



The 9th Asia-Pacific
Landfill Symposium

Integrated Waste Management and Sustainable Landfilling



9 - 11 November 2016

The University of Hong Kong
Hong Kong

Organizers



The Landfill System & Technologies Research,
Association of Japan, NPO (NPO, LSA)



The University of Hong Kong (HKU)

Co-organizers



The Hong Kong Polytechnic University
(PolyU)



Guangdong Institute of Eco-environmental
and Soil Sciences (GIESS)

Symposium Program

Venue: Graduate House, The University of Hong Kong (HKU)

Date	Room Time	Wang Gungwu Lecture Hall P4		
Wednesday 9 th November	08:15-09:00	Registration		
	09:00-10:40	Opening Ceremony & Photo Session Keynote Speeches 1&2		
	10:40-11:00	Coffee break		
		Wang Gungwu Lecture Hall P4	Postgraduate Hub P3-07	Seminar Room P5-3
	11:00-12:30	A1 Progress in Enhancing Landfill Sustainability	B1 Policy and Management Challenges	C1 Practices in Managing Waste
	12:30-14:00	Lunch break		
	14:00-16:00	A2 Keynote Speech 3 Business/Industry Session	B2 Technologies for Landfill Leachate	
	16:00-16:20	Coffee break		
	16:20-18:00	Poster Session		
Thursday 10 th November	09:00-10:30	A3 Advancement in Waste Management Systems	B3 Special Session on Wastewater Treatment and Resource Recovery (I)	
	10:30-10:50	Coffee break		
	10:50-12:20	A4 Waste Utilization Technologies	B4 Special Session on Wastewater Treatment and Resource Recovery (II)	C4 Third Generation Sequencing
	12:20-14:00	Lunch break		
	14:00-15:30	A5 Sludge and Environmental Materials	B5 Waste-to-Energy Strategies	C5 Special Session on Deammonification
	15:30-15:50	Coffee break		
	15:50-17:20	A6 Landfill Gas and Temperature	B6 Ash and Construction Waste	C6 Special Session on Anaerobic Syntrophy
	17:40-18:30	Travel to Jumbo Kingdom Floating Restaurant From HKU to Shum Wan Pier by Coach (Gathering at HKU Graduate House) From Shum Wan Pier to Jumbo Kingdom Floating Restaurant by Jumbo Shuttle Ferry		
	19:00-21:00	Closing Ceremony and Symposium Dinner at Jumbo Kingdom Floating Restaurant		
Friday 11 th November	08:30-14:30	Technical Tour Gathering at HKU Graduate House North East New Territories Landfill / West East New Territories Landfill Sludge Treatment Facility (T Park) Return to HKU		

APLAS 2016

The 9th Asia-Pacific Landfill Symposium

- Integrated Waste Management and Sustainable Landfilling

9 - 11 November 2016

Wang Gungwu Lecture Hall, Graduate House, The University of Hong Kong, Hong Kong

Organized by

The Landfill System & Technologies Research, Association of Japan, NPO (NPO, LSA)

The University of Hong Kong (HKU)

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The Hong Kong Polytechnic University (PolyU)

Guangdong Institute of Eco-environmental and Soil Sciences (GIESS)

Founder of APLAS

Professor Masataka Hanashima

Chairpersons

Professor Toru Furuichi (President of NPO, LSA, Japan)

Professor Sze-chun Wong, BBS, JP (Head of the Department of Civil Engineering, HKU)

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Hong Kong Waste Management Association



Institution of Civil Engineers, Hong Kong
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RESEARCH INSTITUTE
FOR SUSTAINABLE URBAN DEVELOPMENT
可持續城市發展研究院

Research Institute for Sustainable Urban
Development, The Hong Kong Polytechnic
University

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Introduction

APLAS is a bi-annual symposium originally established to discuss about the topics relevant to landfill issues. Recently, the APLAS has also become a major international meeting in the Asia-Pacific region for the discussion of more sustainable waste management practices among research, policy-making and industrial communities. This symposium will address the advancements and challenges in waste policy and legislation, local cases, waste characterization/collection, resource recycling/recovery technologies, and a variety of waste treatment (mechanical, biological, chemical and thermal) and disposal matters. The theme of APLAS 2016 aims to facilitate the development of an integrated waste management system to achieve the sustainable landfilling goal through innovative and interdisciplinary solutions. For examples, special sessions on advanced biochemical treatment processes and on wastewater treatment residues resource recovery are featured in APLAS 2016.

Symposium Structure

The symposium is structured with oral presentation sessions and a poster session on November 9 and 10.

Oral presentations are organized in three parallel sessions. Each presentation is scheduled for 15 minutes, including 3 minutes for questions and answers.

A Symposium Dinner is scheduled in the evening of November 10, and a Technical Tour (pre-registration required) is arranged on November 11.

Welcome Address



Toru Furuichi
Chairperson, APLAS Hong Kong 2016
President of NPO, LSA, Japan
(Honored Professor, Hokkaido University)

I would like to express my sincere congratulations to all involved in the significant holding of the Ninth Asian-Pacific Landfill Symposium in Hong Kong, and to express my sincere gratitude to many people taking part in the event from Asia-Pacific nations and many countries across the world. I am also pleased to share with all participants the pleasure of this opportunity for researchers, engineers, government officials and many other specialists involved in tackling waste problems

faced by Asia-Pacific countries to assemble and exchange their latest research results and experiences.

The earth now faces a crisis that is unprecedented in the history of mankind, including natural disasters such as earthquake and Tsunami, increased temperatures, unusual weather conditions involving floods and droughts, desertification as a result of deforestation et al. The APLAS Symposium has become one of major international meetings of the Asia-Pacific region for the discussion of waste problems at research and practical level. This indicates the need to expand our view of global environmental problems in relation to waste management instead of focusing on landfill alone.

