

ACSS | ACSEE | AGen 2017

The Asian Conference on the Social Sciences – ACSS 2017
The Asian Conference on Sustainability, Energy & the Environment – ACSEE2017
The Asian Conference on Aging & Gerontology – AGen2017

Art Center Kobe, Kobe, Japan
June 8-11, 2017

Final Draft Schedule

Please Check & Confirm

Please check that all information pertaining to you is correct
and notify us at acsee@iafor.org if there is any error.

Please notify us of any corrections by **Wednesday, May 17** 17:00 (Japan Standard Time GMT+9).

Final Schedule

After minor changes have been made to the schedule we will send you a link to the full programme.

The full programme will contain session information and a detailed day-to-day presentation schedule
(including room allocations and session chairs).

This will be available on **Friday, May 26**. Abstracts will also be available online at this time.

Friday Plenary Day Outline

08:30-09:30 Conference Registration & Coffee

09:30-09:45 Announcements & Welcome Address

09:45-10:45 Featured Panel Presentation I

Toshiya Hoshino, Osaka University, Japan

Haruko Satoh, Osaka University, Japan

10:45-11:15 Coffee Break

11:15-12:15 Featured Panel Presentation II

Hiroshi Ishida, University of Tokyo, Japan

James W. McNally, University of Michigan, USA

12:15-12:30 IAFOR Documentary Photography Award followed by Conference Photograph

12:30-14:00 Lunch Break

14:00-14:30 Featured Presentation

Philip Sugai, Doshisha Business School, Japan

14:30-15:00 Spotlight Presentation

Can Data Science do Without the Field Survey? Developing Innovative Statistical and Cartographic Methodologies Involving Small and Big Data Analyses In Social Sciences

Maxime Jaffré, Centre Norbert Elias – CNRS, France

15:00-15:30 Spotlight Presentation

Xinhua News Agency's Coverage of the Kunming Railway Station Attack in the Context of Reshaping China's National Identity

Guo-qiang Liu, Deakin University, Australia

Martin Hirst, Deakin University, Australia

15:30-15:45 Coffee Break

15:45-16:45 Conference Poster Session I

16:45-17:00 Coffee Break

17:00-18:00 Conference Poster Session II

18:00-19:00 Conference Welcome Reception

19:00-21:30 Conference Dinner (Optional Ticketed Event)

Friday Poster Session I: 15:45-16:45

Sustainability, Energy, and the Environment

Room: *To be Announced in Final Schedule*

35522

The Coupling Effect Analysis Between Economic Growth, Industrial Structure and Environmental Pollution in China

Yunxia Tan, China University of Geosciences (Wuhan), China

Jing Yu, China University of Geosciences (Wuhan), China

Yongbao Jin, China University of Geosciences (Wuhan), China

Jing Zhang, China University of Geosciences (Wuhan), China

It is important to explore the coupling relationship between economic growth, industrial structure and environmental pollution. In numerous analysis frameworks which used for studying economic growth, industrial structure and environmental pollution, many scholars verified whether the situation of local area in accordance with the Kuznets curve, the obtained results were always diverse. Dividing China into 3 regions of eastern, central and western, the paper study the relationship between economic growth, industrial structure and environmental pollution by using coupling coordination degree model to analysis 28 provinces and cities' panel data in 2000-2016. The study found that the economic and environment development in most prefectural units are still at a lower level of coupling and coordination. There are significant disparities in coupling and coordinating degree between eastern coastal areas and western inner areas. And economic growth has a significantly positive impetus to environmental pollution while the improvement of economic growth comprehensive level leads to the deterioration of environmental conditions; China's current industrial structure is in good condition and it has crossed the inflection point of the inverted U-shaped curve into the stage industrial structure improve environment pollution; economic growth has a bigger direct positive effect on environmental pollution and it also indirectly affects environmental pollution by influencing industrial structure, technological progress and population quality. The coefficient of Industrial structure is the largest among the indirect path, which means industrial structure is the most effective way to improve environment pollution. Finally, it proposes some related suggestions based on the above conclusions.

35229

Future Development Trends of Green Refrigerant

Chun-Wei Chen, Instrument Technology Research Center - National Applied Research Laboratories, Taiwan

Yu-Wei Lin, Instrument Technology Research Center - National Applied Research Laboratories, Taiwan

The subject discussed in this study is the general development trend of green refrigerants. The results of this study are used to find the optimal conditions for R&D technology for the studied green refrigerants based on this trend. The conclusions from this study are as follows: (1) The future development of green refrigerants should be based on the four explicated levels "technical characteristics, ecological protection, economic benefit, and the environment" and the twenty-six factors with the four explicated levels, in order to diversify the future development of green refrigerants, as well as to assist in developing more competitive and environmentally-friendly refrigerants, (2) The conclusion obtained from using the Fuzzy TOPSIS analysis model and from a group of experts and scholars of different experiences and expertise discussing and assessing refrigerant technology development, is that natural refrigerant technology is the preferred method. The order of preference after natural refrigerant technology is: the HC component refrigerant development technology, the HFC mixed component refrigerant development technology, and lastly the nanometer

refrigerant development technology. These results show that experts and scholars believe that natural refrigerant development technology is the best solution for green refrigerant technology development.

33638

The Study of Numerical Evaluation and on-Board SCR Catalytic Combustion of Marine Diesel Engine's Emission Combustion

Reui-Kuo Lin, Taipei College of Maritime Technology, Taiwan

Shun-Feng Tsai, National Taiwan Ocean University, Taiwan

Extreme weather in recent years, the global phenomenon of climate change and the warming of the Earth increasingly higher, for help to reduce emissions and air pollutants become the target of national efforts. Because diesel engines with high thermal efficiency, is widely used in the generators, vehicles and merchant ships and other power systems, marine diesel engines most people pay attention to pollution in addition to visible particulate pollutants (PM), but it belongs to the NO_x, because the gas is toxic but nitrogen oxide and nitrogen oxide emissions from diesel engines account for over 44% of all mobile sources, therefore, the world's major diesel engine manufacturers who did not actively involved in improving the technology this pollutant. The research project will exhaust in chemical reduction mode, with additional urea injection exhaust pipe through computational fluid dynamics and numerical simulation methods for diesel, ammonia NH₃ or ammonia as a reducing agent selection of catalytic combustion technology (SCR), the use of a catalyst catalyzing the reduction of NO_x into harmless nitrogen N₂ and H₂O, build a new type of exhaust gas NO_x emission reduction device, effectively reduce marine diesel NO_x emissions of pollutants engine to comply with the provisions of the International Maritime Organization (IMO) on the prevention of air pollution from ships in NO_x constitution norms.

37332

Mesoporous NiCo₂O₄ and NiCo₂S₄ Submicron-Polyhedron Architecture from Molecular Design for Efficient Pseudocapacitive Energy Storage

Yu Liu, Curtin University, Australia

Zongping Shao, Curtin University, Australia

Moses Tade, Curtin University, Australia

Spinel-type NiCo₂O₄ (NCO) and NiCo₂S₄ (NCS) polyhedron architecture with the size of around 500 nm and rich mesopores of 1-2 nm in diameter are prepared facilely by molecular design of Ni and Co into polyhedron-shaped zeolitic imidazolate frameworks (ZIFs) as solid precursors. Both as-prepared NCO and NCS nanostructures exhibit excellent pseudocapacitance and stability as electrodes in supercapacitors. In particular, the exchange of O²⁻ in the lattice of NCO with S²⁻ obviously improves the electrochemical performance. NCS shows a highly attractive capacitance of 1296 F g⁻¹ at current density of 1 A g⁻¹, ultrahigh rate capability with 93.2% capacitance retention at 10 A g⁻¹, and excellent cycling stability with capacitance retention of 94.5 % after cycling at 1 A g⁻¹ for 6000 times. Asymmetric supercapacitor with NCS negative electrode and active carbon positive electrode delivers very attractive energy density of 44.8 Wh kg⁻¹ at power density 794.5 W kg⁻¹, and a favourable energy density of 37.7 Wh kg⁻¹ is still achieved at a high power density of 7981.1 W kg⁻¹. The specific mesoporous polyhedron architecture contributes significantly to the outstanding electrochemical performance of both NCO and NCS for capacitive energy storage.

37416**Sustainable Energy Management in University: Energy Conservation and Renewable Energy Usage**

Kittinut Kaewthong, King Mongkut's University of Technology Thonburi, Thailand

Thanakarn Khumphai, King Mongkut's University of Technology Thonburi, Thailand

Amornthep Kumsuk, King Mongkut's University of Technology Thonburi, Thailand

KMUTT is one of Science and Technology University in Thailand which consume high energy according to their main activities in teaching and research. Sustainable Energy management system has been developed within KMUTT according to the Energy and Climate change policy and renewable usage policy that follows the best practices on energy conservation concept and standard practices. The system, procedures and manuals have been developed and focused on electrical & water conservation ,renewable energy usage and greenhouse gas emission reduction.The developed system has been implemented for all in KMUTT with Train of the Trainer program, promotion activities, preparation and hand-on training for technical to KMUTT Energy working group. The system evaluation has been done for one year implementation(Jan -Dec 2016) .The results showed 0.24%,5.0% and 20.41% reduction on electrical usage,water usage and greenhouse gas emission ,respectively with 2.37 %renewable energy usage in KMUTT. The results achieved and showed the sustainable energy management within KMUTT can help to decrease the energy and environmental impacts and maintain a sustainable management for all students, staffs and public.

35223**Steady-State Inherent Operational Characteristics of a Fan Coil Unit (FCU) under Variable Supply Flows Operation**

Ming-Yin Chan, The Hong Kong Polytechnic University, Hong Kong

Chilled water based Fan Coil Unit (FCU) Air Conditioning (A/C) systems are commonly used in large buildings while the ventilation load can be separately dealt with. FCUs have to perform simultaneous cooling and dehumidification.

Following their successful study of the operational characteristics of Direct Expansion (DX) A/C systems, the Applicants wish to further study the inherent steady-state operational characteristics of a FCU under variable supply flows operation. An experimental FCU system will be established and the steady-state inherent operational characteristics of the experimental FCU under a variable flow rate chilled water supply at different constant temperatures and a variable supply air flow rate, will be experimentally and numerically studied. The methodology to be adopted in this project follows that used previously when studying the operational characteristics of DX A/C systems.

The long term impact of the proposed project is that a novel strategy for simultaneously controlling both indoor air temperature and humidity using FCU based air conditioning will be developed for the near future, so as to provide building users with better thermal comfort because of the improved humidity control, at a low level of energy consumption. The project outcomes will be applicable not only to Hong Kong, but to many other parts of the world also.

35057**Feasibility Study on Improving Pollution Degradation of Free Water Surface Flow Constructed Wetlands by Artificial Aeration and Bio-Gravel Wall**

Jih Ming Chyan, Chia Nan University of Pharmacy and Science, Taiwan

Ming Hsiu Yu, Chia Nan University of Pharmacy and Science, Taiwan

I Ming Chen, Chia Nan University of Pharmacy and Science, Taiwan

Constructed wetlands (CWs) have been worldwide applied in controlling water pollution because of their low construction cost, easy operation and maintenance. However, insufficient dissolved oxygen (DO) supply results in low pollution removal performance which establishes barriers for further developments. In this work, artificial aeration was established in-tank and isolated from the free surface flow (FWS) CW by a bio-gravel wall (BGW) which improved nitrification and damped the turbulence induced by aeration. A FWS CW (CW-A) was established as a control system whose experimental results could be compared to the one (CW-B) with aeration and BGW. Both system operated under the same experimental conditions. The emergent plants, cattail, were planted in FWS CWs. The inflow came from the sewage system of university campus and CWs was operate with a higher hydraulic loading, 0.30 m/d. According to experimental results, averaged DO in CW-A maintained 0.15 mg/L; through a specially designed aeration system in CW-B, DO raised to 3.0 mg/L. Due low influent concentration of averaged biochemical oxygen demand, 4.23 mg/L, poor removal, 17.1% ($p>0.05$), was observed in CW-A, however, it increased to 45.4 % ($p<0.05$) when the CW system was added aeration and BGW. Significant improvement was also found in the removals of ammonia-nitrogen which were 42.5% ($p<0.05$) and 16.4% ($p<0.05$) with and without aeration and BGW, respectively. No significantly positive effect was resulted in total phosphorous removal performance. From obtained results, it concluded that, even in low pollution environment, aeration and BGW could effectively improve pollution degradation performances of SSF CW.

35231**Unmanned Aerial Remote Sensing System (UARSS)-Derived Normalized Difference Vegetation Index (NDVI) To Soil Moisture Mapping**

Tung-Ching Su, National Quemoy University, Taiwan

Satellite remote sensing systems have been widely applied to soil moisture monitoring but are unsuitably applied to that of small areas, which merely cover several hectares, due to their low spatial or temporal resolutions. In order to address the soil moisture mapping of the small areas in Kinmen, Taiwan, a multispectral sensor carried on an unmanned aerial vehicle (UAV) were adopted to derive the thematic maps (0.2 m resolution) of Normalized Difference Vegetation Index (NDVI). In this research, a total of 12 in situ sampling points was schemed for a monthly data acquisition of soil moistures at two depths, including 10 cm and 20 cm, and NDVI to establish an empirical model between soil moisture and NDVI. Before the empirical model establishment, a pre-processing of relative radiance correction is necessary for the digital number adjustment of the multi-temporal UAV images. Finally, the performance of the established empirical model in soil moisture estimation is also evaluated in this research.

35526**The Study of Design Elements and User's Behavior in Public Space: A Case Study of Pattaya Beach Road Public Space**

Akharapon Thanyagaset, Faculty of Architecture – Silpakorn University, Thailand

This research aimed to investigate the user's behavior of the public open space, a case study of Pattaya beachfront public space, Chonburi province, the second most visited city in Thailand, after Bangkok. By studying the characteristic of landscape design elements, activities and the surrounding context to analyze the relationship of the various factors that affecting the use of the area, to find out the design guidelines to

improve the physical design of Pattaya beachfront public space which based on the behavior and needs of users. The Post-Occupancy Evaluation methods were used to collect and analyze data by observation, interview and review the literature. The observations are divided into two parts: the overall physical and usage character of the whole area, The second part is the user's behavior in the space which was classified into 3 types, plazas, walkways and memorial place. Then analyze the current usage conditions of each area, positive & negative aspects and compare with the public open space design guidelines. The results showed that during the weekend at 04.00pm-06.00pm is the most active time of Pattaya beachfront public space. The users, both Thai and foreigner, intensively use in many kinds of recreational activity. The main application is the walkway between the north and south of Pattaya beach. And also be the space for recreations. The factors that promote the usage are the activities of the surroundings context Pattaya Bay and physical landscape design elements include: accessibility, the beautiful scenery, daylight & shading, appropriate dimension of space, security and the natural atmosphere.

35923

Analysis of Land Use Classification and Contamination Source for Soil Contaminated Site in Korea

Kyung Hee Shin, Korea Environment Institute, South Korea

Hyeon Kyu Lee, Korea Environment Institute, South Korea

As types of industry and patterns of land use have been diversified, the necessity of systematic management for contamination prevention has increased. This study investigated the feature of soil contaminated site in Korea. The information about contaminants, pollutant concentration, source of contamination (facilities) and land use classification was analyzed. Total 300 sites was selected and land use classification was through 'Land Use Regulation Information System (LURIS)' in Korea. LURIS provides the land use classification which designated by 'Act on Planning and Use of National Territory' at specific site. As a result, most of the sites were used as gas station, small-scale factory, etc. The distribution based on the classification of use area is shown as follows; residential areas (35.1%), industrial areas (26.0%), green areas (16.6%), commercial areas (11.3%), managed areas (10.3%), natural environment conservation areas (0.3%), agricultural areas (0.3%).

As regarding the rate of pollutants and the types of pollutant from the sites, over 50% of the examined lands were contaminated by TPH(Total Petroleum Hydrocarbon). BTEX(35%), Zinc(35%), Copper(16.67%) follow after TPH as the pollutants. In addition, site-specific information such as organic content, conductivity, topography and groundwater net charge was collected. These analyses about previously contaminated site could provide useful implications in assessing soil or groundwater vulnerability and arranging the management policy. (This study was funded by a grant from the GAIA project(2016000560002), Korea Environmental Industry & Technology Institute, Republic of Korea)

35172

Treatment of Wastewater Contaminated with Water-Based Varnish and Glue Using Wasted Chemical and Materials in Coating/Lamination Plant

Suchapa Netpradit, King Mongkut's University of Technology Thonburi, Thailand

Areeya Poolsawat , King Mongkut's University of Technology Thonburi, Thailand

Utaitip Noibut, King Mongkut's University of Technology Thonburi, Thailand

Vanish coating is usually applied to protect the surface and add the value of printed products. Water-based coatings have become popular in the printing industry because of their environmentally friendly and odorless. However, high volume of wastewater from many coating plants need to be treated with low cost. The objectives are to survey the source of wastewater in a coating plant and to find the proper technique of wastewater treatment by using their wasted materials. Two sources of contaminant; water-based varnish and water-based glue, in wastewater were mixed in various ratios to determine the results of coagulation

and adsorption. The results showed that 45 L of wastewater mixing from 2 sources (1:1) could be treated by adding 250 mL of wasted ferric chloride solution, stirring for 1 minute and leaving for sedimentation. The sludge was separated by filtering with the wasted mesh cloth and dried by sun. The remaining color of water was further removed through the adsorption column containing the wasted granule activated carbon. The water qualities was detected for chemical oxygen demand (COD), total dissolved solids (TDS), suspended solid (SS) and pH value. After coagulation process, COD, TDS and SS were reduced from 58,902, 30,424 and 772 mg/L to 7,384, 3,192 and 54 mg/L, respectively, and pH was decreased from 7.6 to 5. After adsorption process, COD, TDS and SS were reduced to 23, 597.3 and 6.6 mg/L, respectively, and pH was increased to 7.13. The qualities of treated water were accepted under standard criterion of industrial effluent.

36101

Synthesized Silica From Rice Husk for Anti-Slip Overprint Coating

Nitus Tipsotnaiyana, King Mongkut's University of Technology, Thailand

Thailand is among the top ten rice exporters that have produced more than 30 million tons of rice in order to serve domestic and worldwide consumption. In a process of rice milling, more than 10 million tons of rice husk as agricultural waste are disposed. Since rice husk is enriched with abundant silica (SiO_2), this study aims to reflux silica from rice husk by 2M hydrochloric acid (HCl) for 120 min. The results yielded refluxed silica whose purity was 98.7% and had amorphous structure. The silica powder was measured color by a spectrophotometer according following printing standard (ISO12647-1), the color measurement (CIE $L^*a^*b^*$) indicated $94.79 \pm 0.48 \pm 1.24$ (white color), whiteness and color difference (ΔE) were 84.85, 3.28, respectively. Particle size of silica was analyzed by 'Image Plus Pro' and exhibited a uniform size of 3-5 μm . The synthesized silica from rice husk was used as a Anti-slip coating material for the improvement friction and smoothness on white kraft papers. The coating was prepared by a water-based varnish of acrylic resin mixed with the synthesized silica from rice husk at different ratios of 0%, 0.5%, 1.0%, and 1.5% on the weight basis. The varnished with 1.0% silica from rice husk displayed the highest friction and printing quality wasn't changed.

36260

Determination of the Biodegradability of Thermoplastic Cassava Starch Reinforced by Natural Fibers

Tanatorn Tongsumrith, King Mongkut's University of Technology Thonburi, Thailand

Susan Selke, Michigan State University, United States

A biopolymer composite, thermoplastic cassava starch (TPCS) was reinforced with natural fibers and glycerol as a plasticizer. Paper fiber and vetiver fiber were used as a reinforcing material. In this study, the objective was to evaluate and to estimate the biodegradability of the fabricated thermoplastic cassava starch reinforced by natural fibers using an in-house direct measurement respirometric system (DMR) under simulated composting conditions.

Biodegradation of thermoplastic cassava starch biocomposites was examined in a simulated aerobic composting environment using a direct measurement respirometric (DMR) system in accordance with the ASTM D5338 and ISO 14855 standards. The thermoplastic cassava starch reinforced by vetiver fiber was easily biodegraded and almost all samples reached above 70 % mineralization in MSU compost. Differences in biodegradation rates were attributed to the intrinsic properties of the compost such as moisture content, temperature, pH, and nutrients for the microbes. Moreover, the polymer characteristics themselves play an important role in degradation. In addition, a mathematical model for biodegradability correlated to the component proportions of inputs was obtained. The ANOVA test showed that the model was sufficiently reliable to be useful in designing of the composites.

37384**Hazardous Waste Management System in Kmutt Thailand**

Suchada Chaisawadi, King Mongkut's University of Technology Thonburi, Thailand

Aranya Udomittipong, King Mongkut's University of Technology Thonburi, Thailand

Thanakarn Kumphai, King Mongkut's University of Technology Thonburi, Thailand

To decrease the environmental pollution and minimize the risk of students, staff and public, hazardous waste management has been set up within King Mongkut's University of Technology Thonburi (KMUTT) since 2005 with first revision on 2010 and aim to play an important role to maintain a safe and environmental responsible within the university. The system, procedures and manuals for the hazardous waste management were developed according to the Green University policy and standard practices. In this system, the hazardous wastes were separated to liquid and solid waste, the liquid waste was separated into 18 categories according to storage and treatment. The solid waste was separated into 5 categories according to physical properties. The system has been implemented for all laboratories within KMUTT. Hand-on training for all laboratory staff has been done. The system implementation showed the hazardous wastes generated for one year (Jan 2016-Dec 2016) were 9,845 liters of liquid waste and 2,950 kilograms of solid waste. All Laboratories in KMUTT have been successfully operated under the developed system. The system evaluation has been done and shown the implementation requires the cooperation and support of students and staff. This management system is now ready to expand to other educational institutions as a model for hazardous waste management. This paper describes the study and implementation experience on hazardous waste management system in Thailand university. As results of this study, hazardous waste management within KMUTT can help to decrease the environmental impacts and maintain a sustainable management for all staff and public.

36391**Improving Power Consumption of Wireless Home Automation System with Secured Smart Energy Controller Design**

Airul Azha Abd Rahman, MIMOS, Malaysia

Ahmad Hafez Nawawi, MIMOS, Malaysia

Muhammad Al Baqir Zinal Abidin, MIMOS, Malaysia

Rohaya Abdul Wahab, MIMOS, Malaysia

Raja Mohd Fuad Tengku Aziz, MIMOS, Malaysia

The field of wireless sensor networks has been recognized as a potentially transformative of home automation system technology and the field is growing steadily due to their ability to control systems via wireless networks infrastructure, efficiently and cost effective. Wireless Home Automation System (WHAS) using Internet of Things (IoT) is a system that uses computers or mobile smart devices and sensors to control elementary home functions and features automatically through internet from anywhere around the world. It is meant to save the electric power consumption and human energy. Secured Smart Energy Controller (SSC) with an Autonomous Intelligent Ambient Control System is an Internet of Things (IoT) solution is studied, which is capable of turning present Home Automation System (HAS) into smart establishment. Reliable and secure, the SSC system has been proven to save energy (approximately: 50% energy savings in lighting and 30% energy saving in air-conditioner). Based on the experiment which was carried out for 8 weeks, measurement and data analysis found, power consumption of the HAS with the SSC system is decreasing 50% from the power consumption before the SSC, which is 8.54KWh. With the SSC, the power consumption is 4.25KWh.

37233**Investigating the Implementation of Disaster Risk Reduction Curriculum in Secondary Schools in Myanmar and the Philippines**

Aye Nandar Win, Kyoto University, Japan

Jane Singer, Kyoto University, Japan

Disaster Risk Reduction Education seeks to improve the resilience of students and school buildings by building a culture of safety and skills for managing disaster risks. DRRE curriculum is created based on the local context and should be vertically integrated through formal and non-formal educational approaches throughout the student's schooling. The objectives of the study were to understand the effectiveness of the Disaster Risk Reduction curriculum and to analyze the perception of students on Disaster Risk Reduction gained through experience and classroom study in secondary schools in Myanmar and the Philippines. The multi-case study methodology mixed qualitative and quantitative approaches, including interviews with 2 curriculum developers, 6 school administrative and 55 teachers and surveys of 300 students of 6 secondary schools in Insein Township in Myanmar and Quezon City in the Philippines. A DRRE framework was applied to assess curriculum development and SPSS software used for descriptive analysis. The survey results indicated that students in Myanmar were less knowledgeable about proper evacuation procedures and disaster response than students in the Philippines, but that 96% of students in Myanmar knew about correct behavior during fire outbreaks, as compared with only 67% of Philippine students. It was found that there was poor linkage between disaster management and the education system in Myanmar. The study recommended that the DRR curriculum should be reviewed and implemented more thoroughly with regular disaster drills and systematic evaluation of student knowledge, based on greater coordination between educational and disaster management authorities.

35985**Distributed Big Data Underwater Fish Observation Platform**

YiHao Hsiao, National Center for High Performance Computing, Taiwan

SunIn Lin, National Center for High Performance Computing, Taiwan

FangPang Lin, National Center for High Performance Computing, Taiwan

In this study, we developed a distributed big data underwater fish observation platform. The platform includes (1) a distributed underwater stream system for performing real-time long-term observations of ecosystems; (2) a multimedia big data query method for accelerating query efficiency; and (3) a fish tracking method based on compressive sensing theory for further analysis of fish. The distributed underwater stream system is broadcast in real-time via the Internet, but the big data are also archived for further fish analysis. These data comprise observations of 12+ hours of 640×480 pixel daylight images collected for over 4 years. The platform has the capacity to collect big data continuously. Accessing and utilizing these large volumes of data is challenging, so we developed a multimedia big data query method, which uses multiple-tier caching architecture and a universal unique identifier, to increase the query efficiency and reduce the database loading. Our experimental results demonstrated that the maximum speed-up when searching data was 2647% faster than that then searching data without using a cached architecture. The proposed fish tracking method implements background subtraction in the compressive tracking algorithm to acquire suitable prediction samples and negative samples, which are used by the compressive tracking algorithm. This method can achieve real-time fish tracking even in unconstrained environments and highly complex scenarios, such as drastic variation in shape, fast-moving fish, and with multiple similar fish. Our experimental results showed that this method improved the accuracy of fish tracking and the tracking success rate was 93%.

Friday Poster Session II: 17:00-18:00

Social Sciences

Room: *To be Announced in Final Schedule*

37278

Mentor Guidance and Reflection: The Exploration of Promoting Science Interest for the Girls' Study in Primary and Middle Schools

Hsiao-Ping Yu, National Taiwan Normal University, Taiwan

This action study tried to improve girls' science interest in middle and primary schools by teacher's reflection and action. It set up teacher's group and professional learning community to discuss how to improve girls' science interest in science class and lead teachers to reflect to improve their gender awareness. The research collected qualitative text and data from the dialogue and investigation between teachers. It also observed teacher's teaching in the classroom and their guidance when girls did the research. Then, it also provided the career guidance to help students explore their scientific interesting, such as biography reading of women scientists, hands-on activities, laboratories visiting, and role-model curriculum. According to the findings, some teachers didn't feel the difference between boys and girls. However, teachers were aware of girl's advantages in scientific research through discussion, and put forward a lot of strategies to enhance girls' learning interest and performance. They felt girls are very attentive and can make many unique points of view. However, girls seem less confident so teachers need to encourage girls to share and give a little more waiting time. Cooperative learning is very suitable for girls to learn science. However, teachers needed to pay attention to the proportion of boys and girls in the group discussion, to avoid that students feel the gender stereotype threat and don't want to express their views. It also observed teacher's actual teaching and collected student's feedback about their scientific learning and career curriculum to understand the implement effectiveness. Teachers felt it can effectively enhance the teacher's awareness and reflection through the teacher's discussion and mutual review. Students also believed that they learn more about the science through hands-on courses and career exploration activities. Finally, it gave some suggestions to be reference to the teachers and educators.

37392

Developing Process of a Sustainable Multigenerational Co-Creative Learning Program

Reina Mori, Teikyo University, Japan

Currently, Japan has the highest life expectancy in the world. Gerontology explores, in depth, a variety of issues related to ageing in both its individual and societal aspects. However, limitations have been pointed out in terms of the credibility of the studies that categorize everyone who is 65 years of age or older as elderly.

From the viewpoints of theories of learning environmental design, and the theories of lifelong learning, this study propose the concept, 'Learningful ageing', to explore possibility of learning in the super-aged society.

This study focused on Mogusa-danchi (Mogusa apartment complex) in Tokyo prefecture which extends over the Hino and Tama city borders in Tama-shi. The purpose of our study is to make Mogusa-danchi into a "Learningful Aging" community by implementing a multigenerational co-creative learning program that enables both young and elder residents to study and age together.

Our long-term goal is to build a system of lifelong learning that connects the Mogusa-danchi to neighboring educational institutions. To that end, (1) we have designed a multigenerational learning program together

with residents and school students in order to encourage interaction between local residents of different generations; (2) we wish to propose a model for the cultivation of administrators who are capable of planning/managing/evaluating such multigenerational learning programs.

As a stepping stone, we have launched a project from January 2015, during which learning needs are identified through dialogues exchanged in Mogusa Fureai Salon (a community space for elderly care).

37360

Exploring Hakka Culture and Ethnic Relationships Through the Baoshan Reservoir Protest Event

Ivy Haoyin Hsieh, Tamkang University Lanyang Campus, Taiwan

Cheng-Hao Pao, Tamkang University Lanyang Campus, Taiwan

The Baoshan (first) Reservoir was constructed in 1981, to fulfill the need of the Hsinchu Science-Based Industrial Park and to underpin socioeconomic development in Hsinchu area. However, when the reservoir was built, the process of land expropriation was not as smooth as the residence expected. While the land over one meter of the reservoir was not counted into the expropriation area, 300 residents was not satisfied with the mode of handling and have kept protesting it for more than thirty years. The majority residents of this area are Hakka people, who migrated to Boshan, Hsinchu area for more than three hundred years. Being suffered from the conflicts in between the Min people and Hakka people, plus with the indigenous people historically, the ethnic group finally settled in Hsinchu, and took Taiwan as their hometown. After the ethnic consciousness rose in 1980s in Taiwan, the Hakka ethnic group has started to gone through a series of social movements. The Hakka mostly live in the hills or margined in the edge of the city, they got easily impacted by the urban development and forced to take the side-effect of the development, such as pollution or land expropriation. The Baoshan First Reservoir event was one of these cases. This study, thus, aims to explore the cultural impact that may happen in the process of protesting the land expropriation and how residents perceive themselves regarding the ethnic identity and the relationships with other ethnic groups.

36049

Culture and Corruption: The Blurring Effect of Confucian Relationalism on Legislative

Yi-Ming Yu, National Defense University, Taiwan

This study drew a sample from Taiwan's military to investigate the effects of culture on corruption. In-depth interview data was collected from 19 Taiwanese military personnel and analyzed to examine the cognitive effects of Confucian relationalism on legislative boundaries. The results of this study indicated that Confucian relationalism has a blurring effect on legislative boundaries. When laws and regulations are clear, there is not much discretionary leeway and civil servants do not let private affairs interfere with their public duty when dealing with strangers while they must devise solutions to help inner circle friends and associates. When legislative norms are not clear, civil servants have relatively more discretion; they might use public resources to establish relations when dealing with strangers or to strengthen existing relations when dealing with those in their inner circles. Under clear legislative norms and the absence of discretionary leeway, civil servants who illegally utilize resources to satisfy their own needs normally use rationalization to resolve cognitive dissonance in order to help themselves and perform their public sector duties. Rationalization allows civil servants to step across legislative boundaries, making it easier to help those in their inner circles.

35430

Gratitude, Social Support, and Life Satisfaction: A Test of Mediated-Effects

Chihche Lin, National Taipei University of Technology, Taiwan

Gratitude is held in high esteem by virtually everyone, at all times, in all places. But only recently has psychological theory and research on gratitude begun to catch up with philosophical commendations. Studies have shown that gratitude is a strong predictor of life satisfaction. However, regarding mechanisms relating gratitude to life satisfaction have not been systematically explored. The current study examined relationships among gratitude, social support, and life satisfaction, and whether social support mediates associations between gratitude and life satisfaction. Four hundred and seventeen participants completed the Chinese version of the Gratitude Questionnaire, Inventory of Social Support, and Satisfaction with Life Scale. A SPSS Macro developed by Preacher and Hayes (2008) was used to address the hypotheses of the current study. Results indicated that not only gratitude was positively associated with social support ($r = .56$, $p < .001$) and life satisfaction ($r = .38$, $p < .001$), but also social support was positively associated with life satisfaction ($r = .39$, $p < .001$). Furthermore, results showed that social support partially mediated the relationship between gratitude and life satisfaction, $F(2, 413) = 48.93$, $p < .001$, $R^2 = .19$ (adj $R^2 = .19$). The findings of the current study thus suggest that social support is one route through which gratitude is associated with life satisfaction.

37268

Factors Affecting Stress among Faculty Members of Public Universities in the Philippines: A Multiple Regression Analysis

Jeryl Shawn Tan, University of the Philippines Diliman, The Philippines

This study focuses on particular demographic and education-related factors that contribute to the stress levels of public university faculty members in the Philippines. Participants in this study were part-time or full-time faculty members in a public university in the Philippines and were teaching at least a class for the First Semester of Academic Year 2016-2017. Participants were tasked to answer a survey, online or paper format, that consists of 3 instruments and other questions. Responses from 100 participants were then analyzed with multiple regression as the main statistical analysis. Results showed age, part-time/full-time status, job satisfaction and negative religious coping as significant predictors to faculty stress. Other performed analyses also revealed significant negative correlations between job satisfaction and stressors related to reward and recognition, and departmental influence. In addition, though faculty members prefer positive religious coping as a coping strategy over negative religious coping, a significant positive correlation was noted between the 2 types. Recommendations were made for future studies related to stress among public university faculty members in the Philippines.

35141

Long-Term Treatment of Native LDL Induces Senescence of Cultured Human Endothelial Cells

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Sung-Tack Oh, Chonnam National University Medical School, South Korea

Hoon Park, Chonnam National University Medical School, South Korea

Hyun Joong Yoon, Chonnam National University Medical School, South Korea

The study aimed to determine whether the treatment of native low-density lipoprotein (nLDL) on primary cultured human endothelial cells could induce their senescence. For this purpose, we analyzed the activity of senescence-associated-beta-galactosidase (SA-beta-Gal) and the expression profile of cell cycle-regulating proteins in cultured human umbilical vein endothelial cells (HUVECs) treated with nLDL for a long time.

The results indicated that nLDL inhibited the proliferation of HUVECs by arresting cell cycle at G1 phase.

The G1-arrested cells showed increase in cytosolic SA-beta-Gal activity, a biomarker of cellular senescence. The causative factor of the cellular senescence was nLDL itself and not oxidized LDL (oxLDL), since blocking LDL receptor (LDLR) with the anti-LDLR antibody suppressed the nLDL-induced increase in SA-beta-Gal activity. In addition, nLDL induced the cellular senescence by inhibiting the phosphorylation of pRb (G1 arrest) via the p53 as well as p16 signal transduction pathways. G1 phase arrest of the senescent cells was not overcome by nLDL removal from the culture medium. Moreover, the nLDL-treated cells produced reactive oxygen species (ROS) dose- and time-dependently.

These results suggested that long-term treatment of nLDL could induce the premature senescence of endothelial cells via the production of ROS under in vitro culture condition.

35533

"Never Too Late to Learn" (Elderly Women's Club): Good Practice of Involving Elderly Women in Active Social Life

Laura Makaryan, Center for the Development of Civil Society, Armenia

Svetlana Aslanyan, Center for the Development of Civil Society, Armenia

The presented paper consists of three parts: in the first part I intend to make a short overview on the situation of elderly women in soviet and post-soviet Armenia. Our research reveal the incredibly vulnerable situation in which elderly women found themselves appeared after downfall of Soviet Union and totally social exclusion of target group.

In the second part I will present the project: its goal, objectives, results and refer to case studies. The long term goal is: to promote elderly participation in public life, to improve their social state and protect their rights and the short term goals are: to find their place in changed social and economical environment, to share their life and professional experience with younger generation, to change the attitude of the society. The objectives are: to help elderly women to stay active persons; to find their own place in changed social environment by increasing their active participation in the social/civic life.

Conclusion: Elderly are in danger of being left out of the society. It is necessary to evaluate their role in society and to facilitate and encourage their participation in public life. In this regards establishment of Club where women could meet, exchange views, discuss an interesting topic pertaining to issues of concern such as health or social relations and do something with the knowledge and experience they have accumulated over the years is very important and can be disseminated as a good practice

35734

The Investigation of Core Nursing Competence in Long-Term Care Services

Ching Hua Liu, Cardinal Tien Junior College of Healthcare and Management, Taiwan

Nowadays, 12.51% of Taiwanese were over 65 years old and 80- years-old people grew rapidly. Thus, the development of long-term care services was needed. When caring old people, physiological, psychological and social needs were considered to be satisfied. Still, there are insufficient studies about core competencies that nurses were equipped in the care of the elderly in Taiwan. Therefore, the goals of this study were to develop the nurses' core competencies in long-term care facilities. This method of this study contained semi-structured interview and focus group. Five chairs from long-term care facilities of Taipei or New Taipei City were recruited. The procedure of this study included three times of one-hour focus group, dialogue records and interview transcript. Data was documented and analyzed by content analysis. The results of this study showed that Care is a profession that takes care of people, regardless of age, who needs basic communication, physical examination and assessment skills and general nursing care skills. However, professional care nurses in long-term care facilities needed two years of medical- surgical

experience with skilled care , independent judgment ,and the crisis handling. Also, they were required to own the ability to lead a group and do assessment activities in order to comprehend residents' needs and enhance quality of individual care in the long-term care institution. Simultaneously, hospice care and related training also recommended. This paper was concluded with the suggestion of nursing competence of first-year nurse in long-term institution and relevance training courses for future lone-term care nurses.

35865

Attention Control Deficit is an Early Detector of Alzheimer's Disease

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Sigmund Hsiao, National Chung Cheng University, Taiwan

Wen-Long Tsao, Dalin Tzu Chi Hospital, Taiwan

Attention is an important cognitive function for the formation of memory. Early stage Alzheimer's disease accompanied by reduced number of neurons in forebrain and medial- temporal lobe. These areas are related to attention and memory function. According to past studies the performance of attention control could discriminate AD and non-AD, thus performance variability in the reaction time maybe a good predictor for cognitive decline. We investigated whether intraindividual variability in an attention control task of reaction time maybe a predictor of advancing AD. We recruited 87 subjects, 28 normal aging, 33 MCI, 26 mild AD with equivalent age, sex, education. Their performance was observed twice, one year apart. Overall, the results indicate that attention control could discriminate advancing stages of AD. Intraindividual variability in reaction time is more sensitive than the mean in reaction time in predicting cognitive decline. Furthermore, attention control instability could predict normal aging converting to MCI. This finding may help early detection of AD, and develop early intervention program.

35872

Investigation of Approaches for Increase in Life Expectancy of Mammals, Using the Immunological and Based on Growth Factors DNA Therapy

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Background. Our previous work has shown that IGF-1 based plasmid DNA well induced regeneration process in mammals. Including defensine gene in eukaryotic gene-therapy vector promote activation of anti-viral and anti-cancer immune response parameters.

Objective: Study life expectancy of laboratory mice injected with plasmid DNA coding IGF-1 and Def-Beta genes.

Materials and Methods: Using specific primers, cDNA of IGF-1 and β -defensine was cloned into a plasmid vector pATG containing CMV promoter.

BALB/c mice received intramuscular injections of DNA plasmid pATG-IGF-1 and pATG-Def-Beta mixture in saline. Dose for injection was 0.1 mg of each plasmid for one mouse. During injection electroporation procedure was performed.

Post injection levels of INF-gamma production were assessed. Blood concentration of IGF-1 after injection via electroporation was measured by ELISA. Life expectancy of experimental animals was fixed. Plasmid mix injection were carried out every 2 month during 3 years of experiment.

Results. After injection via electroporation on 24-96 hours IFN-gamma production increased on 50%. Blood

level of IGF-1 was 96 ng/ml before injection procedure. After injection via electroporation level of IGF-1 was 182 ng/ml on 72 hour, 324 ng/ml on 168-hour end normalized as in control group on 10 day. Life expectancy of mice in experimental group was 3.2 ± 0.4 years and in control group 2.1 ± 0.3 years.

Conclusions. Used plasmids combination provides increase life expectancy. This result proposes the hypothesis that simultaneously activation of T-cell immune component and regeneration system can provide increase in life expectancy.

35883

The Utilization of Opioid Analgesic in the Elderly Population

Ching-Hsuan Chen, National Yang-Ming University, Taiwan

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Tzuo-Yun Lan, National Yang-Ming University, Taiwan

Background and objectives: With the increasing in the elderly population and aging-related disease, the demand for opioid analgesic is required for the treatment of moderate to severe pain should increase accordingly. The purpose of this study is to determine the prevalence and the trend of opioid analgesic use among the elderly population in Taiwan for the last decade.

Method: This is a cross-sectional secondary-data analysis by using the NHI Research Database covering three one-million sample cohorts drawn in 2000, 2005 and 2010. Descriptive statistics and trend tests were used to examine the secular trend of general and long-term use in the elderly population (aged 65 and over). The use of opioid analgesic was defined as having at least one opioid analgesic prescription during a year, and the long-term use was having used for 28 days and over within any 3-months period.

Result: The proportion of opioid analgesics has increased from 6.0% in 2000 to 13.8% in 2010 ($p < .001$). The use of tramadol increased dramatically from 12.4% to 55.0%. In contrary, the use of morphine decreased from 15.3% to 11.9% and meperidine decreased from 55.3% to 20.4%. The proportion of long-term use rose from 9% to 13.5% ($p < .001$) between 2000 and 2010.

Conclusion: The use of opioid analgesic increased significantly for the last decade among elderly population. The most significant increase is tramadol. However, the use of traditional opioid analgesics has decreased. Compare to that in western countries, the prescription of opioid analgesics is relative conservative in Taiwan. Suggested extensions to the related factors of utilization for future research.

35897

Media Influence on Ageism in the Context of Rapidly Aging Societies: A Comparative Analysis between China and Japan

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Lu Wang, The University of Tokyo, Japan

Osamu Sudoh, The University of Tokyo, Japan

Aging issue has never fail to fascinate people's attention these days, which also comes with a stereotype that elderly people are vulnerable, stubborn, less-independent, and out of date, thus becoming a burden to both families and society. On the other hand, it is believed that with the nature of efficiency and propaganda, mass media can intervene the public opinion easily, which means we are very likely to squeeze the stereotype of elderly people out of the public by analyzing the aging-related contents from mass media. Like how media have reflected and impacts on problems of racism and feminism, we hypothesize that ageism towards elderly people is supposed to walk the same route in a rather radical and diverse way. This paper aims to figure out how mass media exactly functions on ageism towards elderly people, comparing and

analyzing what people have commented online about some hot old-people-themed variety shows in China and Japan, especially with a view to SNS and Danmaku video sharing websites which are popular among Chinese and Japanese net citizens.

35915

Aerobic Training Effect on Physical Ability and Cognitive Function in Community-Dwelling Elders

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Yung-Wen Tang, Chung Shan Medical University, Taiwan

Hsiu-I Chen, Hung Kuang University, Taiwan

Yu-Hsiu Chu, China Medical University, Taiwan

Aerobic training has been shown to enhance cognitive function in the elders. This study aimed to explore deeper in this issue by measuring a wide spectrum of cognitive functions, including set shifting, executive function, working memory, response inhibition, auditory memory, and delayed memory. We recruited a convenient sample of twelve community-dwelling elders (76.0 ± 10.6 years). The twelve-week aerobic training program involved ten-minute warm up, twenty-minute aerobic exercise on a stationary bike, and 10-minute cool down in one session, three sessions per week. All of the tests were performed by two trained assessors with excellent intra-rater reliability. The pre- and post-test difference revealed significant improvements in tests of physical ability, including the Timed Up and Go test, grip strength, and the 30-second Chair Stand Test ($p < 0.05$ in paired T tests). The training effects were retained in the three-month follow-up test. With regards to the cognitive function, the aerobic training led to significant improvements in the Wisconsin Card Sorting Test, the Color Trails Test, the Mini-Mental State Examination, the Digit Span backward test, the Stroop test, and the Wechsler Memory Scale II. The only test variable without significant improvement was the Digit Span forward test. All of the above-mentioned improvements in cognitive function were retained in the three-month follow-up test. In conclusion, we declared a positive training effect of aerobic exercise in community-dwelling elders not only in their physical ability but also in a wide spectrum of cognitive functions. Furthermore, these training effects could be maintained for a further three-month period.

35939

Impact of Changes of Dementia Severity on the Primary Caregivers Burden

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Wan-Ting Lin, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Taiwan

Xuan-Song Hu, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Taiwan

Aim. Aging with increasing prevalence of dementia in Taiwan has raised awareness of dementia care, as well as the caregivers' stresses resulted from caring the family member diagnosed of dementia. The study aims to investigate the impact of changes of dementia severity on the multiple dimensions of the primary caregivers's burden.

Method. This is a cross-sectional study, enrolled 130 patients diagnosed with dementia and their primary caregivers from the Dementia Center of Dalin Tzu Chi Hospital in Taiwan. We divided these patients into stable and worsened groups according to the change of Clinical Dementia Rating (CDR) scores in one year. We also used the modified version of the Chinese Caregiver Burden Inventory (CCBI) to evaluate the burden of their primary caregivers. We conducted t-test to determine significance between two groups.

Results. There were 115 patients in stable group and 15 patients in worsened group. Compared to the stable group, the primary caregivers in the worsened group had significantly increased burden over

psychological ($p=0.001$), social barriers ($p=0.045$), health ($p=0.001$), and social ($p=0.002$) aspects. However, there was no significant difference in economic and marital burden.

Conclusion. The study suggests that the worsening of dementia has impact on the burden of primary caregivers in many aspects. We should put emphasis on the emotional support of the caregivers, whose family has worsened disability from dementia.

35956

From Needs and Dilemmas Facing View of Elderly People Living with HIV Long-Term Care Measures in Taiwan

Ching-Teng Angus Yao, Kaohsiung Medical University, Taiwan

The life of people living with HIV has been prolonged with HAART, and since 1997 the introduction of antiretroviral HAART in Taiwan has increased the survival rate of infected people to 85.9%. Therefore, with the extension of the life of people living with HIV and the entry into the old age, how to provide suitable long-term care services is an issue that Taiwan policy needs to face and think.

This research through surveys and interviews to find Taiwan elderly people living with HIV in Taiwan needs and plight of the contains (1) diseases and health care issues. (2) social prejudice and discrimination. (3) psychology and adjustment of the identity and reflection. (4) adjustment of interpersonal relationships.

According to the empirical data shows Taiwan's long-term care measures in difficulties arising in the care for older people living with HIV. (1) non-suitable for elderly people living with HIV community long-term care services. (2) long-term care institution the exclusion of people living with HIV. (3) lack of financial resources of older living with HIV with using institutional long term care. (4) the incoherence of HIV medical and long-term care measures. (5) course focuses on long-term care health care, neglect the psychosocial dimensions of older people living with HIV. This study attempts to present long-term care of the elderly people living with HIV needs and challenges and dilemmas facing in Taiwan.

36030

Strategies of Hong Kong's Healthcare System in Aging Population

Angie Ho Yan Lam, The University of Hong Kong, Hong Kong

The aging population creates challenges for the healthcare system in Hong Kong. This paper examines the challenges facing and an acceptable delivery system amid Hong Kong's rapidly ageing population.

Challenges

The elderly population is expected to increase to 'one in four' in 2033. The elderly inpatient ratio is expected to be 62% in 2029. Aging people highly rely on the public healthcare service, resulting in long waiting queue in popular healthcare service.

The healthcare system over-emphasizes curative care. Aging people seek primary care for cure rather than health maintenance. Even the government provides Elderly Health vouchers, only people aged 70 or above are eligible. Besides, only 16.1% claimed to use the subsidies in the preventive care.

Strategies

Healthcare policy should emphasize disease prevention and active aging. Primary care with multidisciplinary approach should be implemented to address the holistic care. Integrative Elderly Care Centre should be developed to link up all healthcare providers to promote seamless transfer of elders to different levels of care.

Public-private partnership combines the resources in the public and private sectors. The public sector can

purchase from the private sector some elderly healthcare services in high demand, such as dialysis, to shorten the waiting queue.

Elderly Health Care Voucher Scheme should offer to the older people aged 65 or above. Elderly Health Care Voucher Scheme specified on preventive care and health screening could promote the preventive care. Lifelong financial planning and compulsory social health insurance scheme should be implemented to promote the financial sustainability of health systems.

36386

Relative Risk of Developing to Diabetes Among Prediabetic Patients Compare to People with Normoglycemia: Meta-Analysis

Xin Yi Xu, The University of Hong Kong, Hong Kong

Pui Hing Chau, The University of Hong Kong, Hong Kong

Daniel Yee Tak Fong, The University of Hong Kong, Hong Kong

Janet Yuen Ha Wong, The University of Hong Kong, Hong Kong

Angela Yee Man Leung, The Hong Kong Polytechnic University, Hong Kong

Background: Diabetes is one of the most common chronic diseases in the world especially in older adults. Older adults with diabetes are likely to have higher mortality and reduced functional status. The precursor stage of diabetes is called prediabetes. This study is to assess the overall relative risk of diabetes in individuals with prediabetes compare to people with normoglycemia. The results will provide epidemiological evidence to the process of developing diabetes to inform appropriate treatment for reducing the incidence of diabetes among elders.

Methods: Studies were identified from PubMed, EBSCOhost, ProQuest Medical Library, Web of Science databases. Random effect model was used to pool the relative risk. The heterogeneity between studies was assessed by the p-value from Cochran's Q statistic and I². Funnel plot and Egger's test was used to examine publication bias. All statistical analysis was performed by R.

Results: 39 studies published from 1999 to 2016 were included in this meta-analysis which included 195,000 individuals with a broad range of ethnicities and nationalities. The overall estimated relative risk for diabetes among all kinds of prediabetes as compared to normoglycemic people was 6.46 (95% CI: 5.29, 7.89), with high heterogeneity between studies.

Conclusion: Prediabetes is a high risk state for diabetes development and is gradually becoming more and more common among elders. Older adults with any category of prediabetes should pay attention to their health condition to prevent them from being true diabetic patients.

37247

The Physiological Signals Measurement of Cognitive State in the Elderly with Mild Cognitive Impairment or Dementia

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Yen-Ting Chen, Southern Taiwan University of Science and Technology, Taiwan

Chun-Ju Hou, Southern Taiwan University of Science and Technology, Taiwan

Li-Shun Cheng, Taichung Veterans General Hospital, Veterans Affairs Commission, Executive Yuan, Taiwan

Jia-Ying Zhou, Taichung Veterans General Hospital, Veterans Affairs Commission, Executive Yuan, Taiwan

Shyh-Chyang Lee, Taichung Veterans General Hospital, Veterans Affairs Commission, Executive Yuan, Taiwan

Objective

Until now, many developed countries have become the aging society. In Taiwan, according to the statistical data from Ministry of Health and Welfare in 2015, there are 83.5% of the healthy and sub-healthy people among the senior citizen. Therefore, how to propose strategies and plans for the elderly people as well as relevant laws, regulations and industry counseling transformation. This is the major issues at this stage without delay and it seems to be the major challenges of medical and health policy in the future. The main purpose was to realize the electrophysiological signals related with emotional manifestation in the elderly.

Method

We applied the medical engineering technology, while the bio-physiological signals such as electrocardiogram (ECG), electromyogram (EMG), electroencephalogram (EEG), galvanic skin response (GSR), refers to the temperature (thermistor), and photoplethysmography (PPG) would be gathered in the elderly. The emotional trigger films including some international emotional pictures (happiness, sadness, fear and disgust) were applied while physiological signals did at the same time.

Result

We compared 44 elderly persons. The preliminary results show that the physiological signal activity of the elderly who have different cognitive dysfunctions, also have the same difference in the performance of the physiological signal.

Conclusion

The findings demonstrated that there are significant differences of cognitive dysfunctions subjects. The physiological responses were low in cognitive dysfunctions patients as compared with normal subjects. In the future, we should strengthen the comparative analysis would be to quantify and modify the best treatment guideline for dementia.

Saturday Session I: 09:00-10:30Room: *To be Announced in Final Schedule*

Stream: Aging and Gerontology

Session Chair: *To be Announced in Final Schedule***37137****Discover Your Purpose in Later Life. Pre-Retirement Workshops with an Intergenerational Approach**

Poul-Erik Tindbaek, En3karriere, Denmark

The transition from working life to retirement is one of the most difficult changes in our lives and one of the most important social challenges to address. We are in the midst of a paradigm shift in retirement patterns due to the 25 years life bonus we have got. A growing number of healthy and active seniors wants to continue unfolding their talents in meaningful contexts, and the society need their competencies. My pre-retirement workshop model - awarded by the European Commission in 2012 - has shown remarkable and consistent results empowering seniors to develop their talents, discover their purpose in later life and creating a new network and a new identity after leaving the working life behind.

The voluntary world contains diverse possibilities for doing something meaningful together with someone else. With the intergenerational approach a guiding star for many seniors and grandparents searching for meaningful activities in later life and realizing that the time left is shorter than the time lived, is how their valuable experience can be displayed for the benefit of their grandchildren and the future generations "" not forgetting weaker parents need for care. Evaluation schemes from the workshops shows that around 40% of the participants decide to spend more time participating in voluntary work, giving back 'dividend' of their valuable experience.

See a 2 minutes video on 'School Uncle' with english subtitles.

<https://www.youtube.com/watch?v=OWyH64waqbs&t=45s>

37399**The Characteristics of Environment Encouraging Elder-Teenager Cooperation in Rural Community**

Duangkamol Limwongse, King Mongkut's University of Technology Thonburi, Thailand

Pronyos Chattarakul, King Mongkut's University of Technology Thonburi, Thailand

Nowadays, Local wisdom plays an important role in community development. One month of participant observation at Na-Ngoi – Phonplaloh, the rural communities, 650 km from Bangkok, Thailand, it showed that elders were full of passions to contribute craft wisdom to teenagers. Nevertheless, teenagers were not eager to learn. Crafting everyday-products in semi-outdoor space around houses is contrast with chilling out with friends and smartphone at cafes in town. The experience mapping of daily life of elders and teenagers presented that teenagers much consider virtual activities. They were full of passions to connect the world. This is extremely different from elders who preferred being in comfort zone. However, the mapping also showed evidences of potential for cross-generations cooperation. First, craft is still needed although we are surrounded by technologies. Second is online activities addict of teenagers. These reasons supported the idea of startup project, to value craft for tomorrow. In this case, the environment encouraging teenager-elder cooperation must be carefully identified. The study suggested four key successes to develop environment, 1) Flexible Space, 2) Visible Craft, 3) Leisure Activities, and 4) Connect. With empathy of personal context, space should not limited by location. Elders might need to stay in their place for crafting while teenagers travel around and connect to elders, craft products and the world. Craft would be visible in some places where everyone can easily explore them. Everyday leisure could be flexible according to their life-style. These make the space more dynamic and highly adaptable for changes.

35900**The Model of Intergenerational Relation in Balinese Family**

Made Diah Lestari, Udayana University, Indonesia

Ni Putu Eka Yulias Puspitasari, Udayana University, Indonesia

Olvi Aldina Perry, Udayana University, Indonesia

Ratna Dewi Santosa, Udayana University, Indonesia

Change of family structure becomes something relevant to be studied in the era of ageing population. In 2030 it is predicted that the family structure will tend to form an inverted pyramid, where the number of older people in the family is more than that of adults and children. Change of family structure has an impact on changes in the patterns of intergenerational relations in the family. Economic advancement and high population mobility make the interaction between generations in the family lessen. The subsequent growing issue is on intergenerational relations and the role of caregiving for older people in the era of ageing population. This research conducted in Bali by taking into account that Bali is one of the provinces with the largest number of older people in Indonesia. The next unique characteristic is that the Balinese Hindu community embraces a patrilineal kinship system, where caregiving for older people is provided by sons and daughters-in-law in a family. Contrary to some research related to older people caregivers, which suggests that daughter take a significant role in comparison to son. The aims of the study were to discover the model of intergenerational relation in Balinese family. The research was qualitative study using grounded theory. There were 15 participants, above 60 years old, who live in urban area in Bali. The results showed six major themes in family, namely the couple interaction, parents and children interaction, grandparents and grandchildren interaction, kinship, generation gap, and the meaning of family.

Saturday Session I: 9:00-10:30

Room: *To be Announced in Final Schedule*

Stream: Energy: Renewable Energy and Environmental Solutions

Session Chair: *To be Announced in Final Schedule*

35437

Development of a Dual Axis Sun Tracking System with Astronomical Equation Program on Arduino Via GPS Module

Pipatpon Mitasit, King Mongkut's University of Technology North Bangkok, Thailand

Amporn Kunchornrat, King Mongkut's University of Technology North Bangkok, Thailand

Chatchan Thongjub, King Mongkut's University of Technology North Bangkok, Thailand

The overall objective of this study is to design and develop a program for controlling A Dual axis sun tracking system with astronomical equation program on Arduino via GPS module. This paper discusses about mechanical structure, concept of program and algorithm base on the astronomical equation in Thailand. The concept of this tracking system is to collect GPS location and real-time data of date and time to calculate azimuth and elevation angle without another sensors, which is usually have problem of sun tracking. The dual axis sun tracking controller system develops by using an 8 bits Arduino MEGA via GPS module. This paper also compares the efficiency of the dual axis sun tracking system and a non-tracking system under the same location and environment.