At the same time, the issues related to landfill sites, which were the original theme of the APLAS Symposium, are also a hot topic of discussion. With the transition of the concept of landfill sites, there is now a particular need for transparency in waste treatment processes from generation to landfill in order to eliminate anxiety over the construction and maintenance of landfill sites. The transparency of landfill sites as a technical dimension to control the waste management process (improving safety) and the information disclosure as a social dimension and community development involving local residents (developing a sense of reassurance and reliability) are simultaneously important key points. The difference that should be highlighted here now is that conventional discussions on treatment facilities have revolved around the facilities themselves, whereas the essential new concepts related to “material flow and conversion” and “social systems” proposed in a sound material-cycle society should be more important and included in discussions from now on.

Many recyclable waste materials can be found at inappropriate final landfill sites mixed in with hazardous substances. To guide overall terminal waste management systems in the right direction, it is important to establish technologies and social institutions for treating the effects of hazardous waste and recycling useful waste, leading to the regeneration and the space recovery of final landfill sites for use over a longer time frame. This means that landfilling function should be considered as one of “systems” for proper waste management, namely as a final proper disposal system, instead of a landfill site.

As already mentioned, APLAS Hong Kong 2016 involves a wide range of discussions on issues related to waste management, and especially focuses on the Industry/Business Session & Exhibition sponsored by many companies. I strongly believe that the outcome will help to resolve the waste problems faced by many countries in the Asia-Pacific region and around the world, as well as providing insights toward the resolution of global environmental problems.

A handwritten signature in black ink that reads "T. Furuichi". The signature is written in a cursive, flowing style.

Welcome Address



Ir Professor Sze-chun Wong
Chairperson, APLAS Hong Kong 2016
Head of the Department of Civil Engineering
Francis S. T. Bong Professor in Engineering
Chair Professor in Transportation Engineering
The University of Hong Kong

Please allow me to extend my great appreciation to you and welcome you to the 9th Asia-Pacific Landfill Symposium (APALS 2016) hosted by the Department of Civil Engineering at the University of Hong Kong (HKU). APLAS is a bi-annual symposium with a very proud history in contributing to both local and international developments in waste and resource management. With the assistance of the Landfill System & Technologies Research Association (LSA) of Japan, we are extremely honored to have this opportunity to bring this symposium to Hong Kong.

Originally established to discuss topics relevant to landfill issues, APLAS has now become a major international meeting in the Asia-Pacific region for brainstorming sustainable waste management practices among research, policy-making and industrial communities. This year, the theme of APLAS 2016 is “Integrated Waste Management and Sustainable Landfilling”, and it clearly reflected that the role of APLAS 2016 is to solve the waste and resource issues from the viewpoints of environmental sustainability.

Since the establishment of the University of Hong Kong and the Faculty of Engineering in 1912, the Department of Civil Engineering has nurtured many brilliant engineers and witnessed the wonderful growth process of the city of Hong Kong. It has been a great challenge to run a megacity like Hong Kong, while maintaining its sustainable growth. However, sustainability has been the fundamental principle guiding the development of this city and our university education. Hong Kong strongly pursues the state-of-the-art waste treatment infrastructure to be more sustainable in managing the waste in the city and its precious landfill resource. For examples, the recently completed Sludge Treatment Facility has started to manage the sewage sludge waste and at the same time to produce renewal heat energy. Our Organic Waste Treatment Facilities aim to produce biogas as renewable energy from the source-separated food waste to minimize landfill disposal and reduce the fossil fuel consumption for electricity generation. The other new facilities with a more sustainable management in municipal solid waste and waste electrical/electronic equipment, are also underway. All of these are integrated into the city’s waste management plan to achieve a more sustainable landfilling operation in Hong Kong.

To cope with these wonderful developments in Hong Kong, we train our students to become pioneering engineers applying sustainability concepts in their future careers. In addition to initiating sustainable development courses within the Faculty of Engineering, our colleagues have also further promoted the sustainability education across the university by blending fundamental knowledge with local and oversea experiential learning. These continuing efforts, including bringing a more sustainable waste management framework for the needs of local and international partners, are part of our educational and professional responsibility. In APLAS 2016, you will find many enthusiastic delegates with the same spirit in taking up their responsibilities to tackle grand challenges in waste management and sustainable landfilling. I sincerely wish that you will have a fruitful symposium experience with wonderful discussions generated from this collective wisdom.

A handwritten signature in black ink, appearing to read 'Sze-chun Wong', written in a cursive style.

Keynote Speech 1

Genomic and Proteomic Insights into Syntrophy and its Role in Biomethanation in Engineered Habitats

Professor Michael J. McInerney
University of Oklahoma, USA

Controlled biological production of methane, or biomethanation, is expected to offset demand for natural gas, a fossilized fuel source. However, our basic understanding of the biochemical processes involved in syntrophy is currently limited, and this impacts our ability to model and control the conversion of renewable resources to methane in engineering habitats such as landfills. Syntrophy is an essential, rate-limiting, step in biomethanation where metabolically distinct microorganisms form tightly linked consortia in order to maintain very low concentrations their exchanged metabolites. Syntrophic metabolism involves the thermodynamically unfavorable production of hydrogen and/or formate from the high potential electron donors such as coenzyme A derivatives of fatty and aromatic acids. Such redox reactions can occur only with energy input by a process called reverse electron transfer. Genomic and proteomic analyses have identified membrane ion-translocating systems involved in reverse electron transfer and hydrogen and formate production. In addition, a new enzymatic approach for energy conservation during acetate production has been identified. These findings provide greater insight into the bioenergetics of syntrophic metabolism and the mechanisms by which environmental perturbations such as pH and volatile fatty acid concentrations inhibit biomethanation.



Professor Michael J. McInerney is a George Lynn Cross Research Professor and George Lynn Cross Endowed Professor in Microbiology at the University of Oklahoma. He is also a Fellow of the American Academy of Microbiology. He received a B. S. degree in Biology from Northern Illinois University, and M. S. and Ph. D. degrees in Microbiology from the University of Illinois, Urbana-Champaign. He did postdoctoral studies in biochemistry at the University of Georgia, Athens. His research interests include the microbiology of methanogenic ecosystems with emphasis on syntrophic metabolism; biohydrogen production; subsurface microbiology; and petroleum microbiology with emphasis on the development of microbial processes to enhance oil recovery. He currently serves on the editorial boards for *Environmental Microbiology*, *Microbial Biotechnology* and *Applied and Environmental Microbiology*. He serves as reviewer for many journals and granting agencies. He was a Division Chair and is currently a council member for the American Society for microbiology.