35926

Developing an Economic Analysis Application for Solar Rooftop Electricity Generating in Thai Residential

Ariya Pengruksa, King Mongkut's University of Technology North Bangkok, Thailand

Chatchan Thongjub, King Mongkut's University of Technology North Bangkok, Thailand

Amporn Kunchornrat, King Mongkut's University of Technology North Bangkok, Thailand

This paper presents the development of an economic analysis application for solar rooftop electricity generating in homestead. This study focuses on extracting specific parameters of solar rooftop system in residences and finding indicators of cost analysis and economic benefits to design and develop an application for solar rooftop system and economic analysis by using Visual C#. This application can reduce the complexity of the investment calculation of the solar rooftop system and also reduce human error from manual calculating by only input the location and the dimension of the plant area to get the result. The Graphic Design Interface (GUI) was designed in Thai language to help Thai people who are interested in the solar rooftop project to be able to analyze the economic benefits by themselves. The default of the calculation is to use the parameters of Poly Crystalline Silicon (c-Si) which is popular in Thailand and the information on the solar radiation value in each area from The Department of Alternative Energy Development and Efficiency of Thailand. So, the results from this application can represent the real value of each area in Thailand. In addition, the user can vary the technical parameters and economics costs, which could make the result more accurate, so that people can choose an acceptable investment by themselves.

37353

Applying Multi-Criteria Decision Analysis Techniques for Site Selection of Electric Vehicle Charging Stations in Thailand

Pantip Piyatadsananon, Suranaree University of Technology, Thailand

Sauwaluck Vachiranapalai, Suranaree University of Technology, Thailand

Electric Vehicles (EV) have been promoted successfully and widely used in Western countries according to the purposes in reducing environment impacts and utilising energy resources in sustainable way. Including Thailand, several relevant stakeholders have intensively studied the capacity of EV since 2004. Those studies were mainly focusing on vehicle material, battery, chargers, and motors, while charging stations had not been considered in term of the potential locations for fast charging installation. However, with the attractive promotion and tax subsidy of EV in Thailand, it will have enormous numbers of EV within the next few years.

For this reason, potential locations of fast charging stations over are crucially studied to facilitate all EV drivers' requirements efficiently. This paper aims to present an appropriate technique used to identify the potential locations with some criteria essentially considered in installing EV charging station in Thailand. All techniques used to analyse the site section are criticized regarding with some criteria considered in site selection based on multi-criteria decision analysis techniques. The results of this study present an appropriate technique with the justified criteria considered in identifying the potential locations for EV charging stations in Thailand. This paper is beneficial to the Thai government and other relevant organisations in term of an applicable guideline with the standard criteria in considering the site selection of EV fast charging stations over Thailand.

Saturday Session I: 09:00-10:30

Room: *To be Announced in Final Schedule*

Stream: Environmental Sustainability & Human Consumption: Waste

Session Chair: *To be Announced in Final Schedule*

35959

A Sustainable Cement Replacement Material From a Coal-Fired Power Plant Waste

Nuttapong Phachan, Suranaree University of Technology, Thailand

Siriwan Chokkha, Suranaree University of Technology, Thailand

Anurat Poowancum, Suranaree University of Technology, Thailand

Electrical energy is an important in a daily life. Coal is a primary fuel for electricity production. The waste from the coal-fired electricity generation is a fly ash. The numerous fly ash is a low quality fly ash (LQFA). LQFA is a low reactivity ash, and is a hazardous waste. Normally, LQFA is stored in landfills. The heavy metals can leach from the stored LQFA into an environment, which is a serious problem. The sustainable ways to solve the problem is to utilize LQFA as a valuable material.

Although, cement is widely used in the construction work, it is an environmental unfriendly material. The high quantities of carbon dioxide gas are emitted from the cement producing process. Geopolymer is expected to be a sustainable cement replacement material due to its manufacturing process does not emit a carbon dioxide gas. Furthermore, geopolymer can be synthesized from the various types of waste materials

The aim of this work is to develop the geopolymer by using the LQFA and a calcined clay (CC) as a precursor. The results show that the compressive strength of LQFA-CC-geopolymer is higher than that of the commercial cement. The compressive strength of LQFA-CC-geopolymer is increased with increasing the concentration of NaOH and the ratio of Na₂SiO₄ to NaOH solution. The knowledge of this work opens an opportunity to utilize LQFA as a usable waste to reduce an environmental impact of the coal-fired electric power plant.

37425

Municipal Solid Waste Management within Educational Institute: Case Study in King Mongkut's University of Technology Thonburi, Thailand (KMUTT)

Aranya Udomittipong, King Mongkut's University of Technology Thonburi, Thailand

Suchada Chaisawadi, King Mongkut's University of Technology Thonburi, Thailand

Punchida Chimpalee, King Mongkut's University of Technology Thonburi, Thailand

Apichart Thammajarn, King Mongkut's University of Technology Thonburi, Thailand

Thanakarn Khumpai, King Mongkut's University of Technology Thonburi, Thailand

KMUTT's municipal solid waste management system has been developed since 2005. According to the university activities, municipal solid wastes in this system has been separated into 5 different types as organic waste, recycle waste, non-recycle waste, toxic waste and workshop waste. The system has been implemented to all sectors in KMUTT during 2012-2016. The 5 years results showed total municipal solid waste produced in KMUTT were 2,769,935 kg and the average of municipal solid waste was 553,987 kg/year. The results also showed the waste utilization within the university was 347,349.8 kg/year (62.7%) with 24.2% of organic waste, 35.6% of recycling waste and 2.9 % of workshop waste and non-utilizes waste was 206,637.2 kg/year (37.3%) with 35.2% of non-recycle waste and 2.1 % of toxic waste. The average of recycling waste went to the KMUTT recyclable waste bank was 121,212 kg/year. The result from this study showed the average of MSW generation rate within KMUTT was 0.101kg/capita/day. The beneficial of

municipal solid waste management system in KMUTT is not only to promote waste reduction and waste utilization within the university but also, to protect the public health and environment and maintaining a sustainable environmentally responsible workplace and save the university money.

35911

A Green Post-Treatment for Acid-Washed Sediments and Washing Wastewater by Using an Industry by-Product (I.E., Coal Fly Ash)

Yuanyuan Zhang, Hyundai Engineering & Construction Co. Ltd, Singapore

Dan Chen, Hyundai Engineering & Construction Co. Ltd, Singapore

Hongseok Kim, Hyundai Engineering & Construction Co., Ltd, South Korea

Wei-Chung Chang, Nanyang Technological University, Singapore

Acid washing is a commonly used technique to treat sediment contaminated by heavy metals (HMs) through extracting HMs from sediment into solution using acid solution prior to reuse sediment for other purposes in industry. Although this technique is an efficient in extracting HMs, sediment after acid washing has high acidity (pH \approx 2.7) and HMs-containing acidic wastewater was produced. In this study, an environmental friendly approach was proposed to address the issues associated with acid washing technique on high acidity of washed sediment and wastewater produced. Coal fly ash (CFA), an industrial by-product with high alkalinity from coal power plant, was assumed to increase pH value of both acidic sediment and wastewater, and to remove HMs from wastewater through formation of metals precipitation with pH increasing. CFA was added into acid-washed sediment according to different ratios of CFA to sediment (slurry) to figure out an optimal one to approach neutral condition. It was found that with increasing CFA dosage, the pH value of sediment increased. The optimal ratio (pH \approx 7.0) was found to be 3:100. Toxicity characteristic leaching procedure test validated that final neutralization product (acid-washed sediment + CFA) is non-hazardous substance through monitoring concentrations of regulated HMs in leachates. CFA solution (CFA + water) was used to treat washing wastewater. Addition of ash solution into wastewater increased solution pH values, which induced formation of metal hydroxides or oxyhydroxides precipitation. Recovery water was recycled to prepare washing solution and metal precipitation with reduced-volume, was treated as solid sludge.

Saturday Session I: 09:00-10:30Room: *To be Announced in Final Schedule*

Stream: Economics and Management

Session Chair: *To be Announced in Final Schedule***35552****Fusion of Tradition and Modern Time "" Business Development of Hokkien-House B&B's in Kinmen**

Chao-Ling Chen, National Quemoy University, Taiwan

Neng-Huei Lee, National Quemoy University, Taiwan

Yu-Fang Yen, National Quemoy University, Taiwan

Shu-Yu Cheng, National Quemoy University, Taiwan

Yan-Hui Xu, National Quemoy University, Taiwan

In 1992, after half-a-century military governance, Kinmen saw the advent of the era of tourism. What Kinmen has but the tourist sites in Taiwan have not is military relics and age-old Hokkien houses -- two major elements of tourism that are more capable of attracting tourists. When 'Mini-Three links' between Kinmen and Xiamen officially started on the first day of 2001, Kinmen transformed into the key role of cross-Strait interactions. That also gave rise to the increasing demand for staying overnight by businessmen in Mini-Three links, which became one of the reasons why bed and breakfast suddenly emerged in large number in recent years in Kinmen. Hokkien houses now turn into B&B's in Kinmen feature the neat style of bricks, gables, swallowtail roofs and saddle-like ridges, typical of Hokkien architecture, while their interior is equipped with modern and advanced decorations, allowing guests to use modern facilities as well as experience the atmosphere of living in old houses. As such, it is a popular choice among tourists to Kinmen to stay at a 'B&B of Hokkien house'. This study conducted in-depth interviews with owners of old Hokkien house-turned B&Bsthat are representative of the local region on a case study basis to identify the niche market and build a business model for them.

35040**Business Operation of Bed and Breakfast Underlocal Culturesusing Kinmen in Taiwan as an Example**

Hung-Cheng Tsai, National Quemoy University, Taiwan

Chin-Kang Huang, National Quemoy University, Taiwan

Wen-Hung Huang, National Quemoy University, Taiwan

Liang Tsai, Nation Quemoy University, Taiwan

Global tourism has begun to focus on local cultures and characteristics, indicating the advent of a new tourism era. Instead of taking a superficial tour, tourists are becoming interested in experiencing local cultures and lifestyles firsthand. Among various tourist products, Bed and Breakfast is the most effective at helping tourists experience local cultures and lifestyles. In this study, a field survey was conducted along with administering in-depth interviews to Bed and Breakfast operators and tourists in Kinmen, Taiwan, to explore the relationship between accommodation products, organizations, marketing, and competitors. The results revealed that tourists enjoyed local cultures, were willing to expend additional resources to experience them more genuinely, and were loyal to accommodation products.

35296

The Study of Marketing Strategy from Traditional Industries: The Case of Handmade Plain Misua Industry in Kinmen

Chih-Chieh Lee, National Quemoy University, Taiwan

Plain misua evolved from traditional Chinese pasta. Since the ancestors' era, it has been one of the most important food ingredients used for ceremonies of long-life and birthday greetings, temple's worship, as well as the local street foods. The plain misua is one of the most local products of Kinmen county. Early inhabitants have ground their own flour to produce plain misua. Nowadays, there are still several handmade plain misua factories clustered together, which has become the characteristic of local industry. Moreover, there are several ancient plain misua factories in the Kinmen area, who have accepted the concept of marketing and transformed to tourism factories. Their experiential marketing schemes are widely praised by visitors.

This study focus on marketing strategy for local plain misua industry , with a comparative analysis on marketing schemes adopted by local tourism factories.

Techniques including visiting interview in depth, and questionnaire survey. By analyzing the results from the survey and to compare it with the impacts of marketing strategy adopted by local tourism factories, this report provides recommendations for traditional industries marketing strategy; furthermore, to predict how to maximize the marketing effects of traditional industries under the expectation of its competitive advantages and more importantly to create a new brand value.

Saturday Session I: 09:00-10:30Room: *To be Announced in Final Schedule*

Stream: Teaching and Learning

Session Chair: *To be Announced in Final Schedule***37439****Conceptions of Learning English with Synchronous Online Tutoring: A Case Study in Taiwan**

Yu-Fang Yang, Jen-Teh Junior College of Medicine, Nursing and Management, Taiwan

Kuei-Chun Liu Liu, Jen-Teh Junior College of Medicine, Nursing and Management, Taiwan

Huan-Tian Huang, Jen-Teh Junior College of Medicine, Nursing and Management, Taiwan

With the advent of information and communication technologies (ICT), an increasing number of educational institutions are incorporating Internet tools in their teaching programs. In Taiwan, for example, private tutoring is now being transformed from face-to-face mode into distance mode. The purpose of this study was to explore 75 college students' (around 20 years old) conceptions of learning English before and after the synchronous online program with native English tutors. The research data were gathered from a survey called the Conceptions of Learning English (COLE). The COLC survey included the following seven factors, in a hierarchical order: learning English as 'Memorizing, ' 'Testing, ' 'Drills & Knowledge , ' 'Grammar, ' 'Communication,' 'Application,' and 'Understanding & Seeing in a new way.' The results of the t test analysis indicated that there were no significant difference before and after the synchronous online tutoring program in students' lower conceptions of learning, such as learning English as 'memorizing' and 'testing.' The results also revealed that students' conceptions of learning English as 'Drills & Knowledge , ' 'Grammar, ' 'Communication,' 'Application,' and 'Understanding & Seeing in a new way' were significantly improved after the synchronous online tutoring program. Finally, some possible explanations for the results were discussed.

37264**An Explanatory Study in the Egyptian Non-Formal Education: Flipped Learning or Communicative Language Teaching**

Amira Abd El Wahab, International Christian University ICU,Tokyo, Japan

Teaching English as a Foreign Language (EFL) can be a difficult task as EFL learners need to be taught in communicative, lively, and creative ways. They need to be motivated to practice the language as much as they can to acquire the language skills. The Flipped Learning Approach (FLA) tends to help students to be engaged in some activities in the classroom to improve their language skills because they have acquired the basic knowledge outside the classroom. FLA in teaching English can have strong positive impact on students' performance in terms of acquiring the language skills, and developing soft skills such as communication skills, presentation skill, and team work spirit to mention a few. Flipped Learning creates a suitable atmosphere for the students to grow and learn through the classroom activities. However, there are not many studies have been conducted in teaching English by applying Flipped Learning Approach especially in non-formal education. Besides, most of the studies compared between Flipped Learning and other traditional ways of teaching. There are not several studies which have been conducted to identify the students' preferences through recognizing their perspective towards Flipped learning Approach (FLA) comparable with Communicative Language Teaching (CLT). Therefore, this study is addressed to fill this gap by scrutinizing the students' and teacher's perspectives towards both of them in non-formal education. This is a phenomenological single case study with qualitative instruments such as interviews, observation, and students' and teacher's diaries. The data is analyzed manually by open coding theme.

36878**Grammar Teaching Approaches for Adult EFL Learners: An Indonesian Perspective**

Argian Nicko Wiwoho, Monash University, Australia

Grammar teaching pedagogy has been rigorously reconceptualised as a result of perpetual shift from one teaching method to another. A number of dimensions dichotomizing grammar teaching approach appears in response to the disparate degrees of grammar positioning in second or foreign language teaching. This paper attempts to rationalize that grammar teaching for adult learners in Indonesian non-formal educational context is more appropriately approached through the deductive and explicit teaching. The presented rationale is substantiated from the literature drawing upon theoretical basis of English language teaching (ELT) as well as my professional practice as an English teacher in the referred context. The findings reveal that there is a broad spectrum of variables to determine how grammar teaching is contextually approached. This paper specifically addresses language complexity gap and language needs as two determinants in implementing the deductive and explicit grammar teaching for Indonesian EFL adult learners. Two examples of classroom activities are presented as the contextual manifestation of deductive and explicit grammar teaching approach. The implication for EFL grammar teaching indicates the necessity to consider the context-bound determinants prior to putting a particular grammar teaching approach into practice.

Saturday Session I: 09:00-10:00

Room: *To be Announced in Final Schedule*

Stream: Education and Social Welfare

Session Chair: *To be Announced in Final Schedule*

35090

School Lunch Supply Process from the Perspective of Service Design: A Case Study of Elementary School Program in Taiwan

Pin Hua Su, National Yunlin University of Science and Technology (YunTech), Taiwan

The school lunch program in Taiwan was developed in 1954. In recent years, related studies and reports demonstrate that the trend of Taiwanese student wasting their school lunch is climbing. Every year, the number of wasted lunch is as high as several thousand tons and the wasting up to 1.9 Billion NT in cost. Those wasted food and cost may have an impact on Taiwan's economy, which may be a problem in society that shouldn't be neglect. However, there are rarely studies that focus on school lunch and its process. Furthermore, Service Design could discover current process and recognize the situation and solve the problem. Therefore this study will focus on using a service design approach to analysis the school lunch process. The researcher used method such as observation and in-depth interview to understand the relationship between school and group meal industry in the Process. Due to the time and resource limitation, the scope of the study is the case of primary school in yunlin county. Then, by using the KJ technique and user journey map to analysis the information. The result of this study is the development of service design diagram from group meal industry to school lunch table. The result could be served as a reference on future study regarding lunch wastage. This study hope future studies could focus on reduce the school lunch waste.

35778

A Framework for E-Health Promotion Plan: Health Behaviors of University Students and Their Interest in Campus Health Promotion Experiential Activities

Ling-Chin Ko, Kun Shan University, Taiwan

Jui-Feng Ho, Kun Shan University, Taiwan

The purpose of this study aimed to provide an assessment of the needs of health promotion in university students, based on body composition analysis reports, lifestyle variables and the interest in health promoting activates. The researcher design and development a new approach to guide health promotion practice which is an e-Health promoting plan to facilitate the users to recognize one's body composition analysis, and furthermore to encourage one to join the campus fitness center health promotion experiential activities twice weekly to sustain their physical fitness in good condition. A framework for e-health promotion plan will be exposed and discussed in this study. The result of this study can provide health care providers to develop interventions to assist students in developing healthy lifestyle behaviors.

Saturday Session II: 10:45-12:15

Room: *To be Announced in Final Schedule*

Stream: Aging and Gerontology

Session Chair: *To be Announced in Final Schedule*

35527

A Study on Developing a Companion Robot for Dementia Care

Hsueh-Ting Chu, Asia University, Taiwan

Long-term care for seniors with AD/Dementia requires a lot of manpower and the expansion of care costs had become the great challenge for governments globally. Therefore, the development of accompany robots are hopeful to play an auxiliary role to help the care of AD/Dementia elders and reduce the demand of increasing caregivers while the elderly population grows rapidly. We devoted to design accompany robots for caring AD/dementia patients.

Currently, AI-powered chatbot is one of popular topics of robot design. we applied the architecture of chatbot for the design of accompany robot. We see accompany robots as auxiliary caregivers to share the loading of real caregiver and it's the point of our study how to talk with the AD/dementia patients to keep them thinking and not to lose their memory.

For the purpose of Dementia companion, we studied different care models from our dementia cases. We design a care model using interactive multiplication tests. The accompany robot will ask the patient multiplications, for keying his/her memory counting numbers, such as 'Five times two equals?' It also displays flash cards of the multiplication and give an animation for a correct answer on the screen. Our preliminary research needs the feedback from caregivers and elderly experts further.

37370

'Participating in a Dementia-Friendly Book Club at the Residential Aged Care Facility: A Randomised Controlled Trial Plus Qualitative Evaluation'

B Sally Rimkeit, University of Otago Wellington Campus, New Zealand

Gillian Claridge, Dean at International Pacific Unity Palmerston North, New Zealand

Dalice Sim, University of Otago Wellington Campus, New Zealand

International, multicentre single-blind randomised controlled trial plus qualitative evaluation of the effect of participating in a dementia-friendly book club at a residential aged care facility twice weekly for seven weeks on primary outcome of quality of life (QoL-AD and QoL-AD proxy); and secondary outcomes of Thriving (The Thriving in Older People Assessment Scale-TOPAS), social empathy (Unrevised Reading the Mind in the Eyes Theory of Mind Test) and cognition (Addenbrookes-III). Control in the RCT is activity as usual at the RACF. Participants stratified into those living in rest home or hospital level care (with likely mild-moderate dementia), and those living in secure dementia units (with likely moderate-severe dementia, as supported by baseline Addenbrookes-III scores). Lived experience of participating in a book club explored through purposive sampling of narratives for Interpretative Phenomenological Analysis and language changes analysed through Discourse Analysis. Book clubs use materials specially adapted for people with dementia (see www.dovetalepress.com) and a facilitator's manual for semi-structured book club discussions. Sponsored and facilitated within Bupa Care Homes in the UK, Australia and New Zealand.

35336**Using Play to Promote Dementia-Friendly Intergeneration**

Nga Lai Alice Kwong, Institute of Vocational Education, VTC, Hong Kong

Yee Man Eva Au, Institute of Vocational Education, VTC, Hong Kong

Creating dementia-friendly generations have emerged in a recent decade to respond to the steady rise in the number of people with dementia (PwD). Despite very little research, our preliminary review suggests that play activities could be effective in promoting positive interactions between young people and PwD and thus removing the stigma of dementia in society. This paper presents an intergenerational initiative of engaging young generations and people with dementia using play activities. The objectives of the initiative include: (1) promoting positive experiences of PwD; (2) enhancing higher diploma students' social and practical skills of employability; and (3) fostering a dementia-friendly generation. The initiative has two major stages. In stage I, higher diploma students from aging studies design elder-centered toys and games. In stage II, students implement play activities for PwD using their designed toys and games. The initiative presents opportunities for future aged care workers to creatively enhance the well being of PwD through appropriate solutions. The elder-centered games not only enhance sensory and motor functions of PwD but also provide an environment for PwD to have interactions and enjoyment, which also help to reduce negative behavioral and psychological symptoms. It is also important to note that elder-centered games foster respect and dignity of PwD. The outcomes of the initiative could be used to scope the design and approach of educational activities to educate young generations about dementia in schools and organizations.

Saturday Session II: 10:45-12:15Room: *To be Announced in Final Schedule*

Stream: Environmental Sustainability & Environmental Management

Session Chair: *To be Announced in Final Schedule***37237****Integrated Assessment of Palm Oil Mill Residue to Sustainable Electricity (Pomr-Se): A Case Study From Peninsular Malaysia**

Ida Fahani Md Jaye, University of Surrey, United Kingdom

Richard J Murphy, University of Surrey, United Kingdom

Jhuma Sadhukhan, University of Surrey, United Kingdom

Generating electricity from biomass can provide benefits such as energy security, environmental impact and social development. Nevertheless, it has also been claimed biomass fuel are less economically competitive compared with electricity generation using conventional fossil fuels. The functionality and competitiveness of biomass to sustainable electricity systems depends on the chemical and physical properties of the individual biomass feedstocks, the availability and the cost of these feedstocks/ancillary materials/labour, the capital expenditure for the system and any subsidies and policies in place to assist with the emergence of such system in competition with mature, fossil fuel based incumbent system. Clearly, to achieve long-term viability, biomass based system must be developed in their most economical form. This study provides an approach to select appropriate scales for electricity generation plants using palm oil mill residues (POMR) through the combustion of empty fruit bunch (EFBs) and biogas from the anaerobic digestion of palm oil mill effluent (POME) in Peninsular Malaysia. The optimal size plants are expected to provide a return on investment (ROI) of 20% within a reasonable timeframe and have a significant impact on overall economic and environmental feasibility of the system. A comprehensive implementation framework will be introduced to encourage the PO industry and government institutions to develop investment and support mechanism that will enable this important potential resources of sustainable, low carbon electricity to be tapped effectively.

37372**Performance Evaluation of Paddy Rice Pneumatic Dryer**

Krawee Treeamnuk, Suranaree University of Technology, Thailand

Tawarat Treeamnuk, Suranaree University of Technology, Thailand

Jittrarat Jekkew, Suranaree University of Technology, Thailand

Kaattisak Jaito, Suranaree University of Technology, Thailand

This research was carried out to study the drying of paddy using a developed pneumatic dryer by the cyclone and without cyclone installation. In this study, Thai jasmine rice 105 variety was selected as a sample in the experiment. The effect of drying behavior, specific energy consumption (SEC), drying rate (DR) and percent of head rice yield were evaluated as the performance. For drying experiment, 40 kg of paddy was dried at drying temperature of 80°C. The result shown that the drying system without cyclone gives a higher rate of moisture reduction than the cyclone installation. Based only on energy utilization during the process, the highest SEC of 7.25 MJ/kgwater occurs on the drying at airflow rate of drying 0.0512 m³/s (50 Hz on blower motor inverter) by without cyclone. For the dried product quality, the highest head rice yield of 36.84% on the drying at air flow rate of drying 0.0631 m³/s (55 Hz on blower motor inverter). Breakeven at a production level of 1.6 ton/year

37418**A Review on the Status of the Environmental Management System (EMS) For Palm Oil Industry in Malaysia**

Sunday Dalton Oseghale, Universiti Kebangsaan Malaysia, Malaysia

Ahmad Fariz Mohamed, Universiti Kebangsaan Malaysia, Malaysia

Ogboo Chikere Aja, Curtin University Malaysia, Malaysia

Palm oil waste contributes to environmental degradation at the location where the palm oil process is conducted. The management of the palm oil waste is characterized with low regulatory monitoring in Malaysia. This paper reviews the status of palm oil waste generation and environmental management practices in Malaysia Palm Oil industry. The paper also looks at the key factors influencing and driving the changes in the global environmental management system (EMS) procedures and relates them to the factors prevailing in the Malaysia palm oil industry waste management procedures. This review is conducted through a selection of literature from global environmental policies, ISO guides on EMS, Malaysian government policies on environment in relation to oil palm process and academic literature on EMS. The review showed that the current EMS practices in Malaysia are relatively below the global standards. The sustainability of the EMS standards in the Malaysia palm oil industry requires close monitoring from the Department of environment to enforce the policies and keep the industries in line with the stipulated standards and policies. In conclusion, even though Malaysia has some good policies on environment and waste management, the level of practice by the industrial players still require more inputs to make the process sustainable.

Saturday Session II: 10:45-12:45

Room: *To be Announced in Final Schedule*

Stream: Social Sustainability & Sustainable Living

Session Chair: *To be Announced in Final Schedule*

37421

Threat of Bio-Cultural Diversity Loss Evaluated by International Students: Case of Traditional Japanese Paper (Washi) Making in Futamata Community

Aida Mammadova, Kanazawa University, Japan

Kanazawa City was designated as UNESCO Creative City in the field of crafts and folk, and the demand to the locally made traditional crafts still remains high in the city. However, after the rapid economical growth, the utilization of the local natural resource for traditional crafts making was reduced due to the introduction of the cheap materials from China. Traditional Japanese paper or Washi, remained one of the important bio-cultural elements that still use the local natural resources for its production and its production is managed in the sustainable manner with less negative impact to the environment.

We have conducted the educational field trips into the local Japanese community named Futamata in Mount lozen region of Kanazawa City, Ishikawa Prefecture. The region is famous for making washi during the centuries, however due to the depopulation and aging problems now only three craftsmen have remained in the community. The culture faces the threat to be lost with no followers. 20 international students visited the fields and made their evaluations about the bio-cultural linkage, and gave some recommendations for the sustainable traditional crafts making. The outcomes of the field trips showed, that biological and cultural diversity were rich in the region, but, the sustainable practice of washi making can not survive unless the bottom-up approach of the local authorities for its preservations.

36721

Diffusion of Innovation in Rural Community Development with Social Media: Case Study of a Local ICT Project in Japan

Akifumi Eto, Kobe University, Japan

ICT (Information and Communications Technology) such as social media, if employed effectively in rural development, could complement weakness of conventional rural development practices, for example, helping people in a distant place communicating with other and mobilizing various resources. In recent years, the attempt of rural community development with social media called the local SNS(social networking service) has been spreading in Japan. However, there are many cases unsuccessfully. This is because the number of users of local SNS does not increase. Then, this paper focuses on diffusion process introducing SNS for rural communities. This research aims to clarify the methodology on effectively promoting the use of SNS. In this study, questionnaire and interview survey was conducted directing at all residents of three local communities in Japanese rural areas. First, the validity of segmentation followed by an analysis according to a questionnaire conducted was shown. And we suggested the effective intervention activities to potential users of SNS for each segment based on behavioral factors. Next, I verified the effect after carrying out the intervention activities. Based on the results, according to the stage of diffusion, the introduction guidelines were summarized.

35530**Building Community: Stepping Beyond Typical Large Scale Housing Development Models to Create Better Rural Communities**

Shenuka de Sylva, Victoria University of Wellington, New Zealand

Community is a vital aspect of living, yet most large scale housing developments tend to focus on achieving maximum occupation rather than creating environments within which communities can grow and thrive. This paper explores the key characteristics of large scale (and post disaster) housing developments in Sri Lanka, and their impact on the culture of rural communities.