Keynote Speech 2

Appropriate Waste Management in Monsoon Asia

Dr. Masato Yamada

National Institute for Environmental Studies, Japan

Since monsoon Asia is a rainy region, the waste from there is wet. The moist waste is perishable, so hygiene issues such as the generation of odor and leachate and the occurrence of vermin which can mediate epidemics, should be considered in their management. A sticky nature of the moist waste should also be considered in its treatment using machinery. More than three hundred years of the waste management history in Japan is a history to seek how to treat these wet waste safely for human and environment. The source segregation and collection system, the incineration and the semi-aerobic landfill system are the core technologies in Japanese waste management and has been established under conditions in the monsoon Asia. However, these technologies are not easy to introduce into every country in Asia. There are several barriers such as economy, existing industries and social issues for introducing Japanese technologies directly. I will look back the history of the waste management in Japan and discuss feasible ways to manage moist waste in monsoon Asia.



Dr. Masato Yamada works in the National Institute for Environmental Studies since 2000, and now he is a Head of Radiological Contaminated Off-Site Waste Management Section of Fukushima Branch, which is established at Miharu, Fukushima in this year. His main fields of interest are landfill engineering and logistics of industrial waste. Also he studies about appropriate waste management in developing countries. Recently, he is in charge of several researches on disaster and radioactive contaminated waste management in the aftermath of the Great East Japan Earthquake and the Fukushima Daiichi Nuclear Power Plant Accident from 2011.

Keynote Speech 3

Waste to Energy Facilities for a Low Carbon Society

Professor Masaru Tanaka

Institute of Solid Waste Management Engineering (RISWME), Japan

Nowadays, landfill sites; the last bastion of solid waste disposal is difficult to secure. The incineration technology is very effective to reduce waste volume for landfill disposal. So you may say the incineration technology is landfill avoidance technology. To deal with global environmental problem such as global warming, renewable energy has to be developed. So combustible wastes should be used for generation of electricity to contribute to creation of a low-carbon society. FIT system is introduced in Japan in 2012 in order to boost the development of renewable energy. The added value to the "waste to energy" facilities due to the FIT system is so surged, energy recovery type recycling should be promoted rather than material recovery type recycling for plastics or biomass waste. Benefits of "waste to energy" facilities are not only the preservation of global environment but also conservation of fossil resources. Furthermore, the "waste to energy" facilities are expected to have a various functions and benefits as follows: (1) disaster prevention base by strengthening facilities, (2) improvement of revenues by electricity sales, and (3) a place for environmental education, etc... These new functions may mitigate the NIMBY (Not in My Back Yard) syndrome, and alter the NIMBY facility to PIMBY (Please in My Back Yard) facility.

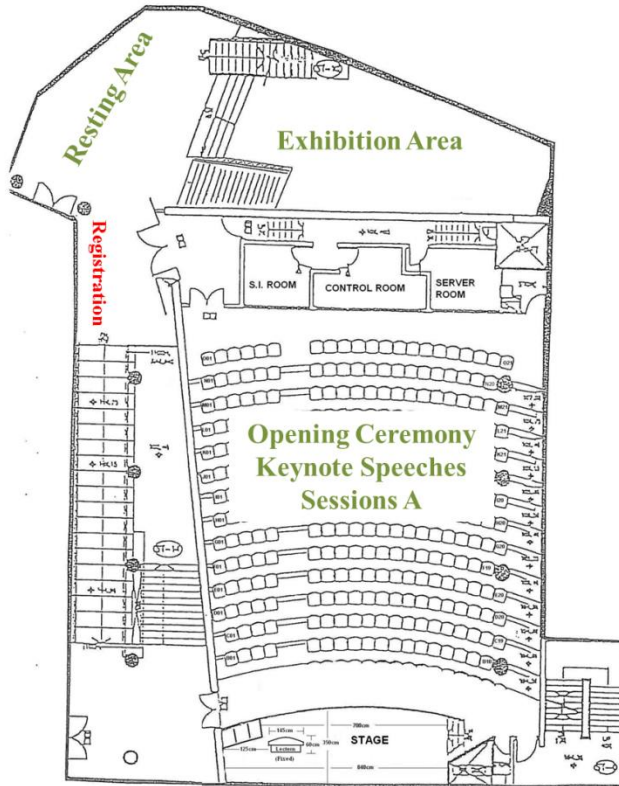


Professor Masaru Tanaka is currently a Visiting Professor at Tottori University of Environmental Studies in Japan and the Director of Research Institute of Solid Waste Management Engineering (RISWME), Japan. He obtained his Ph.D. in Environmental Health Engineering from Northwestern University (USA) in 1970 and B.S. in Sanitary Engineering from Kyoto University (Japan) in 1964. Professor Tanaka was the Director of Research Institute of Sustainability at Tottori University of Environmental Studies (2008-2015), the Chairperson of the Solid Waste Management and Recycling Experts Committee, Central Environment Council, Ministry of the Environment, Japan (2005-2013), and a Professor in the Graduate School of Environmental Engineering at Okayama University (2000-2008). During 1976-2001, he was the Director in the Department of Solid Waste

Management Engineering at The National Institute of Public Health, Ministry of Health and Welfare, Japan. During 2000-2002, Professor Tanaka was the President of the Japan Society of Solid Waste Management Experts.