This paper argues that large scale housing developments should not merely be about providing houses; instead, the focus should also be on the creation of vibrant community environments, and community living spaces. In other words, the paper argues for the significance of spaces in between and around houses, and the effect of these on the wellbeing of people and the progress of the community.

The paper identifies several thresholds of 'community living space' based on traditional, cultural and livelihood practices and discusses the architectural opportunities of these and their value and significance in creating better living environments. The paper concludes with comment on the value of placing a far greater focus on community space planning and design, particularly in low cost housing developments.

35894**Re-Inventing Ourselves: Sustainability and Cultural Identity**

Katsuhiko Muramoto, Stuckeman School of Design, Pennsylvania State University, United States

Much of the current discourse on sustainability is concentrated on technological questions, and often narrowly defined as a matter of energy efficiency. Its ultimate goal is to transform architecture into hermetic, self-sustaining ecological machines by making them effective in reducing consumption while capable of harvesting 'free' sources of energy such as wind and sunlight. This narrow understanding reduces sustainable discourse to matters of supply and demand. What remains unquestioned is man's instrumental relationship with nature: reification of the natural world. This prevailing technocentric approach subsequently motivates a modernism of 'uniformity' in a global context under the guise of slogans such as 'Save our Planet,' only at the price of regional architecture and aesthetic/ethical values. The modernist slogan of 'Form follows function' is replaced by 'Form follows Energy.' Drawing on the work of Heidegger, Merleau-Ponty, and Watsuji, this paper frames the question of sustainability in relationship to the concept of 'co-existence' that elucidates reciprocity between the individual, collective, built environment and nature, and investigates the relationship between sustainability and the expression of cultural identity and aesthetic - a link that is overlooked in our current discourse. I will first examine houses designed by Koji Fujii (1888-1938), considered as the pioneer of environmental design in Japan. Finally, selected contemporary Japanese houses will be explicated as examples of sustainable design that embody the concept of 'reciprocity,' and the implication of 'living in harmony with nature' in a modern and globalized context will be discussed.

Saturday Session II: 10:45-12:45Room: *To be Announced in Final Schedule*

Stream: Economics and Management

Session Chair: *To be Announced in Final Schedule***35392****Risk Management and Profit-Loss Analysis of Foreign Currency Risks During Low-Interest-Rate Periods: A Case Study of NTD/NZD**

Li-Ning Kang, National Quemoy University, Taiwan

Hsing-Kuo Wang, National Quemoy University, Taiwan

Yu-Fang Yen, National Quemoy University, Taiwan

Liang Tsai, National Quemoy University, Taiwan

Jonathan Lu, County College of Morris, United States

In recent years, central banks in many countries have adopted quantitative easing monetary policy which induces lower-interest-rates; take Taiwan as an example, currently the interest rates for short-term (one year or shorter) time-deposits range from .1%~1%. Yet, foreign banks offer short-term deposits with interest rates between 1%~5% which greatly welcome by investors. The drawback for foreign currency deposits is the greatly fluctuated exchange rates. In the past, foreign exchange hedging related literature used the majority of foreign exchange contracts and foreign exchange options for the hedging strategy of the NT dollar against the US dollar, with less research taking financial returns and exchange risk aversion into account. This study aims to explore how enterprises use their short-term funds to buy NZD time deposits considering both the possibility of profits and the avoidance of fluctuated exchange rate risks. This result reveals that buying NZD time deposits fixed with USD index futures is an excellent hedging decision for enterprises to use their funds in a more flexible way considering profits and risk avoidance.

37374**Franchising and Knowledge Based View: A Conceptual Review**

Chin-Chiung Kuo, Tzu Hui Institute of Technology / I-Shou University, Taiwan

Chi-Fang Liu, Cheng Shiu University, Taiwan

Fu-Sheng Tsai, Cheng Shiu University, Taiwan

The present review paper set to understand the adoption of Knowledge-based View (KBV) in Franchising research. Through a SALSA approach (Search, Appraisal, Synthesis and Analysis), 61 papers were located for analysis. We conducted bibliometric analysis in terms of authorship and references analyses, to understand the most privilege journals, impactful author(s), and influential references. The results showed that Entrepreneurship Theory and Practice and Journal of Business Research are two journals with largest number of related articles; that Scott Shane is the most-cited authors (with an average of 1.016 citation); that the Darr, Argote, Epple (1995) paper is the most-cited reference. Moreover, the application of KBV into the research of Franchising contains issues that were categorized into: knowledge transfer (in Franchising context), knowledge creation, knowledge sharing organizational learning, knowledge exchanges, etc. Implications for future studies are discussed.

37376**Internet Fraud's Impacts on Consumers' Economic, Social, and Psychological Losses: An Integrative Perspective of Knowledge Gap, Platform Quality, and Risk**

Chih-Chen Lin, I-Shou University, Taiwan

Kuo-Ming Chu, Cheng Shiu University, Taiwan

Fu-Sheng Tsai, Cheng Shiu University, Taiwan

Internet fraud's impacts should be examined beyond the economic losses. Social and psychological losses are of equal importance in discussing the losses when encountering fraud. We proposed a conceptual discussion with developed propositions from an integrative perspective that combines considerations from knowledge gap, platform quality, and risk management. The conceptual model mainly articulates on a series of relationships among different degrees of knowledge gap, platform quality, and risk management in predicting the various combinative losses in the economic, social, and psychological aspects. Propositions follow. First, when knowledge gap is higher, the economic losses of being cheated on internet will be higher, while lower in the social and psychological losses. Second, when perceived platform quality is higher, the economic losses of being cheated on internet will be lower, while higher in the social and psychological losses. Third, when platform risk management is better, all aspects of being cheated on internet will be lower. Theoretical and practical implications will be discussed.

35234**An Analysis of the Effect of Building Street Light Management Systems on Street Light Management and Repairs: A Case Study**

Yu Lun Liang, National Quemoy University, Taiwan

The Kinmen County has a total of approximately 15,000 street lights. Because of the countless types of street light equipment information, that such information is updated periodically, and that information pertaining to the building and maintenance of street lights in different times is difficult to preserve, control, and access, related departments often spend considerable time to find relevant maps and information prior to sending out their maintenance personnel. Because of the significant number and types of street lights used in the Kinmen County, this study administered a general investigation on the locations, quantities, types, and forms of the street lights to archive relevant basic databases, compile street light numbers and codes, and establish a street light repair system. The objective was to use such an information system to quickly repair street lights and adopt the system concepts to build complete information standards as well as provide the public and related agencies with a convenient repair and maintenance management system. In addition, the said system can be used to conduct relevant operational planning and statistical analyses.

Saturday Session II: 10:45-12:45

Room: *To be Announced in Final Schedule*

Stream: Teaching and Learning

Session Chair: *To be Announced in Final Schedule*

37396

Can Elective Course Be Used to Promote Meaningful Learning at Secondary Level? A Study of Students' Satisfaction in School-Based Course

Yuan-Tai Chen, Taichung Girls' Senior High School, Taiwan

Yong-Shun Lin, Ling Tung University, Taiwan

Yu-Te Wang, Taichung Girls' Senior High School, Taiwan

Chih-Yang Chao, Ling Tung University, Taiwan

The evolution of the traditional disciplinary curriculum was implemented by the education policy in Taiwan school curricula, at secondary level to create knowledge and understanding for the 21st century. This study was the first stage of the three-year research project supported by National Science Council of Taiwan, investigating the effectiveness of school-based elective courses in promote students to develop core competencies and diverse ability.

A total of 17 multiple elective courses, 502 secondary level schoolgirls participated in the study. After 18-week classes in experiment, we interviewed students in depth and collected their evaluation and questionnaires. Through data analysis, the findings showed a statistically significant outcome in Teaching strategy, Learning gains, Reflective learning, and Course cognition, but except Learning attitude outcome dimensions from the survey of students' satisfaction. Participants in the planning of self-learning content and active collection of learning profile two items outcome show no significant, further from the qualitative data analysis that the class time is too short and the first contact with elective courses so that some students cannot master learning skills but most students indicated the elective courses provided them with an opportunity to explore a wide range of subjects. This study proves that elective courses are feasible at secondary level, especially hands-on, exploratory and non-lecture courses could effectively improve students' interest in learning.

35089

The Research of Instructional Objectives of Science Education in Taiwan: An Experience of Biology-Teaching in Junior High School

Chia Jung Hsu, National Yunlin University of Science and Technology (YunTech), Taiwan

The rapid changes bring with the tide of globalization. To promote national development in upcoming knowledge economy and information technology, cultivation of talent becomes an important issue. School education must also be amended and adjusted. In daily life, the relationship of public and technology products is closer and thus the cultivation of scientific literacy is much more important. Therefore, researcher focus on science education in this study. In the traditional school education, teaching emphasis on knowledge learning. Teachers usually use direct instruction as the main teaching method, and students tend to mastery learning to get high scores in pencil-and-paper test. To adapt modern social life, Grade 1-9 Curriculum Guidelines especially shows that students obtain the knowledge and ability by scientific inquiry and experience of life. However, field instructor didn't own this kind of learning process this day. To help instructors produce more profitable instructional events, researcher investigates instruction design of nature science in this study. First, the study used document analysis to discover acceptable instructional objectives of nature science. Then researcher conducted focus group of a group of field instructors to analysis the

instructional objectives. The result is to discover an instructional objectives that reach the curriculum goal of Grade 1-9 Curriculum Guidelines and 12-year Basic Education, and meet the instructor's demand. Researcher expect this study could serve as a sample for science education related area.

35783

A Study on Collaborative Learning Based on Dynamic Group in E-Learning

Jui-Feng Ho, Far East University, Taiwan

Ling-Chin Ko, Kun Shan University, Taiwan

E-learning's dramatic change in information technology (IT) infrastructure has led to fundamental changes in how educations operate and also brought people flexibility, freedom, and equal rights and opportunity to learn. However, not all students could adapt to virtual learning successfully. There are different characters between students in vocational school systems and students in traditional universities in Taiwan. The purpose of this study will be to explore best practices for online learning communities. The systems will automatically dynamic learning groups into learning communities by heterogeneous learners, and learners' profiles and achievements. The experiment will focus on the development of learning communities through online discussion. The researchers hope that design new e-learning platform to improve students' learning attitude and achievements in vocational school.

35975

Examining E-Learning Capability in Chinese Higher Education: A Case Study of Hong Kong

Elson Szeto, The Education University of Hong Kong, Hong Kong

Over the past 15 years, digital technology has ubiquitously penetrated societies around the world, while e-learning is a key driver of widening participation and knowledge transfer in Chinese higher education. As a vibrant, Chinese society in Asia, Hong Kong's new generation university students, perhaps the digital natives, have been learning with e-learning since their basic education. So far, primary to secondary education has embraced advantages of e-learning capacity to advance learning of different subject knowledge. E-learning capacity in higher education is yet to be fully examined in Hong Kong. This project reviews the Government's policy of Information Technology in Education which has largely put forward since 1998. The study reported in this paper is the findings of the policy analysis as a qualitative case study of Hong Kong on potential e-learning capacity to be developed in higher education. In respect of the e-learning capacity developed in schools, this study focuses on: (1) the ICT settings in institutional learning environment; (2) the pedagogic responses to e-learning; and (3) the potential use of e-learning for learning. The findings will inform university senior management, enabling them to effectively enhance institutional e-learning capacity for effective learning and teaching and new knowledge acquisition. Policymakers will be aware of potential development of e-learning capacity for the preparation of future talents for new opportunities in the 21st century.

Saturday Session II: 10:45-12:15Room: *To be Announced in Final Schedule*

Stream: Education and Social Welfare

Session Chair: *To be Announced in Final Schedule***35867****Japanese Avoid Going Abroad? Concerning the Accumulation of Transnational Human Capital in Japan and Its Impact on Social Disparities**

Steve Richard Entrich, University of Potsdam, Germany

Japanese families are known for their massive private investment in supplementary education services. Until recently, however, such investments did only rarely target the increase of students' 'transnational human capital' (Gerhards & Hans 2013). Hence, in international comparison, only a below OECD-average percentage of Japanese students actually studies abroad. However, according to recent data of the MEXT (2016), an increasing number of university students enrolls at universities overseas. Besides making investments in shadow education to increase the chances of gaining access to high ranked schools/universities, it seems as if other ways of improving one's skills, such as the accumulation of transnational human capital through studying abroad etc., have become increasingly attractive " not least because of the possible positive effects on future income. The question addressed here is whether socioeconomically advantaged families invest in transnational capital to gain competitive advantages as a means of maintaining their status advantage?

Based on data of the 2013 Benesse Gakkogaikyoikuhi Chōsa, the determinants for investments in this increasingly valued type of capital is analyzed. Findings indicate that students from well-off family backgrounds who already have experience with staying abroad and with certain types of supplementary education will be most likely to study abroad in the future. Therefore, it seems likely that upper class families make such investments to achieve competitive status advantages.

References: Gerhards, Jürgen & Silke Hans (2013): Transnational Human Capital, Education, and Social Inequality. Analyses of International Student Exchange. Zeitschrift für Soziologie 42(2): 99-117

MEXT (2016): Nihonjin no kaigai ryugaku jōkyō

37395**Investigating the Influences of Online Learning for the Economic Disadvantaged Students in Higher Education System**

Yi-jung Wu, Shih Hsin University, Taiwan

When talking about policies to the disadvantaged students in the higher education system, it is mostly about monetary support. However, from the human capital accumulation point of view, monetary support should not be the only major approach which helps the disadvantaged students enter college, graduate from college, and start a career. The learning on professional knowledge and skills, interpersonal relationships, good working and learning habits, high motivation in learning, and good time management and self-control, are all important capabilities-to-learn in college lives. Therefore, in addition to the traditional approaches in accumulating human capitals, the researcher intends to observe a different and indirect approach in human capital accumulation: digital learning. It is proved that digital learning, when used appropriately, is able to reach better educational achievement in the short term. Moreover, online learning is also able to develop and enhance students' good learning habits and enhance students' motivation. The researcher first collects data from more than 400 students who have taken online courses on campus to get the preliminary findings

about students' views on online learning. In addition to the overall findings to the general student population, the researcher investigates further to the perspectives of the online courses to the social economic disadvantaged students, hoping to provide some policy applications for this specific population.

The accumulation of human capital is not just the advancement of education and professional skills. The researcher intends to investigate whether good working and learning habits, highly self-controlled and motivated attitudes can be cultivated through the process of online learning. If this is the case, online learning approach may become another venue to help the economic disadvantaged succeed in the long term.

37325

Development and Validation of the Instrument for Teachers' Collaborative Professional Work Activity Jihoon Song, Hanyang University, South Korea

Hyun Jung Im, Hanyang University, South Korea

Joocho Park, Hanyang University, South Korea

Myung Hyun Yoo, Hanyang University, South Korea

Yunjung Ro, Hanyang University, South Korea

The purpose of this study is to develop and validate a measuring model on secondary school teachers' collaboration including learning aspects or elements, which lead to their professional developments.

A total of 1030 teachers in middle and high schools in Seoul, the Republic of Korea were surveyed. In order to perform two types of factor analyses, random half-split was considered and then the first half was used for exploratory factor analysis (EFA) and the other was used for confirmatory factor analysis (CFA).

Four categories of teacher collaboration were divided: 1. Sharing teaching methods and knowledge, 2. Observing colleagues' teaching activities, 3. Engagement in team activity and learning, and 4. Interaction for administrative activities. In order to test between four sub-factors and measurement items, two types of factor analyses employed by splitting the sample into two subsamples ($n_1 = 516$; $n_2 = 514$).

First, a relation between four sub-factors and measurement items in the subset 1 was examined using exploratory factor analysis (EFA), and factor-loading value of .50 was used for cut-off value. All loading values ranged from .5 to .904 except one measurement item under factor 2, that is, Engagement in team activity and learning. Second, confirmatory factor analysis (CFA) was performed using the subset 2 ($n_2 = 514$) in order to confirm the measurement model based on the results of EFA. The CFA results support that measurement items fit the structure. As a result, findings indicate that the developed measuring model is reliable.

Saturday Session III: 13:30-15:00

Room: *To be Announced in Final Schedule*

Stream: Aging and Gerontology

Session Chair: *To be Announced in Final Schedule*

35479

Caregiving for Older People in a Foreign Land: The Cultural Divide

Marisa Cordella, The University of Queensland, Australia

Sol Rojas-Lizana, The University of Queensland, Australia

Using Discourse Analysis we explore the connections between ageing and coping in the discourse of senior Spanish-speakers in Australia in relation to the stressor: 'future care'.

Nineteen semi-structured interviews were conducted to identify the coping strategies used by participants when talking about their future caregiving expectations.

The results overall show that immigrants ageing within a different cultural group adopt coping strategies that aim at reconciling needs and expectations about family caregiving. In particular the results indicate that the participants use active and passive coping strategies to deal with stress. Active strategies favour a better connection with family members and community support, while the passive strategies show a level of resignation about what the future holds for them through religious comfort. Although participants tend to prefer a familism approach, in general they also seem resigned to their children having adopted a less family-centred stance. They justify their children's behaviour as an unavoidable product of Anglo-Australian acculturation and modernisation.

A better knowledge of the main stressors confronted by a particular group may contribute to open a broader dialogue on policies, provision of best care and care management that will hopefully address the specific needs of diverse groups in the population.

35491

Elderly Day Care Model in a Thai Community

Kanchana Piboon, Burapha University, Thailand

The purpose of this study was to develop an elderly day care model in a Thai Community, in the vicinity of Burapha University Hospital. This study process was divided into three phases: 1) a situation analysis from public hearing 2) developing an elderly daycare model 3) evaluating the appropriateness of the developed elderly daycare model. Research tools consisted of a questionnaire, open-ended questions and evaluation form of elderly day care model. The data were analyzed by using descriptive statistics, and content analysis. Each phase revealed the following results: 1) The current situation of elderly daycare did not clear and practically stated in both governmental policies and standard guidelines for elderly day care. Stakeholders expected that elderly day care services should be established in the community and the service model should meet the elderly day-care's philosophy, mission, vision and optimal goal and the needs of the elderly and relatives 2) The developed model consisted of three components, including a policy for managing elderly daycare must be explicit and include a plan and strategic management, the multidisciplinary team should participate in developing and operating in the strategic plan, and the elderly and their relatives should participate in the activity planning 3) the developed model was appropriate for using in the community surrounding the university hospital context (93%). To apply this model in other areas, health care providers should consider several issues, including target population, health care service providers, other stakeholders' expectations and needs and area contexts.

34850

Residential Aged Care Services - The Australian Experience

Rodney Jilek, St Elizabeth Home, Australia

Since 1997, the provision of ageing and aged care services to older Australians has undergone significant change and growth. The sector has moved from what was considered a 'cottage industry' to a highly competitive market with a wide range of participants including for profit entities.

This heavily government subsidised sector, which is based upon distinct pillars of accreditation and continuous improvement, compliance and regulation, complaints handling and management is widely considered to be one the most highly regulated aged care systems in the world.

After 20 years of this new system, January 2017 marked the first step of deregulation and the introduction of Consumer Directed Care into community based services. This is due to be followed by a similar introduction into residential services, changes that are expected to fundamentally change the way ageing Australians receive community and institutional based aged care.

This paper will begin by exploring the fundamentals of accreditation and continuous improvement, compliance and regulation and government funding in the Australian aged care sector and then look forward to examine how Consumer Directed Care will fundamentally change this approach.

Saturday Session III: 13:30-15:00

Room: *To be Announced in Final Schedule*

Stream: Energy: Renewable Energy and Environmental Solutions

Session Chair: *To be Announced in Final Schedule*

35647

Sustaining Off-Grid Power or Connecting to the Grid: A Comparative Study on the Implementation of Microhydro Power for Rural Electrification

Heksi Lestari, University of Twente, Netherlands

Maarten Arentsen, University of Twente, Netherlands

Hans Bressers, University of Twente, Netherlands

Budhi Gunawan, University of Padjadjaran, Indonesia

Johan Iskandar, University of Padjadjaran, Indonesia

Pampang Parikesit, University of Padjadjaran, Indonesia

Off-grid technologies have been implemented in rural areas where electricity supply by the national grid is economically infeasible due to high costs and technical barriers. However, the continuation of the stand-alone technologies is quite often challenged by the community's prospect to be connect to the grid. Both community and government prefer electricity supply by the grid over stand-alone technology. But this raises the question about the sustainability of electricity supply at the community level. Is the grid or the off grid supply more sustainable? Therefore, the paper analyzes the sustainability (both in terms of SD aspects and in terms of endurance) of ongoing renewable rural electrification projects, in the prospect of a grid connection of a community. Our analysis compares three cases of microhydro power projects in Bogor Regency, Indonesia and is based on qualitative document analysis, complemented by semi-structured interviews and observations.

The paper explores, firstly, the extent to which each microhydro power project meets a set of sustainability criteria (namely technical, economic, social, environmental, and institutional). Secondly, using Ostrom's Institutional Analysis and Development (IAD) rule-based framework, the paper captures specific institutional conditions influencing the sustainability of each case and analyzes how institutions create ways to overcome obstacles in sustainable rural electrification. Our results show that electricity supply by the grid might be less sustainable than quite often perceived by community and government.

35981

Energy Conservation Strategies: Policy Lessons from the Tokyo Electricity Crisis

Robert Lindner, United Nations University, Japan

The Fukushima nuclear disaster in 2011 triggered a prolonged energy supply crisis in the Tokyo Metropolitan Region and gradually also spread to other parts of Japan. Unprecedented in scale and duration, the supply crisis initiated a multitude of countermeasures and started an ongoing public debate about energy production and consumption in modern societies. Based on anthropological field research and content analysis, the presentation explores how various energy saving and efficiency campaigns were employed in Tokyo to avert blackouts and to raise awareness about energy issues in the general public. The countermeasures proved to be enormously successful, as the mega-city managed to reduce its energy consumption more than 10 percent on average in the years following the disaster. The findings show how energy conservation can be successfully promoted through the interplay of different communication

strategies, involving various societal actors and targeting specific focus groups. The case study provides valuable lessons about energy crises strategies and public awareness campaigns.

35675

Cooling of a Metal Hydride Reactor for Hydrogen Powered Vehicles

Matthew D. Keith, University of Alaska Fairbanks, United States

Sunwoo Kim, University of Alaska Fairbanks, United States

The present research is focused on improving the rates at which hydrogen is absorbed into metal hydride cylinders. Whether the factor under study is the metal hydride material or the heat exchanger structure, there seems to be a lack of study using phase changing heat exchange. This study uses Ti_{1.1}CrMn, a high pressure metal hydride (HPMH) with a low enthalpy of formation, in a simple cylindrical reactor. Regardless, a large amount of heat is still released when the container is charged with hydrogen. To handle the heat generation, phase changing coolant is used to capitalize on the benefits of the heat of vaporization for effective heat removal from the system. The reactor contains 21.37 kg of metal hydride to hold 250 g of hydrogen at 90% reaction completion. Ideally a short charge time of approximately 10 minutes is required for hydrogen powered passenger cars; otherwise the storage system is too slow for the everyday consumer. Using these criteria, an optimization study, with the aid of constructal theory, was completed to choose the best coolant path and fin structure with additional optimization of the volume fraction of the heat exchanger for an efficient charge time.

Saturday Session III: 13:30-15:00

Room: *To be Announced in Final Schedule*

Stream: Environmental Sustainability & Environmental Management: Land Use & Misuse

Session Chair: *To be Announced in Final Schedule*

36031

Effects of Extreme Weather Events and Land Use Change on Urban Ecosystems

Szu-Hua Wang, Chinese Culture University, Taiwan

Min-Han Huang, Chinese Culture University, Taiwan

Urban ecosystems are complex coupled human-environment systems which contain abundant natural resources for breeding natural assets and attract urban assets and consume natural resources, triggered by urban development simultaneously. Land use change illustrates the interaction between human activities and environments factually. IPCC (2014) announces that land use change and urbanization due to human activities are the major cause of climate change, leading to serious impacts on urban ecosystem resilience and risk. Risk assessment and resilience analysis are the keys for responding to climate change on urban ecosystems. Therefore, this research focuses on research review of risk assessment and resilience analysis. The integrated method of risk assessment and resilience analysis will be developed from the aspect of ecosystem based on typhoon precipitation in the Taipei area.

30084

A Methodological Framework for Assessing Tourism Induced Urbanization Towards the Sustainability of the Built Environment

Kereshmeh M.N Roodbari, Universiti Sains Malaysia, Malaysia

Behnam Sarfaraz, Shahid Chamran University of Ahvaz, Malaysia

Badaruddin Mohamed, Universiti Sains Malaysia, Malaysia

Tourism as development strategy, particularly in developing country, leads to dramatic change and reconstructing of the coastal areas. The impulse for attracting tourists and providing the landscape for tourism consumption has resulted in the rapid urbanization of these areas. However, the short time growth should not be overlooked with long term adverse effects. Despite the significant contribution of tourism development in the urbanization process of coastal areas, limited research has taken place into studying the sustainability issues of tourism impacts on their built environment. Understanding the current state of development, changes, impacts, and the underlying factors and pressures is crucial for achieving the sustainability targets in a wider frame. This paper aims to develop a framework to investigate the process of the tourism-induced urbanization and assess it towards the sustainability of the built environment. It seeks to will address the sustainability issues of the built environment of the tourist cities which have been evolved to provide spaces for consumption of pleasure. A set of indicators is assembled from tourism-urbanization theory, physical carrying capacity studies, and sustainable tourism indicators developed by World Tourism Organization. They are structured based on evaluative procedure inspired by DPSIR model.

35950**Establishment and Applied Research on Small Island Eco-Security Assessment Model**

Han-Shen Chen, School of Health Diet and Industry Management, Chung Shan Medical University, Taiwan

Because of the fragility of island ecosystems, island tourism development plans must be thoroughly evaluated by considering the sustainability of the associated ecology, economy, and society. This study evaluated the ecological footprint (EF) (demand) and ecological capacity (supply) of Liuqiu Island in various periods by using the EF model, which was developed on the basis of the theory of ecosystem services. Second, we established an indicator for evaluating eco-security to estimate the eco-security of Liuqiu Island. In particular, we estimated the ecosystem service and eco-security of Liuqiu Island, and the estimation results can serve as references for the responsible agencies to maintain a balance between ecological preservation and tourism development. The empirical results are outlined as follows: (1) The total ecosystem service value of Liuqiu Island increased from TWD\$119.96 million (TWD\$ = Taiwan Dollar (1 US\$ = 32 TWD)) in 2010 to TWD\$163.52 million in 2015, and the ecosystem service function is continually improving; (2) the total EF per capita of Liuqiu Island increased by 6.24-fold from 0.5640 gha/person in 2010 to 4.0845 gha/person in 2015; and (3) the ecological pressure index increased from 0.30 in 2010 to 2.28 in 2015, indicating that tourism and recreation development gradually increased the pressure on the ecosystem, reduced the eco-security level, and severely damaged the environment, thereby threatening the function and structure of the ecosystem.

Saturday Session III: 13:30-15:00

Room: *To be Announced in Final Schedule*

Stream: Economics and Management

Session Chair: *To be Announced in Final Schedule*

35031

Eastern and Western Innovative Business Alliances: From the Perspective of Online Transportation Network Companies in China

Chih Kang Huang, National Quemoy University, Taiwan

Tengyi You, National Quemoy University, Taiwan

China has garnered the attention of businesses from various countries because of its enormous economic market of over 1.4 billion potential customers. Particularly from 2007-2011, the Chinese economy grew at a substantial rate, prompting investments by businesses worldwide. However, this has led to the saturation of the Chinese market, inducing innovative entrepreneurship. For example, Didi Chuxing, a Chinese online transportation network company (TNC) that emerged in 2012, has received the support of Apple and various Chinese businesses and flourished in the Chinese market, where even Uber, a global online TNC, has experienced difficulty entering the market. The attractiveness factors of Didi Chuxing therefore merit further investigation.

35508

From the Battlefield to the Tourist Attraction – Investigating the Changes of Paternalistic Style of Leadership in Kinmen

Mei-Chen Yeh, National Quemoy University, Taiwan

Neng-Huei Lee, National Quemoy University, Taiwan

Chao-Ling Chen, National Quemoy University, Taiwan

Yan-Hui Xu, National Quemoy University, Taiwan

On an offshore island of Kinmen, where intensive artillery fire from across the Strait had rained and there remains a sharp look of place of battle, was stationed by troops of nearly a hundred thousand men at a beginning stage. Owing to the commodity and monetary control by the Government, more commodities were needed than supplied, and the commodity prices were set by vendors freely; that was an incentive strong enough for almost every local house to become a shop. Each of those small shops was individually run by a family. Then, after the number of troops became smaller and smaller in the context of mitigated political tension across the Strait after the lift of martial law, tourists follow. They keep coming to see this place that was once a battlefield and to feel the local culture shaped by and survives warfare.

There are many enterprises from Taiwan introducing modern business modes to Kinmen, and impact these shops are operating in the traditional way. The owners of the local traditional enterprises run predominantly in paternalistic style of leadership, including leading by kindness, by moral and by authoritarianism. We thus conducted questionnaire survey, targeting the businesses in Kinmen, also employed secondary data gathering, to investigate the paternalistic style of leadership in the small and medium businesses there. The findings hereof will assist Kinmen's business leaders in making their decisions in leadership and serve as references in increasing business performances.

35558**From Confrontation to Exchange: Evolution of Coastal Management Around Kinmen**

Shu-Yu Cheng, National Quemoy University, Taiwan

Neng-Huei Lee, National Quemoy University, Taiwan

Hsing-Kuo Wang, National Quemoy University, Taiwan

Mei-Chen Yen, National Quemoy University, Taiwan

Yan-Hui Xu, National Quemoy University, Taiwan

Kinmen was recovered to the Republic of China after the War II, and enforced the martial law at 1948. Then a 40-years confrontation across Taiwan Strait began. During the period of martial law implementation, people on both sides of the Strait ceased exchanges and the coastal management around Kinmen was in the hand of the military. In 1992, the martial law was lifted and the interactions between the people across the Strait resumed. Thus the coastline of Kinmen became open, the duty of management of Kinmen coast was transferred from the military to the Coast Guard. The R.O.C. Coast Guard charged with law enforcement on the coastal waters, marine affairs, and maritime services as an executive agency of coastal management. In the area of Kinmen owing to its vicinity to the mainland of China. Thus Chinese fishermen often fish cross the border. Also find a number of businessmen of China get windfall profits by illegally excavate sand in Kinmen coastal waters give to constructing the Xiang-An Airport on Dadeng Isle. In order to prevent unlawful and banned acts, the coastal administrators on both sides of the Strait are beginning to develop a model of joint law enforcement. This study, with analysis of secondary data, complemented by in-depth interviews, examined the recent cooperative mode of cross-Strait coastal management. Herein we also conducted interviews with Chinese who stayed in Kinmen and violated regulations or laws, to understand their motives in order to identify really effective measures of coastal management.

Saturday Session III: 13:30-15:00Room: *To be Announced in Final Schedule*

Stream: Politics, Public Policy, Law & Criminology

Session Chair: *To be Announced in Final Schedule***36243****New Consensus on Archipelagic Sea Lane Passage Regime over Marine Protected Areas: Study Case on Indonesian Waters**

Maria Maya Lestari, Universitas Indonesia, Indonesia

Indonesia's Archipelagic Sea Lanes (ASLs) is the routes of navigation that used to pass through the archipelagic waters and territorial sea of Indonesia. Every state has the right of ASL's passage. As it is set out in the United Nations Law of the Sea Convention 1982, every foreign ship passes the ASLs is using the normal mode and unobstructed navigation. As the protection to the marine environment is growing, the practice of normal modes and unobstructed navigation will no longer the same. The fact that Indonesia's ASLs is overlapping with the areas protected under the world Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF), Indonesia and international community have a common responsibility to protect and conserve such areas while maintaining the right of ASLs at the same time. This study concludes that concept of normal mode and the unobstructive passage is irrelevant for today because the impact of the establishment of the CTI-CFF should follow by special treatment for international navigation when crossing the Indonesia ASL's area. This special treatment is imperative because of ship speed, machine, ship propulsion, sea flow, junk ship will damage ecosystem of coral reefs and potentially to disrupt sensor of highly migratory fish like whale and dolphin. Therefore, it is argued that new consensus and code of conduct for right of Indonesia ASLs passage is required to facilitate both of international interests.

35892**Social Justice, Concession Regime and Local Politics in South Sumatra, Indonesia**

Vegitya Ramadhani Putri, Sriwijaya University, Indonesia

After two decades successfully improving mangrove forest to be productive rice field, peasant communities in Air Sugihan Districts, South Sumatra, Indonesia, must be threatened by the excessive plantations' expansion through 42.000 hectares in their region. In the end of 70s, it is former mangrove forest which is the forest then converted to be settlement and farm field of transmigrants. Settlers' struggle to survive and develop these deep mangrove environment had been recorded in fruitfully ethnographic reports. Since 2005, plantation enterprises got the legal concessions from local government "" by the legal process that seems collusive. This injustice situation would challenge the principle of social justice. One by one villages must be surrendered by many modus of land acquisitions. Recently only a village which 'still' have rice field: Desa Nusantara. Recently, the village is facing many problems, both internal (such as local conflict among villagers, food shortage scarcity) and external (such as facing arbitrary actions of officials and companies). The paper that summarized from 3 years field research report, will examines how shrinking rice field happen accordingly with massive expansion of plantations "" yet it's impacts local food security, how the destructive works of concession regime towards social justice's deficits, how those situation remains divided communities in many villages "" both pros and cons toward the concessions, and how its accumulation configures local politics.

35667

National Referendums in Croatia and Montenegro: Conditions and Results

Maria Marczewska-Rytko, Maria Curie-Skłodowska University, Poland

The aim of the presentation is the analyse of national referendums in two of postJugoslavia states: Croatia and Montenegro. In relation to Croatia I would like to analyse 3 referendums: independence referendum - 1991, UE membership -2012 and constitutional referendum. In relation to Montenegro I will try to anlyse 2 referendums: the firs independence referendum - 1992 and the second independence referendum - 2006. I would like to compare formal basis, conditions and results characteristics for both countries.

Saturday Session III: 13:30-15:00

Room: *To be Announced in Final Schedule*

Stream: Cultural and Media Studies

Session Chair: *To be Announced in Final Schedule*

35828

Factors Predicting Intention to Use Social Network among Buddhist Monks in Bangkok

Saranthorn Sasithanakornkaew, Kasetsart University, Thailand

This research study on 'Factors Predicting Intention to Use Social Network among Buddhist Monks in Bangkok' has the following objectives: 1. To study correlation between perceived self-efficacy in using technologies, perceived usefulness, perceived ease of use, subjective norm and intention to use social network sites among Buddhist monks. And 2. To study factors that affect intention of the monks to use social media networks. The sample group of this research consists of 400 monks in Bangkok. The research methodology involves questionnaires used in collecting data, analysis of data through the statistical methods of frequency tabulation, percentage, mean, standard deviation, Pearson product-moment correlation coefficient, and multiple regression analysis. It was found that the perceived self-efficacy in using technologies, perceived usefulness, perceived ease of use and subjective norm have positive correlation to the intention to use social network, with statistical significance at the 0.05 level. And all the factors have influence over the intention to use social network, with statistical significance at the 0.05 level. All the four factors jointly explain the variation in the monks' intention to use social network for 44 per cent.

35937

Media Communication in Enhancing the Effectiveness of Knowledge, Attitude and Motivation for Farmers Adoption of Agricultural Innovation in Yogyakarta, Indonesia

Retno Dwi Wahyuningrum, Indonesia Agency for Agricultural Research Development, Indonesia

Gunawan Gunawan, Indonesia Agency for Agricultural Research Development, Indonesia

Effects of communication media influence to the adoption of innovations by farmers are very diverse. This study aimed to test the effectiveness of print media, audio and audiovisual on knowledge, attitudes and motivation of farmers' adoption of chicken farming in the Yogyakarta Province. The study was conducted in the district of Sleman and Bantul regency in November-December 2014, with 171 farmers interviewed were selected randomly. Interviews were conducted using a questionnaire containing 20 questions about knowledge, 20 statements about the attitude and the 20 statements about the motivation of innovation adoption. Data attitude and motivation processed into a Likert scale, then tested for validity and reliability. Differences in the level of knowledge, attitudes and motivation were tested by ANOVA and then regression tested due to determine the influence of age, gender and level of education on knowledge, attitude and motivation adoption. Printed media are significantly the most effective in providing the knowledge, attitude and motivation adoption compared to audio and audio-visual media. Education level factors influence the attitude of the media audience audio and printed media audience knowledge. It's also effect on the education level of knowledge, attitudes and motivation adoption of audio-visual audience. Therefore, in the dissemination of agricultural innovations should use printed media.

35879**The Naked Truth of the Pornographic Market & Consumer Behaviors in Thailand**

Satidchoke Phosaard, Suranaree University of Technology, Thailand

Nuenghathai Khoponklang, Suranaree University of Technology, Thailand

This study aims to investigate the market of a proliferate type of media, pornographic media, which is still illegal in Thailand. It employed mixed methods gathering 1,600 surveyed samples. The investigation includes overview of market environment, consumer, media and behavioral dimensions. Several figures are different among demography. The results reveal an estimation of 230 million US dollars of the pornographic and closely-related industry market size. Viewers mostly watch pornographic media over the internet since it is convenient. The main uses of pornographic media are for catching up the trend of accidental released sexual acts of well-known persons, relaxing and masturbating. The top factors for choosing a pornographic media are reputation, looks, and builds of the persons in the media. Thai pornographic viewers prefer Japanese and Asian actors. They tend to like story-integrated acts rather than pure sexual acts. Viewers are more likely to watch the pornography alone in a private room for viewing quality and privacy. The study found out that even though Thai people watch pornography regularly, they rarely pay for it. For people who are willing to pay, they usually spend less than 30 US dollars per month but sometimes much higher. The majority of Thai people nowadays greater accept sexual permissiveness and willing to legalized the pornographic industry. The study is a pathway to properly steer the pornographic market and social mechanism to be better harmonized in this hypocritical country.

Saturday Session IV: 15:15-16:15

Room: *To be Announced in Final Schedule*

Stream: Aging and Gerontology

Session Chair: *To be Announced in Final Schedule*

35279

Redefining Old Age

Sergei Scherbov, International Institute for Applied Systems Analysis, Austria

Warren Sanderson, Stony Brook University, United States

Most studies of population aging focus on only one characteristic of people: their chronological age. For example, the Old Age Dependency Ratio categorizes people as 'old' at age 65, regardless of whether they were living 50 years ago or likely to be living 50 years in the future. But 65-year-olds today generally have higher remaining life expectancies and are healthier than their counterparts in previous generations. Age-specific characteristics vary over time and place. Focusing on only one aspect of the changes entailed in population aging but not on all the others provides a limited picture that is often not appropriate for scientific study or policy analysis.

The presentation is devoted to new ways of measuring aging that more accurately represent the real world. It will be shown that once more adequate measures of aging are used past aging looks very different and in countries with high life expectancy almost no aging was observed. Future aging trends look much less gloomy when new indicators of aging are used compared to traditional approaches.

The recently developed characteristics approach for the study of population aging will be introduced and used in evaluating differences in aging across space and time. The main idea of the approach is the conversion of different characteristics that reflect people's physical, cognitive or health conditions to a single metric. The hallmark of the approach is the consistent use of changing characteristic schedules together with changing age structures, regardless of the exact way in which the two are combined.

36792

Age, Gender and Fields of Study: Do They Affect the Attitudes of Hong Kong University Students Toward the Elderly?

Alice Ming-Lin Chong, City University of Hong Kong, Hong Kong

The Study

The present cross-sectional survey aimed to examine the attitudes toward the elders among 1,038 Hong Kong university students of various Major studies and to identify the factors affecting such attitudes. Three scales were used, namely the Kogan's Attitude toward Older People Scale (KAOP), the Aging Semantic Differential (ASD) and the Facts on Aging Quiz (FAQ1).

Findings

The results indicate that students generally reported a neutral to slightly positive attitude toward older people. Yet, by interpreting incorrect responses of FAQ1, it was found that 40% of respondents had some negative bias, e.g., they believed that most elders had financial difficulties, lived unhappy lives and were unable to adapt to change. Such bias was found to be associated with their gender and educational background, and might make them less willing to interact with the elders. Bivariate correlation analyses revealed a significant, though weak, positive association between knowledge on aging and attitude.

Hierarchical linear regression models showed that being female or studying either social sciences or health care studies were the best predictors for positive attitudes toward elders, whereas being male or studying either business or sciences were associated with higher prejudice and negative attitudes toward older people.

Discussion

The study suggests that if youngsters have better knowledge about ageing, they will have more positive attitude and less bias towards senior citizens. It is therefore suggested to include teaching of ageing issues in every major study.

Saturday Session IV: 15:15-16:45

Room: *To be Announced in Final Schedule*

Stream: Environmental Sustainability & Human Consumption: Human and Life Sciences

Session Chair: *To be Announced in Final Schedule*

37647

The Path Towards Sustainable Development

Indu Baby, NGO, India

Development is process of change in current system for comfort. Outcome of development can be positive or negative. Only development concept failed and produces damage to lives and its consequences are natural calamities and terrorism.

So the whole world is searching for the path for sustainable development.

Religious values are strong denominator against which all other values could be equated and it is trusted instrument. Different religions advocates for Nature, Spirituality and sustainability.

Hinduism"contains numerous references to worship of divine Nature in Vedas, Purans.

Buddhism"says for survival of mankind has to depend on Nature for his shelter, food, clothing, medicine and other requisites. Buddhism teaches us love for Nature and nonviolence.

Islamism-- Quran says that Allah is the creator of the world. They are told to look after the world for Allah and for future.

Chrisitianism --- teaches us to spread love for Nature, peace and nonviolence. It also teaches us to help poor people.

Jainism --- In the theory of Jainism is that five elements of Nature Prithivi, Jal, Agni, Vayu and Akash are living creatures and must be treated as a living beings. So every religion advocates for the protection of Nature, natural elements and biodiversity conservation.

Gandhiji said,' Earth provides enough to fulfill man's need but not man's greed. For sustainable development while reduce, reuse and recycle is the best concept of sustainable development

New social ethics should be inculcated among the children both in school and home emphasizing concern

35914

The Application of One Health Approach for Household Environment Practice of Dengue Prevention and Control in Phetchaburi Province of Thailand

Wachirawit Parunawin, ASEAN Institute for Health Development, Mahidol University, Thailand

Cheerawit Rattanapan, ASEAN Institute for Health Development, Mahidol University, Thailand

Orapin Laosee, ASEAN Institute for Health Development, Mahidol University, Thailand

Dengue remains a major public health problem in Central region of Thailand. Due to the absence of dengue vaccination, vector control is the only measure to prevent dengue outbreaks. The key element of dengue prevention is household environment practice, preventive behaviors of household members and community participation through collective action by multidisciplinary approach as One Health principle in dengue prevention and control are key successful elements. This study aim will be determine household environment practice of one health application in community among household members for dengue fever prevention and control in highest endemic area of Thailand. Associations between environmental factors, dengue knowledge, attitudes and preventive behaviors of household environment practice based on one health principle and collaboration of community members and household risk of dengue will be conducted by questionnaire. One dengue epidemic province will be selected from central region of Thailand to conduct research. For data analysis, descriptive statistic, chi-square test and multiple logistic regressions will be

employed to identify the predictor of household environment practice. Moreover, data from qualitative analysis will feedback data to community and apply to support and policy recommendation to promote collective action in community within one health principle of household environment practice to prevent and control dengue fever in the central region of Thailand.

35180

Farmers' Perceptions and the Extent of their Adoption of Measures to Manage the Coconut Scale Insect Outbreak in Southern Luzon, Philippines

Dwight Jason Ronan, Mekong Institute, Thailand

A massive outbreak of coconut scale insect recently hit one of the most coconut-productive regions in the Philippines. The rapid spread and wide scale damage caused by the invasive species pushed farmers to adopt various emergency control measures. The study examined the extent of adoption among farmers and their perceptions towards these measures based on a survey of 91 farm households in Tiaong Municipality, Quezon Province.

The study found out that only a few farmers fully adopted the measures recommended by authorities. Reasons for low adoption include weak coordination and institutional support as well as strong opposition from some farmers especially on chemical and biocontrol measures. Furthermore, qualitative data gathered from the field indicate a general lack of interest among farmers to control the invasive CSIs.

T-tests showed significant differences between the perceptions of users and non-users of inorganic insecticides especially on its perceived risks on health, environment, and profit. On the other hand, farmers who decided to adopt biocontrol measures consider the measure to be highly compatible while non-users view the otherwise. Users and non-users of other measures have relatively similar perceptions.

The study shows that farmers' perceptions towards new practices and technologies play a significant role in their decisions whether to use or not use these innovations. Based from these findings, the study recommends authorities to carry out more sustainable and long-term strategies to manage CSIs, improve IPM and ISM services delivery in the country, and strengthen efforts to support Filipino coconut farmers.

Saturday Session IV: 15:15-16:45

Room: *To be Announced in Final Schedule*

Stream: Environmental Sustainability & Environmental Management

Session Chair: *To be Announced in Final Schedule*

37408

Development of an Estimation Method of Energy Consumption and CO₂ Emissions for Regional Travel Transportation

Ruixi Zhao, Waseda University, Japan

Junichi Tabe, Waseda University, Japan

Hiroshi Onoda, Waseda University, Japan

Energy consumption of transportation leads to a large amount of CO₂ discharges. Recently, transportation in tourism draws attention. It is reported that the number of foreigners visiting Japan is increasing, such as there were 8.36 million in 2012 while it became 19.73 million in 2015. Hence, the environment issues like energy consumption and resource in tourism cannot be ignored.

With the aim of achieving tourism sustainability, it is required that tourism ought to be able to promote regional economy and make contribution to building low carbon society.

This study will focus on energy consumption of tourism transportation. The case study is going to be conducted in Chichibu city in Saitama prefecture, Japan. With the reason that they have regional revitalization needs of renewable energy and tourism development.

Previous studies on tourism transportation mainly focus on movement distances and vehicles. However, studies on energy consumption and CO₂ emissions during tourism transportation have yet to be seamlessly achieved.

In this study, with the purpose of developing a suitable estimation method for energy consumption and CO₂ emissions during tourism transportation in a region, the Regional Economy Society Analyzing System (RESAS) is going to be applied for analyzing the regional fluid population and movement.

This method will help to analyse the current situation of regional tourism transportation and provide mitigation plans. Furthermore, it will contribute to create the most optimum mobility including movement distances, population and time.

35465

Feasibility of Using Inherent Inhibition to Achieve Reduced Sludge Production in a Membrane Bioreactor (MBR) For Treating High Strength Wastewater

Yishuai Jiang, Nanyang Technological University, Singapore

Choon Ping Lim, Nanyang Technological University, Singapore

Muhammad Zulhilmi Bin Rahmat, Nanyang Technological University, Singapore

Wun Jern Ng, Nanyang Technological University, Singapore

Wastewater treatment technologies (WWTs) relying on pollutants mineralisation are not necessarily environment-friendly from the holistic perspective. The excess sludge produced by such WWTs also requires additional treatment before disposal and hence incur costs. Nitrification-based processes can save up to 60% of the aeration energy consumed and has reduced sludge production. A stable nitrification process relies on promoting the activities of ammonium-oxidizing bacteria (AOB) over nitrite-oxidizing bacteria (NOB). This study investigated feasibility of using a membrane bioreactor to achieve stable partial nitrification (PN) in a synthetic high strength wastewater (HSWW), with reduced sludge production. An aerobic MBR

(AMBR) was inoculated with an AOB-enriched culture, and operated at 35°C; hydraulic retention time (HRT) 12 h; pH 7.8-8.5; and sludge retention time (SRT) 58 days. The maximum specific ammonia conversion rate reached was 2.16 kg N/kg VSS.d. Average MLVSS was 194.6 mg/L, lower than what is usually observed in MBRs operated at long SRTs. The trans-membrane pressure (TMP) also indicated slow onset of membrane fouling. qPCR results showed that the AOB population was on a decreasing trend (31.9% to 17.4%) when free ammonia (FA) was around 33 mg NH₃-N/L. When the pH range was changed to 7.8-7.9, nitrification increased from 17.3% to 28.7%, and AOB population increased to 33.5%. PN was achieved with minimal sludge production. Preliminary results suggested that FA inhibition could have played a role in reducing the sludge production.

36772

The Implications of Scenarios for Phosphorus Flow From Agriculture and Domestic Wastewater in Myanmar

Cherry Myo Lwin, Ritsumeikan University, Japan, Japan

Mari Murakami, Ritsumeikan University, Japan, Japan

Kyaw Nyunt Maung, Ritsumeikan University, Japan, Japan

Seiji Hashimoto, Ritsumeikan University, Japan, Japan

Agriculture, livestock and fishery can be considered as the main backbones of economy in Myanmar. However, phosphorus (P) used for cultivation and domestic sewage from rural and urban areas is the major source of organic pollutants in Myanmar coastal waters resulting severe environmental damage from eutrophication. Moreover, related concerns have arisen about the rapid depletion of P resources. Therefore, elucidating the amount of P flow into bodies of water is important to ascertain its environmental effects and to formulate methods for the sustainable management of P resources. This study was conducted future trends (2010–2100) of P flows from agriculture and domestic wastewater based on scenarios of numerous parameters that include economic development, population, livestock demand, harvested areas, etc. in Myanmar. Results reveal that P flows from agriculture to the hydrosphere occurred at an annual rate of between 55 Ktpa (thousand tonnes per annum) in 2010, but they are expected to be between 129 Ktpa to 142 Ktpa in 2100. Estimated P flows from domestic wastewater is 15 Ktpa in 2010 and 19 Ktpa in 2100. Urban population growth is a main factor contributing gradual increase in P flow from domestic wastewater but since the most resulted P flow is from agriculture, it indicates that marked reduction of fertilizer use is necessary. Recovery of P from sewage sludge can substitute for a small share of fertilizer use. This research provides a core for the appraisal of P utilization and facilitates determination of important objectives for sustainable P management in Myanmar.

Saturday Session IV: 15:15-16:45Room: *To be Announced in Final Schedule*

Stream: Economics and Management

Session Chair: *To be Announced in Final Schedule***35625****A Research on the Relationships among Role Pressure, Personality Traits, and Job Satisfaction-Personnel Employees at National Universities in Taiwan**

Ya-Wen Su, National Quemoy University, Taiwan

Cheng-Shih Lin, National Quemoy University, Taiwan

The national universities in Taiwan are rather distinctive from the aspects of characteristics, for example, the staff including academic and administrative categories which fit with various compliance systems. Furthermore, Taiwan Governments have been attempting to reform the administrative policies on military and public servants, and to revise the labor-related policies. All the changes have casted severe pressure on personnel employees at national universities. This research aimed to explore the effect of role pressure on job satisfaction, and to examine if personality trait acts as a moderator in-between. We targeted the personnel employees at the 45 national universities in Taiwan and used Linear Regression Analysis to conduct the data analysis. This research contributed in twofold: firstly to suggest the personality traits as effective reference at recruiting employees; secondly, pressure adjustment should be included in the training designs.

35952**Financial Crisis Event Study in the Game Industry**

Bi-Huei Tsai, College of Management, Taiwan

Wei-Jer Lee, College of Management, Taiwan

This explore OTAKU Economic theory in gaming industry. This paper selects events about no-pay leave events which increase employers free time to start "home leisure" consumption, and become 'Home body' which we often hear in the mass media. The phenomenon is called "Otaku economy." This study calculates the abnormal returns during the no-pay leave periods after the financial crisis event of 2008 in the Taiwanese listed video game companies. In mid-September, 2008, after Lehman Brothers went bankrupt, financial crisis gradually occurred in many European and U.S. large banks. Global financial markets were turbulent, the economy continued to decline in Taiwan during this financial turmoil and no-pay leave appeared. Video games, which are easily to be obtained for office workers, are low-cost on leisure and can be directly played at home without additional transportation fees required. As a result, video games were certainly favored during the no-pay leave periods. Thus, the operational revenues of game industry increase during the no-pay leave periods, which stimulate the increase in the stock prices of the game industry. This study discusses whether specific no-pay leave events lead to abnormal returns on game industry during the financial crisis. The investigation results show the significantly positive returns during the financial crisis periods which elaborates the Otaku economy theory.

35916**The Effect of Brand Confusion on Consumers' Decision: A Case of Sanitary Napkins Products**

Tzu Ni Chen, Ming Chuan University, Taiwan

Shu Fen Yu, Ming Chuan University, Taiwan

Brand confusion takes place when consumers misidentify a brand A to a different brand B. Its consequence may change consumers' brand decision by purchasing the wrong brand, brands in promotion, or even postpone the purchase, which is harmful for brand revenue. Literature has showed that product similarity is one of the most common causes for brand confusion to occur in a mature market. A survey from Technavio demonstrates that the global sanitary napkin market was dominated by the menstrual pads segment with approximately 80% of the market share in 2015. Focusing on similarity confusion, this study aims to examine how individual differences in product involvement (brand cognitive involvement, brand affective involvement, product cognitive involvement, product affective involvement), gender and age influence their purchase decision in sanitary napkins products. A survey was conducted at five metro stations in Taipei. The method of stratified proportional sampling was used to increase the representative of the population in Taipei. 600 valid questionnaires were obtained. The study results demonstrate that most of consumers showed brand confusion with sanitary napkins products due to product similarity. Males, younger consumers and consumers with lower level of product involvement tend to have higher level of confusion than their counter parts. Furthermore, their coping strategies are varied depends on their level of involvement and brand confusion. Consumers with higher level of brand confusion tended to postpone their purchase decision. The higher level of the product involvement, the more likely have the information searching behavior.

Saturday Session IV: 15:15-16:45Room: *To be Announced in Final Schedule*

Stream: Sociology

Session Chair: *To be Announced in Final Schedule***35927****The Development of Salaya through Agricultural Livelihood Transformations**

Tawan Wannarat, Silpakorn University, Thailand

A number of recent studies similarly indicated dramatic change in the traditional rural society: subsistence farming was not the main way of life in Thailand rural anymore. Agricultural production is aimed to produce for sales at market rather than for subsistence. Salaya was one of those rural areas transformed over recent decades as the consequence of the expansion of urbanization, the decrease of agricultural land, the mobility of labour and migration. The research aimed to study economic transformation "changing in way of living in a case study of Salaya- in the peri-urban area close to Bangkok, Thailand. The research applied a case study approach through observation, participation and documentation. The study found out that there are changes in people livelihood in various types of income earning which led to a decrease in the number of farmers and agriculture areas, and the emerging of new styles of entrepreneurs who transform themselves from agricultural labour. As a result of the process, the alteration in living of the residents of Salaya was regarded as crucial in promoting basic understanding of further convoluted issues such as the shifts in people's attitude and social relationships.

35429**Innovative Practices of Christian Activism in Hong Kong's Umbrella Movement: Perspectives from Social Movements and Culture**

Shun-Hing Chan, Hong Kong Baptist University, Hong Kong

The Umbrella Movement in 2014 was an important event in the history of democratic movements in Hong Kong. Christians were an integral part of the Occupy Central with Love and Peace Movement and the subsequent Umbrella Movement. Using the theories of social movements and culture, this paper examines the innovative practices employed by Protestant groups competing for Christian representation and the language of social justice in response to church leaders who disputed the movement. The refutations by the Protestant groups were also acts of opposition in reaction to the Chinese Government's control of universal suffrage. The case of Protestant groups in the Umbrella Movement is a good example in exploring cultural analyses of social movements in the context of Asian cities and countries.

35381**A Research on the Relationship between Ethical Climate and Organizational Performance in Charity: The Moderating Role of Family Conflicts**

Chia Jung Lee, National Quemoy University, Taiwan

Hsing Kuo Wang, National Quemoy University, Taiwan

Charitable organizations possess their unique social missions and beliefs; most of them aim to serve and help those whom cannot be assisted by formal policies. This research defines charitable organizations as legal organizations officially recognized by governments which provide money, actual goods, and labor to the needed. In this research, we choose the charitable organizations in Taiwan as research targets. We

expect to have depth-interviews with 4-6 organizations. The research explores the relationship between ethical climate and organizational performance with the moderating effect of family conflicts. The past research found that passionate volunteers are important assets within charitable organizations; furthermore, the ethical climate influenced organizational beliefs and eventually affected the members' ethical decisions and behaviors. Moreover, participating in charitable activities is equivalent to taking an extra work and possibly share family resources (namely, time, energy, and money). Hence, this research will also explore the impact of family conflicts on ethical climate and organizational performance. The expected findings include that ethical climate has a positive influence on organizational performance and the family conflicts have moderating effects on the relationship of ethical climate and organizational performance.

Saturday Session IV: 15:15-16:45

Room: *To be Announced in Final Schedule*

Stream: Art & Design

Session Chair: *To be Announced in Final Schedule*

35861

Epistemology of Sociology of Art

Poonam Gandhi, FLAME University, India

The discipline, Sociology of art, was formalized in the twentieth century and sociological approaches to examining arts are as recent as the early nineteenth century. This paper examines the developments in the field of sociology of art and an attempt is made to review the contribution of contemporary sociologists to understanding the relationship between art and society. It also critically assesses the theoretical inputs contextualizing the significance of the field in contemporary times. This research paper highlights the significance of applying sociological approaches to art forms and the production of knowledge thereof. The attempt is to address the following questions: How has the discipline contributed to the knowledge base on art and society relationship? What are the methodological issues that have been debated upon? Which are the current theoretical approaches likely to provide insights into the elusive world of artists?