Symposium Venue

Graduate House, The University of Hong Kong (HKU)



Opening Ceremony, Keynote Speeches and Sessions A:

Wang Gungwu Lecture Hall P4, Graduate House, HKU

Session B: Postgraduate Hub P3-07, Graduate House, HKU

Session C: Seminar Room P5-3, Graduate House, HKU

Opening Ceremony and Keynote Speeches

09:00-10:40, November 9

Master of Ceremonies: Dr. Kaimin Shih

09:00-09:30 Welcome Addresses

Professor T. S. Andy Hor

Vice-President and Pro-Vice-Chancellor (Research)

The University of Hong Kong

Distinguished Guest Mr. Kam-sing Wong

Secretary for the Environment

The Government of the Hong Kong Special Administrative Region

Professor Toro Furuichi

President of NPO, LSA, Japan

Professor Sze-chun Wong

Head of the Department of Civil Engineering

The University of Hong Kong

Symposium Guest Ms. Hiroko Yokota

Sector Chief, Office of Sound Material-Cycle Society, Waste Management and Recycling Department, The Ministry of Environment, Japan

09:40-10:40 Keynote Speeches

Genomic and Proteomic Insights into Syntrophy and its Role in Biomethanation in Engineered Habitats

Professor Michael J. McInerney

University of Oklahoma, USA

Appropriate Waste Management in Monsoon Asia

Dr. Masato Yamada

National Institute for Environmental Studies, Japan

10:40-11:00 Coffee Break

Oral Presentation Sessions

Session A1

11:00-12:30, November 9

Progress in Enhancing Landfill Sustainability

Chair: Dr. Kazuei Ishii

A1-1: Analysis of Long-term Data on Stabilizing Wastes in Closed System Disposal Facilities

Kazuei Ishii, Toru Furuichi, Masataka Hanashima*

A1-2: Protection Nonwoven Geotextiles for Geomembranes - A Design Approach

Kent von Maubeuge, Jong Hao Su*

A1-3: Alternative and Complementary Use of Hydrophobic Sands in Solid Waste Landfills: Introduction

Sérgio D. N. Lourenço, Shuang Zheng, Deyun Liu*

A1-4: Research of Low-cost Waste Layers Early Stabilization Technology in the Sea Landfill Final Disposal Site

*Takashi Sato**

A1-5: Upgrading the Hong Hua Ling Landfill with Geosynthetics

Jong Hao Su, Kent von Maubeuge*

A1-6: Alternative and Complementary Use of Hydrophobic Sands in Solid Waste Landfills: Treatments

Yunesh Saulick, Sérgio D. N. Lourenço, Béatrice Baudet*

Session B1
Policy and Management Challenges
Chair: Dr. Dongbei Yue

11:00-12:30, November 9

B1-1: Way Forward for Construction Industry and Solid Waste Management with Active Participation in Carbon Footprint Reduction for Sustainable Development

Saravanan Mariappan, Norsharina Kamsani, Shahrul Azrein Badarudin, Khalid Bahsoon, Nantha Kumar Devanayagam*

B1-2: Seasonal and Regional Characterization of Municipal Solid Waste and Estimation of Landfill Carbon Sequestration in Beijing

Xu Wang, Dongbei Yue*

B1-3: A Study on Waste Acceptance Criteria for Landfilling on MBT Residues in Korea

Kyuyeon Kim, Jungu Kang, Heesung Moon, Taewan Jeon, Sunkyoungh Shin*

B1-4: Vertical Expansion of Active Hazardous Waste Landfill for Life Span Extension, Case Study of Engineering Challenges, Environmental Protection Operational and Economical Challenges Faced

Saravanan Mariappan, Khalid Bahsoon, Nantha Kumar Devanayagam, Md Fairuzulhirza A. Rahim, Shahrul Azrein Badarudin, Norsharina Kamsani, Mohd Farhan Baharuddin, Idris Sulaiman, Nurul Hanira Mohd Zam*

B1-5: Externalities Identification and Valuation Analysis for Landfill Development Strategies in Developing Countries

Irwan Ridwan Rahim, Sumarni Hamid Ali*

Session C1

11:00-12:30, November 9

Practices in Managing Waste

Chair: Professor Enri Damanhuri

C1-1: Present State of Treated Waste and Air Pollution Control Equipment at Industrial Waste Incineration Facilities in Japan

*Noboru Tanikawa**, *Motoki Sasaki*, *Shin Okubo*, *Masahiro Oguchi*

C1-2: Design of Integrated Solid Waste Management System and Estimates of GHG Emissions in Phnom Penh City

*Bandith Seng**, *Takeshi Fujiwara*

C1-3: The Performance and Operational of Piyungan Landfill as the Regional Landfill in Special Region of Yogyakarta, Indonesia

*Hijrah Purnama Putra**, *Enri Damanhuri*

C1-4: Transition of Municipal Solid Waste Stream in the World

*Masato Yamada**, *Rieko Kubota*, *Awassada Phongphiphat*

C1-5: Integrated Life-Cycle Assessment and Cost-Benefit Analysis of Food Waste Treatment Scenarios at Airport: A Hong Kong Case Study

Chor-Man Lam, *Francisco J. Medel-Jimenez*, *Shu-Chien Hsu**, *Iris K.M. Yu*, *Season S. Chen*, *Daniel C.W. Tsang**

C1-6: Municipal Solid Waste Characterization and Waste Management Issues in a Tourist City - Hoi An, Vietnam

*Hoang Minh Giang**, *Fujiwara Takeshi*, *Pham Phu Song Toan*

Session A2

14:00-16:00, November 9

Business/Industry Session

Chair: Dr. Kazuei Ishii

Keynote Speech:

Waste to Energy Facilities for a Low Carbon Society

Professor Masaru Tanaka

A2-1: Introduction of Waste Management in Japan

Hiroko Yokota

Ministry of the Environment, Japan

A2-2: Introduction of Our Methane Fermentation Technology

Yasuhiro Wada

Hitachi Zosen Corporation (Hitz)

A2-3: Business Activities of DOWA ECO-SYSTEM Co., Ltd

Satoshi Morimoto

DOWA ECO-SYSTEM, CO., Ltd.

A2-4: Municipal Solid Waste Treatment Projects of E-J Group in South-East Asia in 2016

Nguyen Thi Hoa Ha

Eight-Japan Engineering Consultants Inc.

A2-5: CETCO Environmental Products Introduction

Bart Rowland

CETCO

A2-6: Landfilling Operation and Management in Southeast Asian Countries and Other Technical and Social Matters

Kazuei Ishii

LSA

16:00-16:20 Coffee Break

Session B2

14:00-16:00, November 9

Technologies for Landfill Leachate

Chair: Mr. Kent von Maubeuge

B2-1: Neutralization of High pH Leachate by Atmospheric CO₂

*Kentaro Miyawaki**, *Tatsuya Watanabe*, *Sagiri Ikeda*

B2-2: A Study of “A Serial Bi-MLE(Modified Ludzack Ettinger) Process for Nitrogen Treatment of High Concentration”

Junewoo Lee

B2-3: Evaluation of Leachate Characteristic of Some Landfills in Bali, Indonesia

*I Made Wahyu Widyarsana**, *Enri Damanhuri*

B2-4: MULTI-Component Geosynthetic Clay Liner Improves Landfill Sealing Applications

*Kent von Maubeuge**, *Jong Hao Su*

B2-5: Characterization of Molecular Weight Fractions of Dissolved Organic Matter in Condensed Landfill Leachate from Submerged Combustion Evaporator

Xinyue Wang, *Dongbei Yue**

16:00-16:20 Coffee Break

16:20-18:00 Poster Session

Session A3

09:00-10:30, November 10

Advancement in Waste Management Systems

Chair: Professor Takeshi Fujiwara

A3-1: Interregional Comparison among Japanese Cities on Recycling Behavior and its Determinants

*Vu Chi Mai Tran**, *Yasuhiro Matsui*

A3-2: Study on Multi-criteria Decision Making with Multiple Evaluators to Evaluate Remedial Alternative for an Illegal Waste Dumping Site by Use of ANP Method

*Atsushi Fujiyama**, *Kazuei Ishii*, *Toru Furuichi*

A3-3: Co-benefits of Low Carbon Society to Solid Waste Management: Scenario Evaluation by Visualization of Benefits and Co-benefits

Takeshi Fujiwara

A3-4: Development of Disaster Waste Management System

*Noboru Yoshinari**, *Yukihiko Oyanagi*, *Azuma Ohuchi*, *Masahito Yamamoto*

A3-5: The Integrated Waste Management and Sustainable Landfilling

*Soneye Babatunde Isiaka**, *Aderibigbe Gbemiro Matti*, *Sow Mamadou* (article French translation), *Adeoye Adamson*, *Awoyemi Ademola Ojo*, *Awoyemi Adebolu Martins*, *Edemeka Paul Tom*

10:30-10:50 Coffee Break

Session B3

09:00-10:30, November 10

Special Session on Wastewater Treatment and Resource Recovery (I)

Chair: Professor Xiao-yan Li

B3-1: Chemically-enhanced Primary Sedimentation and Side-stream Sludge Acidogenesis for Enhanced Nutrient Removal and Resource Recovery in Wastewater Treatment

*Xiao-yan Li**, Lin Lin, Juan Xu, Ruo-hong Li

B3-2: Process Optimization for Anaerobic Co-digestion of Food Waste and Sewage Sludge and the Active Cellulose Hydrolyzers Revealed by Metatranscriptomic Sequencing

*Yu Xia**, Chao Yang, Yubo Wang, Tong Zhang

B3-3: Quantitative X-Ray Diffraction for Environmental Materials: Examples in Sludge Beneficial Uses and Phosphorus Recovery from Wastewater

*Kaimin Shih**, Hanlu Yan, Minhua Su, Chang-Zhong Liao

B3-4: Chain Elongation Fermentation for Caproate from Waste

*Ling Leng, Po-Heng Lee**

B3-5: Enhanced Phosphate Recovery from Sewage Using Zirconium Oxide-based Superparamagnetic Nanoparticles

*Irene M. C. Lo**, Baile Wu, Liping Fang

B3-6: Removal of Endocrine Disrupting Chemicals and Retinoic Acids from Wastewater by Novel Chemically-enhanced Primary Sedimentation Processes

*Guang-Jie Zhou, Xiao-yan Li, Kenneth M. Y. Leung**

10:30-10:50 Coffee Break

Session A4

10:50-12:20, November 10

Waste Utilization Technologies

Chair: Dr. Hailong Li

A4-1: Recovering of Gold from the Surface of Wasted Phone Printed Circuit Board by Stripping Foil

*Chenglong Zhang**, Feilong Zheng, Jingwei Wang, Jianfeng Bai, Pengcheng Wang

A4-2: Utilization of Polypropylene (PP) to Substitute Bitumen for Asphalt Concrete Wearing Course (AC-WC)

*Emenda Sembiring**, Harmein Rahman, Yoane Maretha Siswaya

A4-3: Interval Estimation of Household Solid Waste and Market Value of Recycling Potential: A Case Study in Hue, Vietnam

*Hoang Son Le**, Yasuhiro Matsui, Thi Thu Trang Do, Thi My Yen Ngo, Phuc Thanh Nguyen

A4-4: Adsorption Characteristics of Acetone on Activated Carbons Derived from Tobacco Stem

*Ruofei Chen, Liqing Li**, Xiancheng Ma, Chunhao Wang, Hailong Li

A4-5: Nickel (Ni), Chromium (Cr), Cobalt (Co) and Zinc (Zn) Leachability of Nickel Slag Utilization as Roadbase Aggregate

*Sukandar**, Najmi Zukhrufi K

A4-6: Effect of CO₂ Atmosphere on Leaching of Alkali and Alkaline Earth Metallic (AAEM) Species and Cu(II) Sorption by Biochar

*Mi Li**, Yuanyuan Tang, Yiming Cao, Xin Zheng, Ying Pei, Sichang Zhang

Session B4

10:50-12:20, November 10

Special Session on Wastewater Treatment and Resource Recovery (II)

Chair: Professor Irene M. C. Lo

B4-1: Phosphorous Removal and Recovery from Wastewater by Zerovalent Iron Modified Sand

*Jin-li Cui, Xiao-yan Li, Xiang-dong Li**

B4-2: Three-step Effluent Chlorination Increases Disinfection Efficiency and Reduces DBP Formation and Toxicity

Yu Li, Xiangru Zhang, Mengting Yang, Jiaqi Liu, Nigel J.D. Graham, Xiaoyan Li, Bo Yang*

B4-3: Comparison between FeCl₃ and PACl for Chemically Enhanced Primary Sedimentation and Sludge Fermentation for Wastewater Treatment and Resource Recovery

Lin Lin, Xiao-yan Li*

B4-4: Estimation of Nitrogen Removal and Operating Parameters in the Single Deammonification System