Howard Becker's 'Artworld' is a seminal contribution to the field which hitherto had the tendency of examining art through an elitist lens. Becker's 'art as a collective activity' is acquiescent to studying art sociologically. Bourdieu's 'Habitus' is another influential and relevant concept which refers to the cultural capital. The concept includes habits, skills, and dispositions that people possess as a result of their life experiences. This paper is based on secondary sources and draws attention to the significant contributions of sociologists and social scientists to the field of Sociology of Art. This research paper facilitates contextualizing art and society relationship through sociological investigations of varied art forms.

35528

Resilient Living Environments: Identifying a Design Approach to Creating Housing Suited to Culture and Context

Shenuka de Sylva, Victoria University of Wellington, New Zealand

Arnaud Leurquin, Victoria University of Wellington, New Zealand

This paper's focus is on identifying a system for devising and implementing a culture and context specific planning and design approach to creating the right low cost housing solutions for sites prone to flooding and ground instability. Two sites are explored, one in Sri Lanka and the other in Nanjing, China.

The paper first presents the culture and context specific approach for each location, and then compares and analyses these. While the one for Sri Lanka takes a more direct design practice focused approach, that for Nanjing is more theoretical and academic. Each approach is defined by the designer's own cultural background, and knowledge and understanding of the local context, culture and people. The intention of this comparison is to highlight the uniqueness of each contextual situation and the significance of having a specific solution, appropriate to site, and driven with awareness of the designers own limitations and strengths.

The solutions presented are compared for similarities and differences and then analysed for potential for adaptability to the other sites, predominantly from an environmental suitability perspective, and in this sense the ability to transfer the approach and solution to another contextual environment.

37564**The Place of Artistic Innovation: Local Area Characteristics and Arts Growth In Arles**

Elena Raevskikh, French National Center for Scientific Research, France

Located in the south of France, the city of Arles has a rich and diverse history: the impressive Roman monuments get along with the Medieval heritage, the Van Gogh's paintings prototypes and the Camargue natural scenery. However, after several economic crises during the 1980-2000's, Arles is currently one of the poorest French agglomerations, with an important unemployment rate and a low-income household. Since 2010, the Swiss-born art patron, Maja Hoffman, has bet to enhance the economic development of Arles by transforming the city as the new place of artistic innovation. The LUMA Foundation designed by Frank Ghery will be opened in 2018 in the old industrial district of Arles and will become one of the most ambitious arts and artistic innovation hubs in France. The new iconic structure is called to create a 'Bibao effect' by attracting in Arles the international economic resources, human capital and new investments. This paper brings together ethnographical, cartographical and statistical methodologies to analyze the ways that the LUMA Foundation impacts the Arles urban area. How the dynamic interplay between economic and political context, institutional arrangements, and social networks affect the urban transformations? How do the new cultural policies impact the territorial attractiveness? What factors favor or create obstacles for the social assimilation of artistic innovations by the target population?

Saturday Spotlight Presentation: 17:00-17:30Room: *To be Announced in Final Schedule***37161****Applying a Rights-Based Approach in Investigating Repatriation of Fukushima's Nuclear Refugees**

Jane Singer, Kyoto University, Japan

The complex human and natural disaster -- earthquake, tsunami and nuclear meltdown -- that occurred on March 11-13, 2011 caused the evacuation of 180,000 residents of Fukushima prefecture, Japan. Today, more than 80,000 compulsory and voluntary evacuees remain outside their original communities. For some of the original 11 affected communities the evacuation order has been lifted after extensive decontamination efforts and residents are being urged to return. Yet despite government privileging of rapid repatriation, as of January 2017 only 13% of the evacuees have returned to the five communities where evacuation orders have been lifted. Although residents are ensured that health risks of repatriation are negligible, expressed concerns about health and safety issues and economic and social community sustainability, along with eroded public trust in official assurances, have contributed to few returning, especially young families. Few studies have been published examining the long-term economic, social and policy implications of the Fukushima evacuation experience and future prospects for repatriation. Drawing on interviews with compulsory and voluntary evacuees and focus group discussions with evacuees who have already returned to original communities this paper applies a rights-based framework to discuss repatriation and engagement in re-articulation of long-fragmented communities.

Saturday Spotlight Workshop: 17:45-18:45Room: *To be Announced in Final Schedule***35965****Using Mindfulness Practices to Improve Mental Health and Address Unconscious Bias**

Kamilah Majied, Howard University School of Social Work, United States

This workshop will guide participants through developing the skills to use mindfulness -based interventions to improve mental health and facilitate cross-cultural conflict resolution. The workshop will open with an overview of the broad array of international research that identifies the positive impact of mindfulness-based practices on mental health and social functioning. There will also be an overview of the literature and best practices regarding mindfulness-based conflict resolution and mindfulness-based social justice action. The workshop will contain several didactic discussions of various types of applied mindfulness practice and then guide participants through experiential activities that allow them to practice using the techniques. For example, the presenter will discuss the clinical literature and mental health practice research and describe how mindfulness is used to become aware of emotions that may be slightly outside of conscious cognition. Then the presenter will lead experiential exercises that guide participants through raising their emotional awareness and managing emotional material through diaphragmatic breathing and other mindfulness techniques. There will be an overview of how mindfulness can be used to gain awareness of bias, prejudice, and discriminatory ideas and then participants will be guided through an exercise that allows them to explore their unconscious bias using mindfulness practice. Finally, there will be an overview of the process by which mindfulness-based interventions are used to facilitate cross-cultural conflict resolution and participants will have an opportunity to observe and practice this process as led by the presenter.

Sunday Session I: 09:00-10:30Room: *To be Announced in Final Schedule*

Stream: Aging and Gerontology

Session Chair: *To be Announced in Final Schedule***36957****Rural-To-Urban Migration of Young Adults and Its Impact on Elderly Parents in Rural China**

Zhen Liu, Brown University, United States

China is aging at unprecedented rate. Meanwhile, massive rural-to-urban migration has changed living arrangement of rural households. Due to the strict household registration system, the elderly are often not able to move to cities with their migrant children or not willing to migrate with their children to cities due to other cultural or economic reasons. Yet, China's long-standing weak pension system for the rural population makes the large rural elderly population remain highly dependent on their children for support. Using 2011-2013 China Health and Retirement Study, this paper aims to answer the following questions: 1) How do migration and associated remittances affect rural elderly parents left behind in terms of self-reported health as well as psychological well-being (measured by CESD-style depression scale)? 2) Does migration affect elderly parents' well-being differently when all children migrate out in comparison to when some children remain in the origin? 3) How do community factors(public safety net programs) mediates some of the potential impact of massive rural-to-urban migration of young adults on the rural elderly left-behind? Preliminary results based on mixed-effects multilevel models controlling for community-level and household characteristics suggest that the impact of having migrant children on the elderly's physical health is limited, though remittance from migrant children is associated with improved the elderly parent health. However, having all children being migrant is associated with higher levels of depression risk among rural elderly in China. Community factors such as SES and out-migration prevalence also have significant mediating impact on elderly's health outcomes.

36316**Activities of NGOs in the Field of Social Welfare in Asia**

Yuki Yokohama, Kanto Gakuin University, Japan

The purpose of this report is to study future development of social welfare services by NGOs in Asia. In particular, this report focuses on Hong Kong where economic activities are robust and charitable activities have been closely affiliated with China and Taiwan in recent times.

Through literature research, the history of charitable activities and the relationship between the government and NGOs were analyzed based on a variety of already published documents on NGOs in Hong Kong and China.

This analysis shows that, in Hong Kong, there was a historical circumstance where mutual support activities among immigrants from mainland China had been actively conducted since British rule, which provided the basis for present NGOs in Hong Kong society. In contrast the social security systems and social welfare services of the Hong Kong Government are not established unlike those in Japan and most of the services are entrusted to NGOs in the private sector. In addition, in terms of the government subsidies to NGOs, it has also been revealed that the government based on the economic conditions of the time does not support all the NGOs. Against the backdrop of the falling birth rate and the aging population in Hong Kong attention should be paid to how the relationship between the Hong Kong government and NGOs and the government's social welfare policies will develop in the future. Furthermore, it is noteworthy how NGOs will

change under the influence of China in the years to come.

36909

A Question of Debate: Four Pillars or Five Pillars Old Age Protection in Hong Kong?

Gigi Lam, Tung Wah College, Hong Kong

Yuruo Yan, Southwestern University of Finance and Economics, China

Edward Jow-Ching Tu, The Hong Kong University of Science & Technology, Hong Kong

Hong Kong now adopts four pillars old age protection which comprises a publicly managed, non-contributory and tax- financed social security system (including Social Security Allowance Scheme and Comprehensive Social Security Assistance Scheme), a funded contribution scheme (i.e. Manual Provident Fund), voluntary personal savings and public healthcare and housing services.

The statistics compiled by the Government of the Hong Kong Special Administrative Region (2013), however, provided clues that the four pillars old age protection is unable to alleviate the aging of poverty. The Social Security Assistance Index of Prices compiled by the Census & Statistics Department from 1972 onwards also unanimously demonstrated that CSSA recipients assigned more than 50% of total expenditure to food.

The aging of poverty calls for an urgent need to revise the outdated old age protection model. In the public consultation exercise, The University of Hong Kong (2014) introduced the additional pillar of non-contributory social pension and assistance. Conceivably, the proposed five pillars old age protection generated a contentious debate. The HKSAR government again sparked another round of public engagement exercise on retirement protection on 22 December, 2015 to gauge the public opinions about old age protection. The incessant consultation exercise disappointed most of the people because of the explicit reservations expressed by the government over the proposals. Hence, the government should abandon the narrow-minded mentality and forge the cooperation amongst government, individuals and employers.

Sunday Session I: 09:00-10:30

Room: *To be Announced in Final Schedule*

Stream: Economic Sustainability: Sustainable Businesses and CSR

Session Chair: *To be Announced in Final Schedule*

35868

Integrating Environmental and Social Sustainability in Public-Private Partnerships in Infrastructure: Focus on Effective Strategies in Asia

Jean-Isamu Taguchi, Graduate School of Law - Nagoya University, Japan

This paper investigates the inclusion of environmental and social (E&S) sustainability in Public-Private Partnerships in infrastructure (PPPs). These partnerships involve long-term and complex contracts between a public authority and private parties to deliver infrastructure services, in which the private party bears significant risks. Multilateral development agencies and international organizations, for instance ASEAN, strongly promote PPPs to achieve sustainable development. At present, international organizations' resources and guidelines, as well as the literature focus primarily on the financial aspects of PPPs and pay little attention to the environmental and social sustainability of these projects. However, several Asian countries have effectively included E&S aspects in PPP projects or PPP legislations. Drawing on several projects in Laos, India, and Philippines, this paper analyses effective strategies that could be used to integrate environmental and social sustainability aspects into the legal and regulatory frameworks of PPPs. First, this paper investigates how sustainability issues are included at each stage of the PPP cycle, emphasizing the significance of E&S criteria in attributing the PPP project. Second, the paper highlights the tools and contractual mechanisms to enhance public participation and benefit sharing in PPPs, such as community development agreements, or community ownership schemes. These mechanisms not only increase acceptability of PPP projects by affected communities, but can also yield secondary benefits on climate change or gender policies. Based on this analysis, the paper finally suggests recommendations to integrate environmental and social sustainability, so that PPPs can become a tool to harness sustainable development in infrastructure projects.

37234

CSR Activities and Employee Perceptions in Family-Run Businesses in Eastern Thailand

Sapanna Laysiriroj, University of Surrey, United Kingdom

Walter Wehrmeyer, University of Surrey, United Kingdom

Richard Murphy, University of Surrey, United Kingdom

Many (Thai) scholars have suggested that the concept of Corporate Social Responsibility (CSR) was introduced to Thailand by large foreign companies, many of which have active and typically formalised CSR programmes. However, family-run businesses in Thailand (FRBT) often practice a different form of CSR, driven by a desire to 'give back to society', influenced by religion and culture. Previous studies have stated that CSR practices may vary between different firm types. This paper explores differences in approach to, and practices of, CSR in FRBT, in particular sectoral differences how different business sectors of FRBT practise their CSR activities and how such activities are perceived by their employees.

The research is based on 2292 returned questionnaires from employees of 28 FRBs from the hotel, fruit processing, and jewelry sectors in Eastern Thailand. Overall, the results show strong appreciation of the intrinsic CSR activities with interesting gradients across 3 FRBT sectors. Perceptions of CSR practice were clustered into CSR Inactive, CSR Active, Caring, Moral Owner and No CSR. It appears that there are clear

differences between the sectors, with staff from the jewelry sector appear happier than others, likely because they appreciate the strategic intent of the CSR activities and have better awareness of the business owners' generosity. Employees from the fruit processing sector appear the most disaffected likely because they perceive less CSR actions of their company. Finally, CSR awareness and perception of employees in the hotel sector are

34833

Governance Impact on Innovative Entrepreneurship Policy in Clusters and the Role of Technological Diversification in Japan: Bioenergy alongside Forestry Robotics

Phillip Tolar, Ritsumeikan University & Graduate School of Technology Management (MOT), Japan
 Shuichi Ishida, Ritsumeikan University & Graduate School of Technology Management (MOT), Japan
 Kota Kodama, Ritsumeikan University & Graduate School of Technology Management (MOT), Japan

The literature draws attention to innovative entrepreneurship policy desirability (IEPD) within clusters in Japan, and views it as a necessity in governance effectiveness (GVE), in order to insure nationwide economic growth through bottoms-up technological diversification orientation (TDO), making use of forestry robotics alongside biomass and bioenergy in resource-rich rural areas of Japan that possess a satisfactory mix of materials. The primary aim of this study is to propose a framework in which the GVE indicator is associated with IEPD, and influenced by TDO. Data collected from participants in Japan were analyzed using structural equation modeling which supported the hypotheses. TDO can have a great influence on IEPD when governments are made fully aware of the firm's technological orientation in advance, thus allowing them to respond effectively. Therefore, this study offers the following contributions: (1) it advances studies which relate GVE and IEPD by showing that TDO has a significant impact on IEPD, however, the relationship between TDO and GVE could be improved by firms communicating their diversification intentions to governments in advance, thus making governments more effective; (2) and it shows that the reflective model is both robust and prototypical in explaining innovative entrepreneurship policy desirability and governance effectiveness as it pertains to the diversification of technologies from the bottoms-up in Japan.

Sunday Session I: 09:00-10:30Room: *To be Announced in Final Schedule*

Stream: Social Sustainability & Sustainable Living

Session Chair: *To be Announced in Final Schedule***35086****Understanding Corporate Social Responsibility (CSR) Among Small Businesses Using Social Capital Theory for More Socially Sustainable Policies**

Teik Aun Wong, INTI International College Penang, Malaysia

Stakeholder Theory is the dominant theoretical framework used in scholarship on Corporate Social Responsibility (CSR). This theory has its genesis from the analysis of large corporations and is suitable when applied to them. However, in the context of Corporate Social Responsibility (CSR) among small business the appropriateness of Stakeholder Theory is debatable. Small businesses are structurally different from large corporations with distinct local characteristics. It is questionable Stakeholder Theory is adequate to satisfactorily explain the motivations and behavior of small businesses. A qualitative research on this phenomenon of Corporate Social Responsibility (CSR) among small business was conducted in Jelutong wet market in Penang, Malaysia. This field-site was selected for its wide diversity of small businesses in terms of trade, ethnicity and gender of the business operators, and length of time in business. Thirty (30) semi-structured interviews were conducted and a framework of phenomenology in the analysis of the data was employed. The findings indicate that Social Capital Theory is arguably the more appropriate theoretical framework to understand Corporate Social Responsibility (CSR) among small businesses in Jelutong wet market. The implications of this finding are discussed. With Social Capital Theory as the theoretical framework more socially sustainable policies are recommended to foster Corporate Social Responsibility (CSR) among small businesses. Consequently the scholarship on Corporate Social Responsibility (CSR) among small businesses is deepened considerably.

37393**Analysing the Affecting Factors of Comprehensive Utilizing Mineral Resources in Hubei Province, China**

Wang Yongqing, China University of Geosciences, China

Wang Laifeng, China University of Geosciences, China

The comprehensive utilizing mineral resources plays an active role in utilizing and protecting mineral resources, which is great significance in promoting the transforming model of economic development from "extensive" to "intensive", achieving optimal allocation of mineral resources and sustainable development. Based on the survey data from nearly 3,000 mining enterprises in Hubei Province, this paper divides the influencing factors into the conditions of resources, technology of comprehensive utilization and economic incentive policies. The logistic model and OLS model are used to evaluate the influence of various factors on the comprehensive utilization. The results prove that: 1) The rate of comprehensive utilizing mineral resource is low, but there are a great potential and more improvable room for comprehensive utilization. 2) Conditions of mineral resources determine the technology of comprehensive utilization, and it is an important factor affecting the comprehensive utilizing resources. 3) The economic incentive policies and the financial fund will significantly for mining enterprises increasing the investment in comprehensive utilization. Above all, the recommendations m be made as following, 1) Increasing the scope of special projects, it will include all types of mines gradually from the point and surface to the whole. 2) Increasing investment of advanced and applicable technology, building a platform for exchange and promotion the advanced and applicable

technology to improve the overall level of utilizing mineral resources. 3) Adding and reifying policies of conservation & comprehensive utilizing of mineral resource, it contains regulation or economic punishment on enterprises with low levels of comprehensive utilizing.

37415

KMUTT Sustainable University from Policy to Student's Green Heart

Thanakarn Khumphai, King Mongkut's University of Technology Thonburi, Thailand

Suchada Chaisawadi, King Mongkut's University of Technology Thonburi, Thailand

Sustainability is one of the major challenges for current and future generation of students and staff. King Mongkut's University of Technology Thonburi (KMUTT) policy is committed to be a Green University for sustainability providing a role model on Energy, Environment, Safety Management Systems ;to educate /encourage/ promote the development of sustainability leadership 'Green heart 'which become change agents for helping the community and society have a better quality of life and to strive for continual improvement. To achieve the commitment, KMUTT transform their campuses to be an ideal environment for developing awareness and innovative solutions to problems that will improve the world for current and future generations., promoting the application of all these activities within the university and encourage students to do their part to protect environment and natural systems by educate and encourage them to learn outside classroom. In the year 2016, KMUTT developed 2,685 "Green heart" to lead their sustainability activities within our university and communities surrounded which can help to achieve sustainability for all in the near future.

Sunday Session I: 09:00-10:30Room: *To be Announced in Final Schedule*

Stream: Economics and Management

Session Chair: *To be Announced in Final Schedule***37337****Evaluation of Total-Factor Carbon Emission Performance and Technology Gaps in China****Yuqi Li, China University of Geosciences, China**

Reducing carbon emissions contributes to mitigate global climate warming. Based on meta-frontier, this paper applies the non-radial direction distance functions to propose an alternative approach to measure total-factor carbon emission performance and technology gaps. We adopt the proposed approach to investigate carbon emission performance and technology gaps ratio of China's 30 administrative regions between the years 2005-2014. Moreover, the decomposition of carbon emission performance loss and the correlation analysis of the actual and the potential carbon emission performance are quantitatively demonstrated. The results indicate that, firstly, the overall level of total-factor carbon emission performance in China is at a relatively low level, and the regional difference is positively significant. Secondly, considering the unbalanced development in different regions, we take Province Per Capita Income as the moderator variable, we find that high income regions and lower-middle income regions perform better than upper-middle income regions regarding carbon emission performance, and the lower-middle income regions generally had the lowest technological levels. Furthermore, both the technology gaps and insufficient management impact carbon emission performance negatively, whereas insufficient management is a dominant factor.

35825**Towards an Improved Theory of Disruptive Innovation: Evidence from the Personal and Mobile Computing Industries**

Juan Sebastian Montoya, Doshisha University, Colombia

Toshiro Kita, Doshisha University, Japan

This research studies the concept of disruptive innovation, its patterns, and the mechanisms that cause it. By using quantitative and qualitative evidence from the personal and mobile computing industries, this research serves to corroborate Clayton Christensen's disruption theory, the main theory proposed today as an explanation of this phenomenon. It identifies the strengths and weakness of the theory, and builds upon it in order to propose an improved theory of disruption.

In order to measure disruption in the personal and mobile computing industries this research collected data for 58 product lines, including personal computers and smartphones developed by companies in America, Europe, and Asia from 1974 to 2015. A correlation analysis validated the foundations of Christensen's model, however it also revealed many unexpected results such as the importance of radical innovation and architectural innovation, and the possibility of self-disruption. Further qualitative historical analysis corroborated these results.

The main finding of this research was identifying three different types of disruption and proposing an original categorization for them: 1) disruption by creation of a new market, 2) disruption by 'mainstreamization' of the market, and 3) disruption by commoditization of the market. This represents an improvement over the current theory.

Finally, this research analyzed a phenomena previously not explained, and coined a new concept for it: 'anticipation of the technology life-cycle', which describes the adoption of new technologies earlier than optimal in order to leapfrog competitors. This mechanism serves as a causal explanation of disruption, and complements the existing theory.

35226

Case Study on the Organizational Structure Design Based on Technological Innovation Platform of Core Enterprises within the Distributed Innovation Networks

Yayan Zhu, Tianjin University of Finance and Economics, China

Research from a variety of perspectives has argued that technological innovation no longer takes place within a single organization, but rather is across multiple institutions or firms within a distributed network. This paper only discusses one kind of the distributed innovation networks that the ones have a core enterprise as the innovation platform provider. This study focuses on the organizational structure and its mechanism for the core companies to ensure and accelerate technological innovation within the distributed network. The methodology adopted in this study is case study. A diversified transnational firm is chosen to be the objective of this study, which is a high-tech in Asia and a core enterprise of a distributed innovation network across the world. This paper considers the nature, organs and their effects of the organizational structure for the innovation platform of the core enterprise. From this, we contrast and analyze the sources, motivation and connection of external innovation, and thereby provide a framework for the organizational structure design of the core enterprises of the distributed innovation networks.

Sunday Session I: 09:00-10:30Room: *To be Announced in Final Schedule*

Stream: Politics, Public Policy, Law & Criminology

Session Chair: *To be Announced in Final Schedule***37364****Prevention and Eradication of Corruption through Optimization of Legal Research in College**

Edita Elda, Universitas Indonesia, Indonesia

Current world progress has brought sophisticated influence in the development of the level of corruption crimes. Today, law enforcement corruption eradication is highly anticipated for the direction of change that much better. The role of the College and in creating the next generation of the nation has a very big role for such changes. In the social field, including legal research, is a material that can create change towards a direction of improvement in law enforcement. Legal research can give meaning and contribution in the spirit of law enforcement that aligns scientifically. The problem is how to create optimization studies law in College can be an innovation in the prevention and eradication of criminal acts of corruption. With regards to the rampant growth of corruption in every sector, certainly brought a bad impact to the achievement of national development as a whole. The role of academics through thought-provoking research can give donations for research as strategic measures to be able to prevent and provide recommendations in the eradication of criminal acts of corruption. Legal research study results may provide direction toward improvement. Therefore, the need for optimizing the results of legal research for better law enforcement in the future, particularly in the prevention and eradication of criminal acts of corruption.

37423**Public Enterprise Subsidiary in Corruption in Indonesia**

Fauzan Prasetya, Universitas Andalas, Indonesia

Indonesia restructuring of the Public Enterprise through the Government Regulation Number 72/2016 on the Amendment of Government Regulation Number 44/2005 on Procedures for Investment and Administration of the state capital in the Public Enterprise and Company Limited. This caused controversy. The decree stated that the Public Enterprise subsidiary treated equally with the Public Enterprise in carrying out public service or get a specific policy of the country, including the management of natural resources with a particular treatment as applied to the Public Enterprise. This opens the possibility of equal treatment of equal treatment in terms of financial accountability. The problem is, if tort by the Board of Directors Public Enterprise subsidiary causing damage an act of corruption. The method in writing is normative. State finances in the explanation of Law Corruption is a whole wealth of the country arising in the possession, handling and accountability of SOEs. Given these conditions, the impairment of the Public Enterprise subsidiary also included losses to the state as equivalent the Public Enterprise pursuant to an Act of Corruption.

35457**Political and Legal Challenges in Reforming the Structures of the Indonesian Bureaucracy**

Mas Pungky Hendra Wijaya, Curtin University, Australia

The purpose of this paper is to identify challenges to the reform of the Indonesian public sector, particularly in the area of institutional reform, and ascertain the extent to which political and legal aspects influence such reform. In addition, this study will propose a legal framework for establishing effective and efficient government organizations. The large structure of the Indonesian public sector has significant potential overlapping functions between institutions, which results in ineffective and inefficient governance. Reforming government institutions in Indonesia often faces political and legal obstacles. In the past, politicians or high-level officials have sometimes resisted reform measures in the interests of preserving their position in the administration. Moreover, there are laws which provide for the preservation of certain ministries or agencies; reforming these often involves difficult political processes.

A qualitative approach has been taken in order to meet the aim of this paper, namely to identify the political and legal challenges in conducting institutional reform and examine the extent of those challenges that shape the governance structure of the Indonesian bureaucracy and how they constrain public sector reform in Indonesia. This research is a socio-legal study that combined political science, public policy and management, and legal research in the area of administrative law. The benefit of using other disciplines to support legal research have been widely known; and socio-legal research expands legal discourse which guides the course of the research and methodologies to produce evidence in answering research questions.

Sunday Session I: 09:00-10:30Room: *To be Announced in Final Schedule*

Stream: Sociology

Session Chair: *To be Announced in Final Schedule***35993****The Relationship between Perpetrator, Victim and Bystander**

Yuki Nakamura, Keio University, Japan

This paper explores the issue of accountability from the perspectives of agency and structural violence. Agency as the capacity for social action and structural violence as a social structure with no identifiable agent that harms people pose a difficult challenge when considering the problem of accountability. The relationship between perpetrator, victim and bystander offers an insight as to what happens to accountability when harm is being done depending on whether an agent can be identified or not. Solving the problem of accountability is an important task that can have broad implications in theory and practice.

37412**Witnessing Cyberbullying and Psychological Well-Being among Hong Kong Chinese Students**

Angel Nga Man Leung, The Education University of Hong Kong, Hong Kong

Across 347 Hong Kong Chinese college students (225 females, 122 males, Mage = 20.27, SD = 2.02), their experiences in witnessing cyberbullying and psychological well-being were studied. Cyberbullying has become a serious concern among Internet users worldwide. Despite a number of past studies have been conducted about cyberbullies and cyber victims, very little is known about Internet users who witnessed cyberbullying, especially in a Hong Kong Chinese population. Therefore, this study aimed at studying the relationship among witnessing cyberbullying, self-esteem and depression.

Results suggested that 96% of the participants reported witnessing cyberbullying in the past three months, while 38 % of them seldom witnessed it, 41% of them sometimes witnessed it, and 17% of them witnessed it frequently. Male students witnessed significantly more cyberbullying than female students. With age, gender, and time spent on using social media online being controlled, self-esteem negatively explained 41.6% of variance in depression, while self-esteem was further controlled, witnessing cyberbullying still positively and uniquely explained an additional 4.6% of the variance in depression.

This study demonstrates that while Hong Kong Chinese college students who have low self-esteem are already more likely to have depression, witnessing cyberbullying would worsen the situation. The study implies theoretical and practical importance of studying online witnesses of cyberbullying, on top of the current focus on cyber-bullies or victims in existing literature.

35903**A Sociocultural Perspective on Alcohol Use in Thailand**

Brent Mack Shea, Sweet Briar College, United States

Household income inequality in Thailand is ranked among the highest in the world, and is related to health problems that include alcohol abuse. Recent explanations for problem drinking go beyond income level, which has been harder to interpret in middle income countries than in high income countries, considering

wealth instead. A measure of wealth based on an index of household assets is used in a recent study (Jirapramukpitak et al, 2013), who relate this measure to problem drinking in a sample of old persons living in 100 villages in Western Thailand. Village-level household wealth inequality is directly related to problem drinking. Yiengprugsawan et al. (2012) analyze self-reported data on risk factors for accidents in Thailand. Sornpaisarn et al. (2013) provide a meta-analysis of correlates of alcohol price and taxes in lower middle income countries. Social Policy implications of these and related recent reports of research include increasing both the price and taxation of alcohol as well as reducing inequalities in wealth or limiting increases in these inequalities. Phelan, Link, and Tehranifar (2010), in tests of their fundamental cause hypothesis, demonstrate that eradication of infectious diseases did not change the negative relationship between measures of socioeconomic status and morbidity. Chronic, degenerative diseases like alcoholism are related to risk factors correlated with socioeconomic status. The resources associated with prevention are socioeconomically patterned in a way that could affect health disparities such as morbidity differences due to alcohol use in countries including Thailand.