*Daehee Choi, Sukhyun Cho, Jinyoung Jung**

B4-5: Preparation of Hydrophobic PVDF Membrane and its Application in Membrane Distillation Process

Ziyi Wang, Yuanyuan Tang, Baoan Li, Wei Chen*

B4-6: Sulfate Radicals-Mediated Degradation of 1,4-dioxane by Pd/Al₂O₃ Composite-Activated Peroxymonosulfate

Yong Feng, Kaimin Shih*

Session C4

10:50-12:20, November 10

Third Generation Sequencing

Chair: Professor Wen-Tso Liu and Dr. Po-Heng Lee

C4-1: Multi-omics - The Future Trend of Omics Analysis

*Leon Mai Shi, Kwok-Wing Stephen Tsui**

C4-2: Application of Long Fragment Sequencing in de Novo Genome Assembly and Metagenomics

Meiyeh Lu

C4-3: SMRT® Sequencing: From Finished Genomes to Complex Microbial Communities

Zuwei Qian

C4-4: PacBio Long Read Sequencing for Full Length 16s rRNA and Metagenomics

Siddarth Singh

C4-5: Discussion Section on “Applications Roadmap for Next and third Generation Sequencing”

Po-Heng Lee (Panel Leader)

Session A5

14:00-15:30, November 10

Sludge and Environmental Materials

Chair: Dr. Daniel C.W. Tsang

A5-1: Apparatus for Solidifying Sewage Sludge Having Deodorization Devices Which Correspond to Characteristics of Solidifying Steps

Eun-kyung Jeong

A5-2: Methane Potential of Various Organic Waste

*Jae-hoon Jeong, Seong-yeob Jeong, Soon-woong Chang**

A5-3: Effects of Different Mineral Addition on Properties of Sewage Sludge-derived Biochar

Nana Ren, Yuanyuan Tang, Mi Li*

A5-4: Brownfield Remediation by Biochar Produced from Sewage Sludge and Timber Waste

*Jong-Chan Yoo, Lei Wang, Jingzi Beiyuan, Daniel C.W. Tsang**

A5-5: Immobilization of Lead in Cathode Ray Tube (CRT) Funnel Glass with Beneficial Use of Red Mud

Chang-Zhong Liao, Minhua Su, Chengshuai Liu, Kaimin Shih*

A5-6: Stabilization of Cadmium Laden Sludge by Thermally Reacting with Al/Fe-rich Precursors

Minhua Su, Kaimin Shih*

15:30-15:50 Coffee Break

Session B5

14:00-15:30, November 10

Waste-to-Energy Strategies

Chair: Professor Sang Yul Kim

B5-1: The Study of Phase Separation for Furan Compounds from Pyrolysis-derived Bio-oil

*Sumin Lee, Eunjung Kim, Jinwon Park**

B5-2: Enhancement and Study of Biogas Production from Cow Dung

Avneesh Kumar Gehlaut, Ankur Gaur, Shabih-Ul-Hasan, Jin Won Park*

B5-3: Analysis of Possibilities of Converting Sewage Sludge and Food Waste into Fuel through Torrefaction

Yongho Lee, Hyunsook Kim, Daewon Pak*

B5-4: Study of Waste-to-energy High Efficiency from Municipal Solid Waste Facilities

Youngsam Yoon, Suyoung Lee, Eunhye Kwon, Kyu Yeon Kim, Taewan Jeon, Sunkyong Shin*

B5-5: Characterisation of Refuse Derived Fuel and its Constituents to Predict their Energy Recovery Potential

*Lalit Joshi, Anurag Garg**

15:30-15:50 Coffee Break

Session C5

14:00-15:30, November 10

Special Session on Deammonification

Chair: Professor Jih-Gaw Lin and Professor Ji-Dong Gu

C5-1: Cultivation and Performance of Denitrifying Methanotrophic Bacteria of the NC10 Phylum in Sequencing Batch Reactor

*Shubham Singh**, *Jih-Gaw Lin*

C5-2: Improvement of Gas Permeability of PVA/Alginate Carriers for Deammonification Process

Daehee Choi, *Dongryeol Lee*, *Yunsik Jang*, *Hunyoung Park*, *Jinyoung Jung**

C5-3: Application Testing and Monitoring of Anammox Process by Inoculation to Traditional Wastewater Treatment Plants

H. Meng, *Y. C. Yang*, *J. G. Lin*, *J.-D. Gu**

C5-4: Insight into the Mechanism of the Elevated Nitrate Removal Efficiency of Aerobic Methane Oxidation Coupled to Denitrification Process in Membrane Biofilm Reactor (MBfR)

Jing Zhu, *Xingkun Xu*, *Weixiang Wu**

C5-5: Ten-year Experience with a Full Scale Anammox Plant Combining Activated Sludge with Activated Carbon Biofilm

*Mohammad Azari**, *Uwe Walter*, *Volker Rekers*, *Martin Denecke*

C5-6: Shortcut Nitrification-denitrification (SND) with Active Landfill Leachate

Lu Tang, *Giin-Yu Amy Tan**, *Huichuan Zhuang*, *Yuen Him Chan*, *Po-Heng Lee*

15:30-15:50 Coffee Break

Session A6

15:50-17:20, November 10

Landfill Gas and Temperature

Chair: Dr. Kaimin Shih

A6-1: Monitoring of Landfill Gas Component and Temperature in Passive Landfill Gas Extraction Wells for Managing a Semi-Aerobic Landfill

Hideki Yoshida

A6-2: Optimal Collection and Utilization of Landfill Gas at Sudokwon Landfill

Wonback Son

A6-3: Field Investigation of Landfill Gas Flow in Cover Soil Overlaid with Artificial Structure

*Masahiro Sato**, *Yugo Isobe*, *Tomonori Ishigaki*, *Satoru Ochiai*, *Kazuto Endo*, *Masato Yamada*, *Kazuei Ishii*

A6-4: Effect of COD/SO₄ Ratio on Landfill Gas Generation in the Sudokwon Landfill

*Myunghwa Shim**, *Kyung Ho Lee*, *Don Sik Ryu*, *Yun Hee Kim*

A6-5: Field Experiment on Low-Oxygen Collection of Municipal Solid Waste Landfill Gas

Xu Wang, *Dongbei Yue**, *Junli Zhang*, *Xinyue Wang*, *Xia Li*

A6-6: Thermal Source Positional Estimation in Solid Waste Landfill Using Surface Hot Spots' Temperature and Position

*Tepei Komiya**, *Hirofumi Nakayama*, *Takayuki Shimaoka*

Session B6

15:50-17:20, November 10

Ash and Construction Waste

Chair: Dr. Yuanyuan Tang

B6-1: Effect of Landfilled Ash on pH of Retained Water in Coastal Disposal Sites

*Ramrav Hem**, Tomohiro Yamasaki, Hiroko Sumida

B6-2: Experimental Study of Carbonation of the Municipal Solid Waste Fly Ash

*Peng Ni, Jun Lei, Chong Tian, Hailong Li, Yongchun Zhao, Junying Zhang**

B6-3: A Life Cycle Assessment Framework for Evaluation of Construction and Demolition Waste Management Practices

*Chooi Mei Mah**, Takeshi Fujiwara, Chin Siong Ho

B6-4: Big Data in Construction and Demolition (C&D) Waste Management: Prospects and Challenges

*Weisheng Lu**, Xi Chen, Fan Xue

B6-5: Factors Affecting Construction and Demolition (C&D) Waste Generation in Hong Kong: A Big Data Approach

*Xi Chen**, Weisheng Lu

B6-6: Phase Identification in Copper-enriched Fly Ash during Thermal Treatment and its Role for Copper Immobilization

*Yuanyuan Tang**, Pengfei Wu, Xin Zheng, Sichang Zhang

Session C6

15:50-17:20, November 10

Special Session on Anaerobic Syntrophy

Chair: Professor Michael J. McInerney and Dr. Po-Heng Lee

C6-1: Genomics and Proteomics of a Model Syntrophic Bacterial Partner, *Methanospirillum Hungatei*

*Robert P. Gunsalus**, *Lars Rohlin*, *Gregory B. Hurst*, *Michael J. McInerney*, *Joseph A. Loo*, *Rachel R. Ogorzalek Loo*

C6-2: Bioenergetic Aspects of Syntrophic Fatty and Aromatic Acid Metabolism

Michael J. McInerney

C6-3: Syntrophy vs Individualism

Yoichi Kamagata

C6-4: Microbial Insights Reveal Digestion Efficiency in Full-scale Anaerobic Digesters

Ran Mei, *Takashi Narihiro*, *Masaru K. Nobu*, *Kyohei Kuroda*, *Wen-Tso Liu**

C6-5: Microbial Community Responsible for Anaerobic Digestion and Syntrophic Fatty Acid Degradation

Yue-Qin Tang

C6-6: Metagenomics of Methanogenic Microbiota in an Anaerobic Bioreactor Treating Amino Acids-containing Wastewater

*Takashi Narihiro**, *Masaru K. Nobu*, *Kyohei Kuroda*, *Atsushi Tobo*, *Wen-Tso Liu*, *Masayoshi Yamada*

C6-7: Caproate and 1,3-Propanediol Co-production through Glycerol Fermentation and Chain Elongation

*Ling Leng**, *Po-Heng Lee*

Poster Session

16:20-18:00, November 9

P-1: The Detoxification of Chrysotile

Young Nam Jang, Hwanju Jo*

P-2: Fenton Based Treatment for Palm Oil Mill Effluent and Rubber Wastewater

Disni Gamaralalage, Osamu Sawai, Teppei Nunoura*

P-3: The Study on Characteristics of Landfill after Burying Dyeing Sludge-mixed Soil

Jae-hyeung Jeoung, Moon-kyung Chung, Sung-pil Hwang, Jun You, Sangkun Kim*

P-4: Evaluation of Crack Generation Formed by Local Subsidence Using the Large-scale Bentonite-Mixed Soil Layer Model

Sadahiko Usami, Kenji Shibata, Joji Hinobayashi*

P-5: Comparison of the Two-stage Method and Coupled Estimation Method to Estimate 1,4-dioxane Groundwater Contamination

Kazuei Ishii, Toru Furuichi, Atsushi Fujiyama, Shohei Imaike*

P-6: Investigation of Watering in Closed System Disposal Facilities by Questionnaire Survey

Kazuei Ishii, Daisaburo Koga, Toru Furuichi, Masataka Hanashima*

P-7: Mineral Carbonation of Flue Gas Desulfurization Gypsum

Hwanju Jo, Young Nam Jang, Myung Gyu Lee*

P-8: Kinetic Analysis for the Anaerobic Co-Digestion on Beverage Wastewater Sludge and Food Waste Leachate Using Biochemical Methane Potential Test

Youngsam Yoon, Suyoung Lee, Eunhye Kwon, Kyu Yeon Kim, Taewan Jeon, Sunkyoungh Shin*

P-9: Resistivity Imaging of Water Saturation Condition inside a Landfill Using Geophysical Survey

Yugo Isobe, Mikio Kawasaki, Ayumu Makuuchi, Yuta Matsukuma, Shinichi Takakura*

P-10: Current Conditions and Problems about How to Dispose of Toiletries Waste and Medicine Waste in Japan

Mikio Kawasaki, Kazuyuki Suzuki, Yugo Isobe*

P-11: Chemical Composition Affecting Unconfined Compressive Strength of Incineration Bottom Ash

Yuki Tsutsui, Hiroyuki Ishimori, Kazuyoshi Tateyama*

P-12: Promoting the Use of a Liquid Fertilizer Produced from Municipal Waste Biomass in the Eastern Region of Tottori Prefecture Based on an Oral Survey of Liquid Fertilizer Users

SangYul Kim, Reina Shimizu, Haruo Matsumura, Masaru Tanaka*

P-13: Leaching and Volatilizing Behaviors in Stabilized and Solidified Waste Metal Mercury

Hiroyuki Ishimori, Ryo Hasegawa, Hirofumi Sakakura, Kazuto Endo, Tomonori Ishigaki*

P-14: A Study on GHG Reduction Potentials Estimation by Adoption of Waste Acceptance Criteria for MSW Landfills