Sunday Session II: 10:45-12:15

Room: *To be Announced in Final Schedule*

Stream: Aging and Gerontology

Session Chair: *To be Announced in Final Schedule*

37414

A Filipino Version of an Ideal Type of Aging

Maria Cecilia San Luis, University of the Philippines Baguio, The Philippines

Growing older entails several things: accumulation of years, functional decline, behavioural changes and transits from one status to another. The multi-dimensional experience of getting old allows one to look into present circumstances. What one wishes to be in late life can be gleaned from what one is at present. The ideal type, following the Weberian conceptualization of such, as applied to aging is explored in this paper.

The paper presents a case for the building up of an ideal aging experience as an aspired state of existence in late life. Seventeen individuals were interviewed using a semi-structured format. Two vignettes were read to each participant who were interviewed individually and were asked of their reactions to the two older persons in the vignettes. The first presents the story of the 66-year old never married man and the second describes the condition of a 73-year old married woman. The characters in the vignettes were fictional and are actually a composite of characteristics and situations of several older persons whose existence are deemed realistic. The vignette was used to know what one must have in place for a better if not a successful aging.

The study yielded that financial stability must be secured because growing older spells functional decline and unemployment. Saving money is a common concern identified. Saving in social network, with strong emphasis on family, is strongly stressed by the participants too.

35885

Acceptability of a Video Decision Aid in End-Of-Life Care Decision Making among Older Adults: A Pilot Study

Ching Ting, Jenny Lai, The Chinese University of Hong Kong, Hong Kong

Yue Lai, Helen Chan, The Chinese University of Hong Kong, Hong Kong

Introduction

Studies have shown that video decision aid (DA) was effective in promoting end-of-life care (EOL) decision making. However, little is known about its feasibility in the Asian cultures.

Objective

To determine the feasibility and acceptability of a video DA in EOL decision making in community-dwelling older adults in Hong Kong.

Method

This is a one-group pre-test post-test study. A video DA was developed through an iterative process and reviewed by an interdisciplinary expert panel. Older adults were recruited from elderly centres. A 6-minute video DA was shown followed by a 30-minute talk to clarify questions. Participants were asked to complete a questionnaire before and after the intervention on its acceptability and their EOL preferences. Chi-square test was performed to compare their preferences at the two time points.

Results

Fourteen subjects were recruited with two-thirds were female (64.3%) and a half aged between 65 and 74. Before the intervention, only four of them have heard about ACP (28.6%) and five have discussed their EOL preferences with others (35.7%). Most of them agreed that the video DA is easy to understand (78.5%) and informative (85.7%), but several found it sensitive (28.4%). There is a significantly higher proportion of participants able to articulate their EOL decisions after the intervention (pre: 21.4% vs post: 50.0%, $p = .037$).

Implications

The findings showed that video DA is generally acceptable by older adults as an effective means to improve understanding about EOL. It also help to empower them to make decisions for their EOL decisions.

37410

Examining the Multi-Cultural Aspect of the Adare Care Model

Hing-Wah Chau, The University of Melbourne, Australia

Adare Aged Care Home in Victoria, Australia, is a 45-bed facility providing supported residential services for the elderly. It was built in the year of 2000 and catered for English-speaking residents in the first fifteen years. Since 2015, Adare has been transformed into a multi-cultural aged care home under the new management. Due to the lack of Chinese aged care homes in Victoria and the close proximity to Chinese dominated suburbs nearby, Adare now accommodates many Cantonese and Mandarin-speaking residents in addition to English speaking residents. The distinctive combination of Chinese and Western cultures at Adare deserves closer examination and this paper will examine the multi-cultural aspect of the Adare Care Model. Based on the person-focused approach, residents are entitled to make their own choices and to live with dignity and respect no matter which ethnic groups they belong to. Staff working at Adare can communicate with residents by using English and Chinese to overcome language barriers. Both Chinese and English meals are served at Adare to cater for different tastes. Chinese acupuncturist and food massager visit Adare periodically for the health and wellbeing of residents apart from general practitioner, dentist, physiotherapist, podiatrist and speech pathologist. Residents are encouraged to volunteer and to exercise their remaining skills to serve others, such as to teach calligraphy and to do gardening. Through sharing and cultural exchange, they can learn new skills and be involved in social engagement for positive ageing.

Saturday Session II: 10:45-11:45

Room: *To be Announced in Final Schedule*

Stream: Economic Sustainability: Sustainable Businesses and CSR

Session Chair: *To be Announced in Final Schedule*

37389

Making Sustainability Operable: How Hong Kong Textile and Apparel Firms Translate Environmental and Social Concerns into Practice through Stakeholder Engagement

Bruce Bergstrom, Hang Seng Management College, Hong Kong

John Coombes, Hang Seng Management College, Hong Kong

The aim of this research is to identify and examine ways in which publicly listed Hong Kong textile and apparel firms have leveraged stakeholder engagement to implement the principles of sustainability within their operations and across their regional supply chains in the context of sustainable development. With rising concerns for climate change, water scarcity, energy conservation, and human rights, what strategies have Hong Kong textile and apparel firms adopted to meet the ever-increasing expectations of their stakeholders? Expectations on firms and their role within society and its environment continue to grow. Society will continue to demand firms to address and solve problems that are directly and indirectly related to their business activities. To meet the growing societal expectations and demands for sustainable development, firms need to foster strategic relationships with their stakeholders. They must develop internal capabilities, processes, procedures and systems that will enable them to effectively engage with their stakeholders and thereby facilitate sustainable innovation and development. Firms will need to innovate, as without innovation, there can be no sustainable development. The outcomes of this research will identify key success factors (internal resources and capabilities) that leverage stakeholder relationships to create a framework for greater sustainable development. A qualitative multiple-case (at least 5 in depth cases) study approach will be employed using a triangulation method (interviews, observations and operational information) to collect and analyze our data.

34303

Organisations Enacting Ecological Marketing Strategy for New Product Development: A Structure and Agency Conundrum

Simon Lockrey, RMIT University, Australia

Organisations are applying ecological marketing strategies in new product development efforts to help address the impending ecological crisis. Managers enacting these strategies have for the best part failed in delivering product based ecological impact reductions. Reasons for this conundrum are still not yet clear.

In this paper, I use Giddens' structuration theory to help address this strategic issue at hand. By starting from what we know about this phenomenon, I argue that more attention in regards to people and their 'agency' is needed when considering such strategies. I do this by conceptualising how employees interact with rules and resources to either reproduce or change social structures, which in turn constrain or enable sustainable outcomes respectively. I examine the conditions where employees may have the power to change or exploit contexts for better ecological outcomes when marketing and product development interact. Alternatively I ponder whether these strategies are problematic when employees are faced with structural resistance at the organisations in which they work.

I test this conceptualisation by applying it to previous research exploring the ecological marketing/product

development issue, thus contributing a new understanding of these contexts. I conclude by summarising how structuration could be used in further research that identifies routes for manager to navigate structural barriers. Indeed such work may help in enabling effective strategic implementation for sustainability based marketing and product development at organisations.

Saturday Session II: 10:45-12:45Room: *To be Announced in Final Schedule*

Stream: Cognitive and Behavioral Sciences

Session Chair: *To be Announced in Final Schedule***35988****The Case Study of Entrepreneur's Behavior and Enterprise Transformation Mode Selection**

Shaoqing Geng, Tianjin University of Finance and Economics, China

Yubin Liu, Tianjin University of Finance and Economics, China

As one of the main bodies of the market, SMEs play the most active part in the market, fueling the industrial structure transformation. Currently, the relevant researches on this topic mainly focus on the motives of the transformation, integration of resources allocation, path evolution, mode selection and consequences of the transformation. Few studies, however, have been targeted at the correlation between entrepreneurs' behaviors and Hi-Tech SMEs transformation mode selection. This paper conducts a case study of Qi Wei Te solar energy corporation on this issue. The research reveals that the entrepreneur's risk preferences fluctuate in the life circle of the enterprises, and accordingly affect organization's behaviors and transformation selection of the enterprises. This paper presents the patterns of incremental and radical transformation modes based on the entrepreneur's behaviors. The results of this paper contribute and enrich the theoretical framework of the relationship between entrepreneur's behavior and business transformation, and present referral value for the transformation of Hi-Tech SMEs.

35907**Validity and Reliability of a Home-Made Cognitive Ability Test: A Case Study of a High-Tech Company in Taiwan**

Po Han Li, National Changhua University of Education, Taiwan

Tun-Chun Huang, National Changhua University of Education, Taiwan

In Taiwan, companies use home-made cognitive ability tests to select applicants. However, the psychometric properties of these test batteries (e.g., validity, reliability and sensitivity to change) are largely remained unexplored. Establishing the psychometric properties of an instrument is essential prior to applying it in practical use. Accordingly, we introduced a useful procedure in testing the psychometric properties of a cognitive ability test and applied this procedure to examine a newly developed cognitive ability test by a high-tech company in Taiwan. Validity evidence was collected from 83 undergraduate and graduate students. All participants undertook the newly developed cognitive ability test and some of them undertook the test twice ($n = 20$). Specifically, the criterion-related validity, Cronbach's alpha, and test-retest reliability were calculated. Results showed that the home-made cognitive ability test have acceptable internal and test-retest reliabilities, but did not predict the test takers' academic performance, suggesting that the home-made test may have little utility in employee selection. Based on the results of this study, practical advices are offered to companies who wish to develop and apply the cognitive ability test in their selection process.

35871**Cognitive Decision-Making in Evolving Transformative Resilience: Responses to the Livelihood Risks of a Marginalized Sampaguita Growing Community in the Philippines**

Susan Bacud, University of the Philippines at Los Banos & University of the Philippines Open University, The Philippines

Virginia Cardenas, University of the Philippines Los Banos, The Philippines

Luis Rey Velasco, University of the Philippines Los Banos, The Philippines

Poverty compels many farmers in the Philippines to engage in alternative livelihoods. The research setting is a locality where sampaguita growing is a valued community livelihood diversification that provides marginalized households daily income source.

Constructivist research methodology was used to explore the constructs and meanings of lived experiences about the sampaguita livelihood. The research revealed as salient in the 'life world' of the sampaguita growers the inter-linkages of their cognitive processes with extant social and physical ecologies in addressing livelihood risks. The perceived livelihood risks include: poverty; frequent pesticide spraying that caused pest emergence and resistance, human and environmental health problems; and variable weather conditions, production level, and market prices. Human-nature relationships and social interactions - among community members, with members of other communities, with local government units and other organizations - evolved local knowledge, values, and practices that influenced cognitive decision-making to solve the livelihood risks. Decision-making as risk-solving is a meaningful undertaking that underlies the sampaguita growers' resilience processes which are categorized as learning livelihood change, building social support mechanisms, evolving self-organizations, nurturing adaptation learning, and aspiring for agro-enterprise development. Cognitive decision-making in resilience processes enabled the sampaguita growers to survive the compounded negative effects of livelihood risks. Based on experiential understanding of the interaction of risks, there was a range of choices from which to base collective and adaptive risk-solving decisions. Transformative resilience paved the development of livelihood capitals that include social, human, economic and natural capitals.

37398

The Environment Encouraging "Something to Do", Being Lively, In Juvenile Correctional Facilities, Case Study: Juvenile Vocational Training Center, Thailand

Pronyos Chattarakul, King Mongkut's University of Technology Thonburi, Thailand

Duangkamol Limwongse, King Mongkut's University of Technology Thonburi, Thailand

Young generation is always important for the future. With the limited of experience and maturity, they occasionally make a mistake. In the developing country as Thailand, number of teenagers in juvenile correctional facilities is a serious problem. This qualitative study was conducted to understand the life in Juvenile Vocational Training Centers (JVTC) in Thailand and important factors of environmental design of JVTC. Twelve days participatory observation in fifteen JVTC conducted the considerations of personal context and circumstance. Typically, the activities in JVTC focus on rehabilitation programs which are boring for juveniles. Most of them ignore the program by various reasons. The result of study showed that juveniles cannot be rehabbed efficiently if they feel depressed. And they cannot feel lively if they are not secured. Clear environment is proposed to ensure that all juveniles can be always noticed by others for safety. To be lively, juveniles need to have 'Something to do'. The study has strongly recommended that 1) natural environment (such as pond, soil, and big tree) and 2) everyday environment (such as garage, street vender, and local meeting point) are key elements for them to start creating activities in JVTC. The environment with a good combination of these two elements is significant for juveniles to mean their future living in centers. 'Something to do' in this case, could be considered as driving force, upon them to be away from worry and be lively then they can realize the future opportunities and also the benefit of rehabilitation programs.

Sunday Session II: 10:45-12:45

Room: *To be Announced in Final Schedule*

Stream: Economics and Management

Session Chair: *To be Announced in Final Schedule*

36658

Analysis of Household Debt Inequality in Thailand

Narissara Charoenphandhu, Faculty of Economics, Rangsit University, Thailand

Inequality has been usually mentioned in term of income inequality to evaluate people's well-being. This research examined another dimension of inequality, which is debt inequality. Among people who have the same level of income, some of them have high debt while some people have not. Therefore, we should not neglect this aspect because indebtedness makes them vulnerable to unstable life.

This research mainly used household data, known as the Socio-Economic Survey, compiled by the National Statistical Office of Thailand. To estimate the debt inequality, people were classified according to the level of income, and the distribution of debt was estimated for each income group. The results revealed that there was debt inequality within the same level of income group. Low debt inequality was not always good because it means that households have debt equally. Besides, it can be also positively interpreted that they have small amount of debt similarly. This depends on average household debt of each group. High debt inequality can be implied that there are large differences between debts of each household in the same group, i.e., there were some households with low debt or even no debt despite some households having high debt.

This research points out the issue that only the measure to alleviate income level may not be enough to sustain people's well-being. Therefore, the government and policy makers should emphasize to implement the effective policies to lesson household debt together with increasing people's income that will lead to real well-being and self-sufficiency.

35353

Financial Management Competency of Graduates of Senior High School: Basis for an Outcomes Based Financial Education Program

Arnel Manuel Leonardo, University of Makati, The Philippines

The issue of financial education has risen on the agenda of educators, community groups, government agencies, and policymakers. This interest in financial education has been prompted because of the increasing complexity of financial products and the increasing responsibility on the part of individuals for their own financial security. Well-informed, financially educated consumers are better able to make good decisions for their selves and their families, and because of this they are in a position to increase their economic security and well-being. Financially secured individuals and families are better able to contribute to the betterment of the communities and foster development of the country. Thus, financial education is important not only to individual households and families but to their communities and their country as well. And because of this financial literacy became the focus of this study. This study assessed the degree of competency of the selected graduates of the Senior High School on financial management specifically on financial knowledge, financial attitude and consumption behavior with an output of Outcomes Based Financial Education Program. Specifically it aims to answer the degree of financial management competency in terms of assessed and perceived financial knowledge, perceived financial attitude, perceived consumption behavior, the degree of competency in terms of financial knowledge, financial attitude and

consumption behavior when grouped according to their profile, and Outcomes Based Financial Education Program that can be proposed.

37262

Geographical Diversification and Corporate Social Responsibility

Xinyuan Peng, China University of Geosciences, China

This paper investigates the relationship between geographical diversification and Corporate social responsibility (CSR), and whether this relationship due to the ownership structure. By using a sample of 7456 observations of listed companies in China over the period of 2010 to 2014, we develop a set of empirical models of CSR, and find evidence of a significant positive relationship between the CSR and geographical diversification. Considering the unbalanced development in different provinces, we take the Marketization Index as the moderator variable, and we find that the higher index, the more positively relationship between CSR and geographical diversification. Furthermore, when distinguishing the firms' ownership structure, state-owned enterprises (SOEs) have higher CSR and there exist a more significant positive relationship in SOEs. These findings provide new explanations for CSR from geographical perspective and strengthen the understanding to corporate rent-seeking behaviours, and providing important inspirations for China and other emerging countries.

35127

Evaluation Indicators: Satisfactory Labor Relations of Migrant Workers in Tianjin' Pharmaceutical Industry

Bilin Xu, Tianjin University of Finance & Economics, China

Today, The satisfaction with labor relations of migrant workers is a topic of interest, and is receiving an increasing attention in China. Because of migrant workers are an important source of labor for manufacturing, HR managers want to know how to build evaluation indicators to promote a satisfactory labor relations of migrant workers.

Earlier studies show that satisfaction with labor relations impacts firm performance, and the relationship between labor satisfaction and firm performance is positive. However, little research examined the evaluation indicators of satisfactory labor relations of migrant workers in China, especially lack of empirical investigation.

On the basis of theoretical review, and the interview with 118 workers and 48 managers in 3 Tianjin' pharmaceutical firms of China, the paper developed a scale including 5 first-level indicators, and 41 second-level indicators. We conducted a questionnaire survey of 480 samples in pharmaceutical Industry of Tianjin, and 446 are valid. The data are analyzed by Analytic Hierarchy Process, the paper identify that 5 first-level indicators, and 36 second-level indicators have a significant evaluation the satisfaction of labor relations of migrant workers. Finally, the implications for HR managers are also discussed.

Sunday Session II: 10:45-12:15

Room: *To be Announced in Final Schedule*

Stream: Ethnicity, Difference, Identity

Session Chair: *To be Announced in Final Schedule*

36881

Can You Do Hip-Hop in Yogyakarta? Global-Local Nexus in Javanese Hip-Hop

Septirian Praditya, Monash University, Australia

The emerge of the internet and the development of transportation technology has enabled massive products, people, and ideas to travel beyond borders and nations. It also fosters and intensifies the interaction between global and local culture. This essay attempts to examine of the global-local nexus in globalisation by conducting a case study. It focuses on the growth of hip-hop as a form of a global culture in the Javanese society. The discussion includes the development of hip-hop as a global culture, the identification of factors that affect the acceptance of hip-hop in Javanese society, and the Javanese hip-hop as a form of hybridization.

It concludes that the society responds to the global product based on its own interpretation. It also highlights that the process of global-local nexus depends on several factors. The dissemination of hip-hop culture in Indonesia gained advantages from the policy of Indonesian government to be more open to the international discourse as well as to grant more freedom to the media industry in the 1990s. Furthermore, the development of hip-hop is supported by the characteristics of Javanese society which deeply respects mutual understanding and collaboration between different cultures. The similarity of hip-hop elements to the forms of Javanese traditional music and arts such as wayang (puppet show) and parikan (traditional poems) also plays pivotal roles in creating a hybrid product as a result of the interaction between global and local culture: a Javanese hip-hop.

35910

Problematizing Contemporary Government Policies toward Right of Religion and Culture within Heterogeneous Indonesian Society

Maman Maman, University of Melbourne, Australia

Since 1998, Indonesia has embarked on a new democratic era which embraces protection of human right and more social and political freedom. This was expected to fabricate a significant advancement toward Indonesian society, through government policies, especially in term of religious and cultural freedom which was suppressed during Soeharto's authoritarian regime. Numbers of local religion, traditional believes and culture vanished due to fear of being classified and targeted as communist supporters. Not only it has caused the loss of diversity, but it also breached the value of humanity and triggered oppression toward minority. However, this research argues that, instead of making significant positive progress, the contemporary government policies have been inconsistent toward protection of religious and cultural freedom. Some policies, which are maintained from dictatorial regime, have even stigmatised local religions and traditions. The state is still performing a system, a legacy of the regime to combat communism by recognising only 6 religions and excluding local believes, which has been contradictory toward Indonesian constitutional principles and values as a miscellaneous country. Also, government policies that embrace certain values of major religion, Islam in particular, applied to general society have contributed toward growing tyranny of majority of 'Islam hardliner' that post dominance toward minority deemed as 'religiously deviant'. Lastly, it examines the repercussion of such inconsistencies toward degradation of social capital,

especially trust and tolerance, which tends to trigger social conflict and more importantly hinders the protection of religious and cultural freedom and social development within Indonesian society.

35974

Examining the Influences of Exchange Programmes on Youths' National Identity: A Hong Kong Case Study

Annie Cheng, The Education University of Hong Kong, Hong Kong

Since the handover of Hong Kong to China, 'National Identity' has become a vital focus promoted by the HKSAR government. Past research has shown that student participation in exchange programmes and study tours provides the possibility of new formulations of national identity. Since the Policy Address 2008, the HKSAR government has been actively expanding and exploring the feasibility of Mainland exchange programmes to enhance our youths' understanding of Chineseness and to strengthen their national identity. Schools have been sponsored or subsidized with the costs of Mainland exchange activities through various grants and channels. Considering the significantly increasing number of Hong Kong youths who have participated in these Mainland exchange programmes and study tours, however, the effectiveness of these activities is understudied. At present, there is lack of systematic research on the impacts of these activities and the ways in which they influence our students' perceptions of national identity. Using case study approach, this study aims to examine students' perceptions of their national identity; and evaluate whether the Mainland exchange programmes or study tours have influences on students' perceptions of national identity. Results show that the influences on national identity varied which were dependent on the objectives and destinations of the programmes. The findings of this study can provide significant feedback for schools to organize meaningful Mainland exchange activities or study tours and inform policy makers how to formulate effective strategies for promoting such exchange activities.

Sunday Session II: 10:45-11:45Room: *To be Announced in Final Schedule*

Stream: Cultural and Media Studies

Session Chair: *To be Announced in Final Schedule***35092****A Study of Comfort Elements Combine with Local Mascot: The Case of Yunlin Townships**

Wen Ying Chiu, National Yunlin University of Science and Technology (YunTech), Taiwan

Yunlin County, which located in south-west of Taiwan, west of the Taiwan Strait and consists of twenty townships. Due to its plain ground and fertile soil environment advantages which suits for agriculture, it has been being the main supplier of rice and vegetables, which had made a great contribution to Taiwan. Although there is an official mascot 'MENG YA ZIH' representing Yunlin County, there is no mascot for township individually. The mascot should contain affinity which let people feel close, harmless and being kind. The purpose of this study is looking for a method to combine those elements and to improve those to create a new harmless mascot for the townships.

At the beginning of the research, the researchers will use Secondary Qualitative Study for the collection of mascot design. And analysis the color, and comfort elements, and combine the two data collection. After the completion of the data collection, researchers use focus groups to conduct interviews on design background students to get those who have Basic Aesthetics and Design Sensitivity for the mascot's opinion and the image of Yunlin local towns. The contents of the interview after the integration of the mascot in accordance with the results of the prototype design, prototype design is complete, the use of prototype for the comfort of the in-depth interview. As the research time and human, financial and other factors, all the township can't be the mascot design, therefore the study will output 1-3 township healing mascot as a result.

35091**The Research of Taiwan Virtual Idol Design Factor Analysis**

Chien Wei Chou, National Yunlin University of Science and Technology (YunTech), Taiwan

In December 2014, Kaohsiung MRT works with creator to launch 'K.R.T. GIRLS' in order to attract young people's attention, it received a great response. In addition, Taiwan professional baseball team Uni Lions also established girl idol group 'Unigirls Junior' at June 2016, the group also has three virtual idol to serve as its corporate image spokesperson. In October 2016, Taiwan Tainan City has also launched 'Fucheng Xiaoman' to promote Tainan City's tourism and culture. More and more government units and enterprises want to attract young people through virtual idols. These virtual idols have a charming, lovely, friendly, even 'Moe' appearance. Because virtual idol industry is becoming more and more popular, if the design principle behind the design of the virtual idol could be study, it is possible for future creator to create additional economic value. Therefore, this research will start from understanding the design principle of virtual idol in Taiwan.

The research will analyze the literature of the character design to understand the design elements behind the character. And using Expert Assessment to verify the elements. Finally, using Case Analysis to examine the elements of Taiwan virtual idol for corresponding results of this research. The research result of this research is to unify the design concept of Taiwan virtual idol, in order to assist the new designers to enhance their design creativity. This research expect to serves as a sample for future researcher or designer to reference on.

Sunday Session III: 13:30-15:00

Room: *To be Announced in Final Schedule*

Stream: Aging and Gerontology

Session Chair: *To be Announced in Final Schedule*

35621

Perspectives of Users and Experts on Designs for Converting Existing New Zealand Houses to Make Them Suitable for Ageing in Place

Fatemeh Yavari, Victoria University of Wellington, New Zealand

Brenda Vale, Victoria University of Wellington, New Zealand

The limited available choices for older people as well as personal factors have led to a demand for ageing in place. Given the slow rate of adding new houses to the existing stock in New Zealand (Statistics New Zealand, 2013), it is essential to find effective design solutions for redeveloping the latter to achieve a better quality of life, wellbeing and independence for the elderly. This paper reports on the preferences of older New Zealanders for a number of such designs as well as comments from experts in the field.

Two New Zealand housing types were investigated (early 20th century villas with a central corridor and 1930-50s single storey state houses). Selected examples of each were redesigned, the possible options ranging from subdivision (conversion to two smaller units) to varying degrees of shared living (shared spaces such as a guest bedroom) to only having private bedsits and all living spaces shared. These designs were presented to a group of design professional and researchers into ageing for comments on their suitability. The same floor plans were examined by people aged 65+ through an online questionnaire survey. This paper reports on the results of these investigations. The various design-related characteristics identified through analysing the comments could assist designers in making informed decisions when altering existing houses to make them more suitable for ageing in place. The outcomes of this study could also assist the authorities involved with housing provision for the ageing.

35227

Development and Validation of the Reinvented Fall Prevention Specific Traditional Chinese Exercise Protocol for Healthy Community-Dwelling Elders in Hong Kong

Lok Chun Janet Lee, Technological and Higher Education Institute of Hong Kong, Hong Kong

Hector Tsang, The Hong Kong Polytechnic University, Hong Kong

Justina Liu, The Hong Kong Polytechnic University, Hong Kong

Del Wong, Shangdong Sport University, Hong Kong

Colin Hayes, Technological and Higher Education Institute of Hong Kong, Hong Kong

Aims and objectives: This study attempt to develop and validate a culturally relevant fall prevention specific exercise protocol for healthy Chinese elders in Hong Kong.

Design: This study was designed using the Delphi technique.

Methods: Extensive literature review was conducted to identify elements that were proven to be important to fall prevention exercise. The first author reinvented the traditional Chinese exercise protocol (Baduanjin) by incorporating balance training and strength straining principles to the original protocol. The reinvented exercise protocol was further evaluated by expert panel consensus through content validity index (CVI). A 4-member expert panel with backgrounds in occupational therapy, physiotherapy, nursing, exercise physiology were convened to assess the content validity of the reinvented protocol. Stage 1 of the Delphi

technique has identified 9 factors/criteria that are essential for a fall prevention exercise protocol. At Stage 2, experts were required to rate how far the reinvented protocol could may achieve the factors/criteria.

Results: All experts evaluated the reinvented exercise protocol using content validation Index (CVI). All the identified factors/criteria received CVI ranging from 0.75 to 1, meaning multidisciplinary experts reached consensus that the reinvented protocol has potential to address fall prevention. Qualitative experts' comments were also used for further refining the reinvented protocol.

Conclusion: Consensus reached by multidisciplinary experts suggested that the reinvented protocol is ready to be tested on field by human subjects.

35940

Do Social Activities Guarantee Senior Citizens to be Spiritually Satisfied?

Yanki Hartijasti, Universitas Indonesia, Indonesia

Kirana R. Ririh, Universitas Indonesia, Indonesia

Aryana Satrya, Universitas Indonesia, Indonesia

Niken Iwani Suryaputri, Universitas Indonesia, Indonesia

Indonesia is a country with an aging society. With around 20 million senior citizens, Indonesian government is continuously designing senior citizens program activities to a create healthy aging society. Previous studies claim that being engaged to social life activities has a positive effect on physical health condition which includes the mind and body of senior citizens, but majority of the community are not sufficiently aware of how important this is to successful aging. The objective of this study is to analyze whether carrying on social activities will lead to spiritual satisfaction. Non-probability sampling technique with convenience sampling is utilized in this study. Data gathered from 518 respondents from seven provinces in Indonesia was analyzed using descriptive and chi-square analysis. Results show that social activities in urban areas are higher than rural areas, especially in spending time with family and friends. This condition is supported by a better internet access and more cellular phones as well as car or motorcycle ownership in urban areas. The finding of this study reveals that doing more social activities does not guarantee senior citizens to be spiritually satisfied. Although they have less sophisticated technology and modern infrastructures, senior citizens in rural areas accept the condition whole-heartedly which make them having higher spiritual conditions than senior citizens in urban areas. Possessing cellular phone with good internet access will only cause overloaded information, whereas having vehicles will lead to overcrowded transportation.

Sunday Session III: 13:30-15:00

Room: *To be Announced in Final Schedule*

Stream: Economic Sustainability: Environmental Challenges and Economic Growth

Session Chair: *To be Announced in Final Schedule*

35629

The Impact of Green Innovation on Manufacturing Industry in Yangtze River Economic Belt under the Circumstances of Resources and Environment

Jia-chao Peng, China University of Geosciences (Wuhan) , China

Ming Yi, China University of Geosciences (Wuhan) , China

Based on the theory of human capital and innovation, the article by stochastic frontier model (the SFA) examines effects of green innovation in the manufacturing sector, which using 2011-2015 years of the Yangtze River economic belt manufacturing data. The SFA estimates show that there is the positive effect between funding for green innovation and manufacturing output elasticity, and the positive effect of patent innovation is higher than the output elasticity of patent innovation on the performance of manufacturing industry. There is a significant negative effect between R&D and the elasticity of output performance of manufacturing industry, fossil energy consumption also has this kind of relationship. The equation of Technical ineffective environmental impact factor shows that carbon dioxide, sulfur dioxide and dust emission have significant effects on the technical efficiency of manufacturing industry; the technical efficiency of manufacturing industry in the lower reaches of the Yangtze River is lower than that of the green innovation in manufacturing industry, between the upper and middle reaches. On this basis, this paper puts forward the policy enlightenment of the Yangtze River Economic Belt to build regional innovation cooperation platform.

37390

A Research on the Relationship Between Innovation Input, Innovation Output and Economic Growth in Hubei Province

Xuyang Li, China University of Geosciences (Wuhan), China

Tongping Li, China University of Geosciences (Wuhan), China

In recent years, China's economy growth has undergone structural slowdown, for the "New normal". In this regard, the government proposed the implementation of innovation-driven development strategy. Currently, Hubei Province faces with resource constraints and other environmental challenges. Thus how to develop the economy and enhance the comprehensive competitiveness of the region has become the focus. Based on the above background, from three aspects of innovation input, innovation output and economic growth, this paper chooses representatives indexes: industrial enterprises above designated size R&D expenditure, number of granted patent and Per Capita GDP. By using VAR model and sample data from 1998 to 2015, it analyzes deeply the relationship between innovation input, innovation output and economic growth. The results show that Granger causality and the lagged effect among the three variables. What's more, innovation output plays only a small part in promoting economic growth. Therefore, scientific and technological innovation is not the main cause of economic in Hubei Province. Then, the economic benefits of innovation need to be improved and the task of developing innovative economy is still challenging in Hubei Province. Finally, based on the above analysis, it promotes the countermeasures about development of Hubei province innovative economy. Initially, increase innovation investment, and optimize innovation environment. Secondly, build a platform for innovative services and enhance the capability of independent innovation. Thirdly, promote regional linkage innovation and rationally allocate scientific and technological

innovation resources. Lastly, deepen the reform of institutional mechanisms to enhance the functions of government services.

37238

Sustainable Regional Economic Development in West Africa: Imperative of an Ecowas Super Highway

Henry Itotenaan Ogiri, Rosebowl Education Consult Ltd, Lagos, Nigeria

Over the last four decades, countries in the West African sub-region (namely; Nigeria, Benin Republic, Togo, Ghana, Cote 'd Ivoire, Sierra-leone, Liberia, Guinea, Guinea Bisau, Niger, Mali, Burkina Faso, The Gambia, Senegal, and Cape Verde) have continued to search for an economic integration model through which its socio-economic prosperity will be enhanced. However, despite numerous sub-regional summits, little has been achieved to date in terms of real fiscal and developmental growth thus securing an almost permanent seat for the region as one of the world's poorest. While regional integration is increasingly being accepted as essential in facilitating socio-economic development, various accounts from the extant literature indicates that the lack of political will by ECOWAS leaders, among other concomitant factors, have led to the region's inability to drive home the lofty ideas as contained in its numerous protocols. Using survey method for the data collection and the e-view software for empirical analysis, this paper examines the critical factors that have hampered socio-economic growth in the West African sub-region and highlights the imperatives of an ECOWAS Super Highway as a driving force for a rapid transformation of a region so rich in human and materials resources yet is nested in a web of abject poverty. Finally, the paper provides an opportunity for further research to assist regional policy formulation particularly as it affects cross-border transportation system within the ECOWAS sub-region.

Sunday Session III: 13:30-15:00

Room: *To be Announced in Final Schedule*

Stream: Energy: Energy Economics and Ecological Economics

Session Chair: *To be Announced in Final Schedule*

36007

Significance of Household Composition on Electricity Consumption and Carbon Emissions

Thoedsak Chomtohsuan, Rangsit University, Thailand

There are various household composition including with the number of member and the age of each member. The consumption pattern of member in each age range are different. Although two households may have the same number of member but may have different pattern of consumption because the age of each member in each household are different. The estimation of household electricity consumption and its carbon emissions without considering on the household age composition may lead to inaccurate results.

Therefore, this paper emphasizes on the significance of the different household age composition on the different household electricity consumption and its carbon emissions by utilizing the Age-Oriented Household Consumption model which was developed from the Linear Expenditure System model. The data used in this paper come from the household socio-economic survey of the national statistical office of Thailand.

The results of this paper express the change of the household electricity consumption and its carbon emission when the household composition changes. The government may apply the results on the energy and environmental policy relating to the population demographic change.

37355

Towards Environmental and Social Sustainability in the Development of Renewable Energy

Kuei-Chao Chang, The Research Center for Energy Technology and Strategy, National Cheng Kung University, Taiwan

Min-Chi Wen, National Cheng Kung University, Taiwan

Hwung-Hweng Hwung, National Cheng Kung University, Taiwan

To help solve the global energy consumption dilemma, renewable energy development is currently the most important energy resource option. Although renewable electricity is produced from "renewable" resources, such production still creates environmental and social concerns and conflicts, as well as economic impacts involving the livelihood of local residents. To reduce these conflicts among environmental, social, and economic factors, a multilateral solution is required. However, it is difficult to reach this goal due to conflicting viewpoints and interests. At present, Taiwan is actively promoting the development of renewable energy, with the development of offshore wind power being an important goal of the Taiwan government. In addition to the development of technology and industrial upgrading, we face difficulties involving properly addressing impacts on the environment and local residents' livelihoods. Therefore, this study used a method of cost-benefit analysis to investigate the relationships among stakeholders from government administrations, enterprises, residential communities, and environmental groups. According to research results, government administrations could gain electricity price and Carbon reduction benefits to cover subsidy cost; the largest benefit of enterprises come from selling electricity and cooperative benefits; residential communities could gain cash back and cooperative benefits to improve their livelihood.

Consequently, all of them have a cooperation could increase the benefit of renewable energy and share benefit in the renewable energy development.

36136

The Effectiveness on Subsidizing Program for the Energy-Efficient Home Appliances in Taiwan

Jin-Long Liu, National Central University, Taiwan, Taiwan

Promoting the investment on the energy-efficient home appliances has been one of the policy tools frequently used to reduce the energy consumption in Taiwan. The policy is viewed as a win-win measure because it also has the effect to overcome the externality problem. However, the existence of the argument of energy efficiency gap has led the decision-maker to use incentive programs as instruments to encourage consumers purchasing the energy-efficient products.

During the period between Nov. 2015 and Feb. 2016, Taiwan government launched a subsidizing program for the energy-efficient appliances to counter the economic recession. The program grants direct cash rebate to consumers who bought the energy-efficient products including air-conditioner, refrigerator, TV, gas stove and water heaters. The program subsidizes 1.4 million set of products and around US\$85 million.

The purpose of this study is to examine the effectiveness of the program. By using the survey data randomly collected from those consumers who joined the subsidizing program, our results indicate: (1) about 65% of respondents would still purchase the energy-efficient products without the subsidizing program; (2) about 23% of respondents would delay the purchases of energy-efficient products if there is no such a subsidizing program; (3) about 7% of respondents would purchase the less energy-efficient products and about 4% of respondents would delay and purchase the less energy-efficient products if there is no such a subsidizing program. Overall, the results show that there is a free-rider effect underlying the subsidizing program.

Sunday Session III: 13:30-15:30

Room: *To be Announced in Final Schedule*

Stream: Economics and Management

Session Chair: *To be Announced in Final Schedule*

36796

The Role of Top Management Team Behavioural Integration in the Strategic Decision- Making Process

GE LIU, University of Edinburgh, United Kingdom

The study explores the role of behavioural factors in the strategic decision-making process (SDMP). Many SDMP studies focused on limited variables within the top management team, such as demographics, cognitive diversity and personality, which resulted in a fragmented understanding and failed to investigate whether interactions between the top managers have significant implications for SDMP outcomes. The study explores how individual background, relationship within the top management team, group considerations and political behaviour are a set of constructs that will represent how top managers manage the conflicts and how the cooperative behaviour can make a difference in the strategic decision-making process. It develops a strategic decision-making framework based on a comprehensive set of strategic factors from an incremental perspective. Driven by the nature of the research questions, a multiple case study is used. The research setting in the Asian emerging market highlights the behavioural influences on strategic decision-making practices. The preliminary results illuminate the complexity of team dynamics and top management team cooperative behaviour may advance the top managers' decision but is mediated by the CEO's individual behaviour.

35929

Improve the Job Engagement of Temporary Employees from the Job Design: A Case Study of L Company in Taiwan

Hsuan-Yu Kuan, National Changhua University of Education, Taiwan

I-Chieh Hsu, National Changhua University of Education, Taiwan

In a highly competitive and rapidly changing environment, companies use temporary employees to enhance organizational flexibility and reduce labor costs. In recent years, the proportion of companies employing temporary employees has gradually increased. Temporary employees can help organizations to solve the problem of manpower shortage during high season. If companies can make good use of temporary employees, it not only satisfy customer orders but also increases their competitiveness.

Job design is the basis of the operation of companies. Through appropriate job design, can help employees to get meaning and value from their work, so that employees feel the importance of their work and their responsibilities, thereby enhancing the job engagement of employees. When a person has a high degree of job engagement, he or she is not easy to quit and will have a higher output.

This study takes a Taiwanese food manufacturing company "L" as an example to analyze the impact of L's existing job design methods on temporary employees through participatory observation and interviews. However, its practices of the job design have room for improvement. Therefore, this study tried to made three recommendations for improvement on present practices: (1) conduct the job rotation in the subsection of the operative department (2) adjust variable working hours (3) build comprehensive induction training system, hope to enhance the job engagement of temporary employees and reducing the situation about

absence or quit of temporary employee.

37319

The Use of a Saving-Loan Cooperative As an Illegal Bank

R. A. Velentina Napitupulu, Universitas Indonesia, Indonesia

Detention of a supervisor and two of the managers of Cooperative Cipaganti is the impact of the loss of Cooperative Cipaganti. It cannot pay interest and return of public funds that have been collected. The total public funds that have been collected reached Rp3.2 trillion with 8738 investors. Under Article 42 of Law No.25 of 1992 concerning Cooperatives, a cooperative is authorized to collect funds from the public to be stored in the form of 'investment capital sourced from the public' (modal penyertaan yang bersumber dari masyarakat). Cooperatives need to strengthen capital for business development. However, it shall uphold the values and character of cooperatives as mandated by Indonesian Constitution, the 1945 Constitution. The existence of investment capital sourced from the public, in saving-loan cooperatives (koperasi simpan pinjam), is similar to banking transactions. Firstly, the investment capital depends on the source of funds from the public. Secondly, the cooperatives mobilize funds from the public in the form of the investment capital and then channel the funds back to the community (cooperative members) in the form of 'loan'. This function of saving-loan cooperatives is similar to the function of banks as financial intermediary. Thirdly, investment capital, just like savings in banks, obtains benefit from the interest. It results in there are several cooperatives that offer high interest of 18-30% a year, and of 100% within a certain period. It is significant to analyze to what extent a saving-loan cooperative could be classified as an illegal bank.

35922

Different Sores Must Have Different Salves: Needs Assessment in Education and Training: A Case Study of S Company

Jia-Yi Lin, National Changhua University of Education, Taiwan

I-Chieh Hsu, National Changhua University of Education, Taiwan

The purpose of this study is to analyze a bicycle traditional manufacturing industry with more than 50 years. In order to strengthen its own brand, this organization has been reformed itself actively. If an organization desires to transform, the ability of the staff should be enhanced. Therefore, it's crucial to improve the ability of the staff through the implementation of education and training; however, in the circumstances of the limited funds in every aspect, the first thing to be restricted in expenditure planning is education and training. Apart from this, the hardware resources of the organization have become timeworn after many years. Thus, how to effectively utilize the funds and resources to create benefits and its value it's important. In order to propose a plan to improve education and training, organizations need to rely on the needs analysis in the planning of education and training through analyzing the core issues of the organization, work, and employees. During the implementation of needs analysis, the results of the analysis and the method we used would vary from organizational background to organizational background. In order to propose a needs analysis process and the methodology for each analysis phases that correspond to the background of the organization, this study will focus on a case by using literature review and the current situation of the organization to conduct needs analysis, and hopes to provide recommendations that combine academic and practical implementation for the case company.

Sunday Session III: 13:30-15:00

Room: *To be Announced in Final Schedule*

Stream: International Relations & Human Rights

Session Chair: *To be Announced in Final Schedule*

34479

On Identity of States: What is Sovereignty in a Post-Human Rights Era?

Christoforos Ioannidis, King's College London, United Kingdom, Central China Normal University, China

State sovereignty, the core state identity, is a concept that became central to discussions in international law with the peace of Westphalia. Nowadays, international human rights are deemed as either clashing with or being exemptions of state sovereignty. We live in a world where words change their meaning and efforts to define/redefine concepts and present them as somehow compatible render them more and more unclear. In this paper, I offer a concrete solution to the issue with a clear understanding these concepts ought to have in the realms of Philosophy and Law, immune to changes of policies in the international realm, on a reasoning, which rests (1) on the firm basis of legal positivism (Gardner), (2) a clear understanding of legitimacy (Buchanan, Tasioulas) and human rights (e.g. Griffin) and (3) comparative analysis of important decisions of the International Court of Justice (Koskenniemi). First, Legal Positivism detaches morality from the legal validity of norms and thus conceptualizes sovereignty, contrary to Weber, as morally neutral. Second, legitimacy, a moral term, is an independent concept, which has neither necessary nor contingent relationship with sovereignty. I explain how historical developments construed the actual meaning of the concepts of sovereignty and human rights, crucial protection of which is political choice and not necessary entailment of relevant norms. Finally, I demonstrate how the use of the term sovereignty has become an inconsistently applied legal excuse in the decisions of International Court of Justice. I conclude with the proper definition, immune of factual/historical/political and other non-legal contexts.

35901

The Unsc Resolution 1540: Prospects and Challenges for Regional Governance and Cooperation in Southeast Asia

Mirinza Cerrero, University of the Philippines - Diliman, The Philippines

Southeast Asia is a significant player, potentially as both consumer and producer, in the development and trade of WMD materiel. The availability and accessibility of WMD materiel or CBRN weapons have lost its exclusivity to government official use and military authorities thus exposing Southeast Asia to grave threats and damages to regional peace and human security. The dual-benefit argument where nuclear energy is seen as a solution to the dwindling energy resources needed for continued growth and development exacerbate the illicit and political nature of WMD proliferation. The paper examines the interaction between the UN Security Council (UNSC) Resolution 1540 and its implementation or non-implementation by Southeast Asian countries by using history and theories of international relations and international law. It seeks to gather evidences for why some countries in the region are constrained in complying with the obligations while others have successfully incorporated these into their own state practices. It will also attempt to conceptualize the nature of regional cooperation and norms of consensus-building created by this particular case of harmonizing Southeast Asian state practices with Resolution 1540 and draw on lessons and policy implications on regional geopolitics, human security, international law and technology.

34974**What's Gender Got to Do with Climate Justice?: Conscientisation through Role-Play in the Teaching of Sexual Reproductive Health and Rights**

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The challenge of enabling students to recognise the symbiosis of climate justice and gender justice was realised through a role-play for a second-year undergraduate unit titled, 'Sexual reproductive health and rights (SRHR) in global contexts' offered by the School of Arts and Social Sciences at Monash University, Malaysia. The unit explores the cross-cutting nature of Sexual Reproductive Health and Rights (SRHR) in cornerstone areas of concern, e.g. gender-based violence, comprehensive sexuality education, reproductive justice and bodily integrity, HIV and AIDS, sexualities, with emerging areas of concerns, e.g. poverty, climate justice, food security, labour and migration and political and religious fundamentalisms. The archetypal actors representing key stakeholders in the role play, 'Who is responsible' are woman, business leader and the government. The role play was aimed at teasing out differentiated responsibilities of stakeholders within the gender-inclusive framework reflected in the 17 Sustainable Development Goals (SDGs) that are the bases of sustainable development that synergise not only climate justice but also gender justice (SDG 5). Conscientisation through the role-play enabled students to be cognisant of this synergy as they begin to recognise that the partnership of multi-sectoral interventions are needed precisely because men and women are differently and disproportionately affected by systemic gender inequalities and gender inequities. The unit's learning objectives were also met as students were empowered not only to make informed and reflexive decisions on SRHR matters related to their own lives but also to understand broader implications of SRHR in terms of synergising local practices and global visions.

Virtual Presentations

35715

Movies Piracy and the Future of Indonesia Copyright Law

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Globalization has generated developments in all aspects of human life, in particular entertainment. For example, there is a seemingly never ending supply of movies which are delivered in many different forms including VCD and DVD. However, piracy is rife in this area. Piracy is an issue as it violates intellectual property rights

Indonesia is one of the countries that have been wrestling with the issue of movie piracy. The Association of Indonesia Film Producers' data shows that Indonesia suffers from 90% movie piracy rates. This condition supported by the high demand of consumer that wants to access movies for little or no cost. Dealing with this issue, Indonesia has established Law number 28 year 2014 on copyright which aims to fight copyright issues, such as piracy. Yet this requirement has not prevented the increase in movie piracy.

This paper attempts to analyze Indonesia's current law in relation to the protection of movies under Law number 28 year 2014 on Copyright and what action may take to provide better protection for movies in Indonesia. The study shows that the Law number 28 year 2014 on Copyright has failed to provide sufficient protection for movies against piracy. This paper will show effective steps can be taken to combat piracy by applying Friedman's effective theory of law, which are: the equal practice of legal substance enforcement, combines with building anti-piracy movie task force system; and the cooperation in a society to fight piracy in the movie industry.

35842

Continuing Professional Development of Modern Regulators: Innovation and Discovery in Program Approach

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The impacts of not establishing and maintaining a Continuing Professional Development (CPD) program can be particularly disruptive for regulatory agencies. These impacts can include: knowledge decay, de-skilling, inconsistent work practices, and ineffective regulatory decisions; all of which affect the ability of agencies to deliver public value. CPD is an important element for modern regulators to establish and maintain their capability to perform regulatory functions. However, generally speaking, CPD does not receive the same level of attention and resourcing (agency commitment) when compared to other key staffing functions such as recruitment (initial and promotion) and training (induction and mandatory). This situation can arise due to a range of factors including, but not limited to: complex operating environments, funding and resourcing imbalances, and shifting government priorities. The design and delivery of CPD needs to be informed by organisational and cultural factors in order that tangible benefits can be maximized. Moreover, as workforces become increasingly diverse (staff roles, skills, demographics) and disparate (virtual, remote, flexible) there is an increasing need for CPD programs to be customised, innovative (integrated, contemporary) and resource efficient. This paper considers how regulatory agencies, operating across different commodities (social, economic, environmental, hybrid) have developed their CPD programs. The aim of this research is to establish whether, and/or to what extent, innovations and discoveries have been incorporated. It is

anticipated that the findings will be of interest to regulatory agencies, regulatory staff, and the regulated community, all of whom have an interest in regulatory excellence.

35845

Mediated Citizenship: Examining the Tokyo Big Three Newspapers Depiction of Citizens during Japan's Postwar Independence and Commencement as a Democracy

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This study analyzed the Tokyo Big Three commercial newspapers (Asahi, Mainichi, and Yomiuri) in the wake of Japan's postwar independence and emergence as a sovereign democracy. The aim of this study was to examine how the Tokyo Big Three depicted and incorporated Japan's citizens into democracy with regard to their newly inherited role as the sovereign and political citizen of a democracy; a role in which the people were inexperienced. This mediated citizenship project analyzed 8335 articles (April - October 1952) in the immediate wake of Japan's postwar independence. It focused on what the Big Three had prioritized in their news selection and predicted that, unlike current mediated citizenship trends where citizens are largely seen as emotional beings who have little to do or say about politics, would portray them, in an exploratory fashion, as politically responsible and normative democratic citizens. It was found that, while the Tokyo Big Three repeatedly declared the importance of the political socialization of the citizen, nevertheless, overwhelmingly omitted political citizens from the news. When citizens were mentioned, their depiction was for the most part negative, criticized over their political immaturity and lack of knowledge. The study revealed that the Japanese media functioned in a 'trickster' like fashion; voicing a particular narrative on one hand while simultaneously functioning in a way that appears to contradict the articulated narrative's initial intentions.

35964

Managing Carbon Dioxide Emissions Through Spatial Planning: An Approach in the Realization of Sustainable Development in Indonesia

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In the last decade, emissions of CO₂ in the atmosphere has increased significantly. Recorded by the IPCC (2007), the concentration of CO₂ in the atmosphere in 2007 was higher than scenario A1F1 prediction. The high concentration of CO₂ in the atmosphere has become a threat to sustainable development in the world, including in Indonesia. Indonesia as a developing country with 52,53% forestry area, identified as third contributor to CO₂ emissions in the worlds. The various sources of emissions, 87% of Indonesia's total emissions resulting from land-based sectors (Ministry of Environment and Forestry, 2013).

To deal with this condition, necessary mitigation, one of which is done by intervening in spatial arrangement. Role of spatial planning directing low-carbon development can be identified by reducing CO₂ emissions in the atmosphere. Therefore, the goal of this article is identifying the significance of the spatial planning contribution in reducing CO₂ emissions in Indonesia.

By using Batam City, one of industrial areas in Indonesia, as the case study, it is known that the spatial planning has contribution to reducing CO₂ emissions in the atmosphere significantly. By using stock difference approach, it is identified that the environmentally friendly spatial planning capable to reducing CO₂ emissions up to 93,54%. It is indicating that spatial planning can be used as one of the approaches in the emissions mitigation, particularly in Indonesia.

36299**Towards Age-Friendly Housing and Built Environment**

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The population of aged people is increasing dramatically worldwide and this demographic change is challenge to society in many ways. One of the challenges is the existing built environment being not suitable to the requirements of ageing population. To improve the overall wellbeing of elderly, they should remain healthy and active which can be achieved not only by improving the health care facilities but also by designing their housing and immediate outdoor environment. Planning and design of such an environment will help them to continue to live in same place as they age where they have been living fulfilling their emotional requirements as well. Therefore, the aim of the proposed research is to design a prototype for such a built environment which fulfills the requirements of the ageing population. Such built environment is also required in Adelaide, South Australia as it has the relatively higher proportion of older people compared to other states which is expected to increase over the coming decades.

The requirements for such age friendly built environments can be inferred from the development of indicators with the help of experiences of older people and caregivers and the expert opinions. Before designing such environments, assessment of the level of the age-friendliness of a particular environment will guide the approach for planning such environments. This assessment will determine existing barriers and opportunities assisting in design of age-friendly prototype built environment. Thus, the proposed research will develop a framework for planning age-friendly housing and built environment.

36755**Multidimensional Determinants of Caregiving Burden in Chinese Male Caregivers of Older Family Members in Hong Kong**

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Luisa Baladon, The Adults Mental Health Centre of Garraf, Spain

Maria Rubio-Valera, Fundació Sant Joan de Déu, Spain

During recent decades, demographic changes and family structure transformation in Hong Kong have made a growing number of male undertaking care giving roles. However, there is a noted paucity of research on men's caregiving activities and caregiving burden. The aim of the present study was to examine multidimensional determinants of caregiving burden in Chinese male caregivers of older family members in Hong Kong. Underpinned by the modified stress process model, this study explored how background and contextual factors (caregiver's demographic characteristics, mental health status, caregiving related factors, support and services), primary stressors (care dependency level, special care needs), and secondary stressors (self-efficacy, gender role conflict) might relate to male caregivers' caregiving burden. Gender role conflict was first time added as a secondary stressor in the model and examined as a predictor for male caregivers' burden. Questionnaire survey was conducted with a total of 204 male caregivers who considered themselves as primary caregivers for frail older family members aged 60 and over. Descriptive analyses, bivariate and multivariate analyses were conducted. The results showed that being the son of the care receiver, caregiver's presence of depressive symptoms, higher levels of gender role conflict and use of services and supports predicted a higher burden level. Higher self-efficacy level was negatively associated with care burden. Among all determinants, gender role conflict was found to be most influential factor of male caregivers' burden. Interactions between background and contextual factors and primary stressors were detected.

36799**Recent Computer Applications in Marketing**

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Emre Sumer, Baskent University, Turkey

Especially in recent years, marketing efforts of businesses have gained more importance along with the intense competition. Creating value to the target market and facilitating the life of consumers have become the primary goals of the firms. There is no doubt that offering simplicity to the consumers will affect the success of businesses in competitive environment. Technology is an important input in the wellness of the firms and customers. Hence, marketing needs to be in a close contact with computer related technologies. Computer science is one of the disciplines that encompasses these technologies and aids the marketing managers' decision process. As a marketing decision maker, it is important to utilize the benefits of recent computer applications. In this study, among these applications, we mainly focus on geographic information systems, computer vision, augmented reality, eye tracking and data mining. These technologies and their complementary roles in marketing will be discussed in detail along with the real life examples. It is believed that the study is expected to draw managers' attention and thus, support the survival of the firms by satisfying the consumer expectations, maximizing profits and creating a value to the target market.

36800**Sustainability Should Be Fun: Designing Board Games to Teach Sustainability**

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Teaching sustainability to undergrad students, particularly those in design degrees, faces barriers when it comes to relating core concepts such as the triple bottom line (environmental, economic and social issues) or the environmental impacts of technological development with the product's life cycle in their design process or even their daily lives. It results in difficulties to understand and apply the knowledge due to the lack of practical learning when it comes to the topic. Game-based learning has proven a good tool to raise understanding of certain topics, within a fun, flexible, and risk-free environment that enables lateral and critical thinking. Board games are an accessible way to put into practice such concepts and improve understanding through play, experimentation, interaction, and repetition, combining theory with practice, thus they could help design educators to tackle sustainability issues with their students. The aim of this paper is to present the findings of a research project whose objective was to develop and test a board game with sustainability as the main theme for use, within a framework of knowledge transfer, as learning tool in sustainable design courses at the undergrad level.

37224**Designing the Interior of a Nursing Home for the Elders of Mauritius****Ashmita Hurlundee, University of Mauritius, Mauritius**

Sabrina Ramsamy-Iranah, University of Mauritius, Mauritius

The phenomenon of population ageing is occurring in Mauritius, this is due to the progressive ageing of the median age itself. The demographic changes in the social and family structure has altered so drastically in the last decade; the extended family structure has disappeared to be replaced by the nuclear family. Since then there have been an increasing demand to provide the elderly people in Mauritius with a good residential. The first part of this research explains the usability, healthcare and safety problems occurring in the interior environment of old age homes in Mauritius. The aim was understand the different needs of the elders from several cultural and religious background and design the interior of an old age home according

to it. The aspect of design, colour and sustainability were explored and applied in the design process of the nursing home, focusing on all basic facilities such as a good environment, recreation, yoga and prayer room, green areas, well ventilated areas, lightings and others. Moreover, the colour preferences of elders were investigated to study how ageing affects colour vision due to many eyes diseases associated with old age. The data that has been yielded during this study was conducted by interviewing elderly people from different nursing homes. Five sample boards were prepared and presented to the residents of the homes. Based on the results obtained, a colour palette was made to design the interior of the nursing home.

35030

The Impact of Economic Liberalization on the Environment an Empirical Analysis of Environmental Kuznets Curve Hypothesis

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In this paper, the Environmental Kuznets Curve (EKC) is hypothesized to investigate the casual association between fossil fuel consumption, carbon dioxide emissions and economic growth in India. The casual association between the aforementioned variables has been analyzed using the interventions such as urban development, industrial development, trade liberalization and financial development. The choice of interventions for this study has been done keeping in view the economic liberalization perspective of India. The main aim of the paper is to investigate the missing feedback link for Environmental Kuznets Curve Hypothesis after incorporating the intervening variables. The period of study is from 1971 to 2011 as it covers pre and post liberalization era in India. Annual time series data for all the variables has been taken from the World Bank Database of country level indicators. The Johansen and Juselius Cointegration testing methodology and Error Correction based Granger causality have been applied since all the variables are integrated of same order. Before economic liberalization, matters relating to environmental degradation were handled by legislative actions, the problem became more severe when the economy was liberalized because it led to massive industrialization, urbanization, trade liberalization and financial development contributing to increased carbon di-oxide emissions. This paper can put forward significant policy implications for environmental protection and sustainable development.