Kyuyeon Kim, Heesung Moon, Suwoong Lee, Taewan Jeon, Sunkyoungh Shin*

P-15: Carbothermal Conversion of Fe-rich Waste Sludge into Nano-flake Fe-SC Hybrid Materials and its Application

Lingjun Kong, Xiangyang Chang, Diyun Chen*

P-16: Evaluation of Leachate and Odorous Gas Emissions Using Short-term Pre-aeration of Municipal Solid Waste Prior to Landfilling

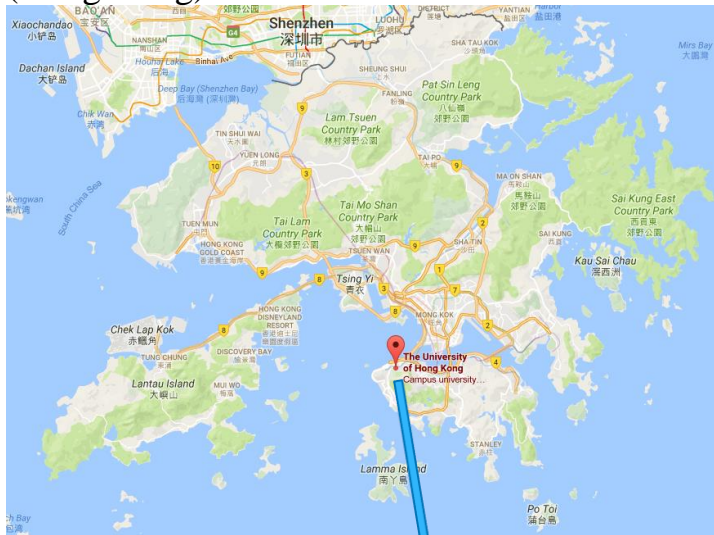
Zhe Ni, Jianguo Liu, Mingwu Zhang*

P-17: Leaching Behavior of Lithium-ion Batteries Cathode Materials by Organic Acid

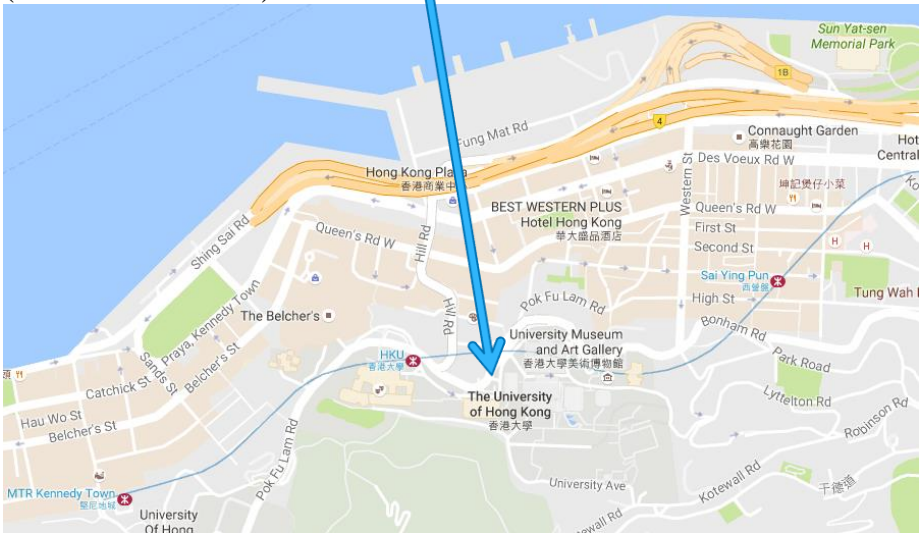
Ying Pei, Mi Li, Yuanyuan Tang*

Location of The University of Hong Kong (HKU)

(Hong Kong)



(Western District)



(Source: Google Map)

How to Get to HKU?

From Hong Kong International Airport to HKU

HK International Airport is situated in Chek Lap Kok on Lantau Island

Option 1 - By Train & By Taxi

Take the Airport Express Train from HK International Airport to “Hong Kong Station” (Train fare is about HK\$100 and the train ride takes approximately 25 minutes).

Then take a taxi from Hong Kong Station to HKU (Taxi fare is HK\$50-\$70 + luggage fee and the ride is approximately 20 minutes to HKU.).

(Although there are green mini-buses from Central to HKU, this is not recommended as they do not allow luggage.)

Option 2 - By Bus

Take bus No. A10 from HK International Airport to “Shek Tong Tsui Complex, Queen's Road West” (Bus fare is HK\$48 and the ride is approximately 1 hour.). Look for entering “HKU Station” (a MTR station) and exit through its Exit A2. Take the lift to the Upper Level of University Street to reach HKU campus.

Option 3 - By Taxi

Take a taxi from HK International Airport directly to HKU (Taxi fare is about HK\$350 and the ride is approximately 45 minutes.).

Most taxi drivers understand enough English to get you where you want to go. However, it may be helpful to show the instruction cards (Chinese translation included) provided in the following section of this program booklet to facilitate your communication.

Option 4 - By Train & MTR

Take the Airport Express Train from HK International Airport to “Hong Kong Station” (Train fare is about HK\$100 and the train ride takes approximately 25 minutes).

Walk from “Hong Kong Station” to “Central Station” (a MTR station) through their interlinked underground path (approximately 7 minutes).

Take MTR (Mass Transit Railway system in Hong Kong) from Central Station to HKU Station and exit through its Exit A2. Take the lift to the Upper Level of University Street to reach HKU campus.

From Hung Hom Train Station to HKU

Option 1 - By Taxi

Take a taxi from Hung Hom Train Station to HKU (Taxi fare is about HK\$100 and the ride is approximately 35 minutes.).

Option 2 - By Bus

Take bus No. 103 at the bus station area outside of the Hung Hom Station and near Cross Harbour Tunnel to HKU (But fare is around HK\$10 and the ride is approximately 1 hour).

Suggestion: When traveling in Hong Kong, it is highly recommended to purchase an **Octopus Card** (example shown below), which is a stored value card that you can use for all forms of public transportation, such as bus, MTR and train (not including taxi). When you leave Hong Kong, you may return the card and get refunded for the unspent balance.



(Source: Octopus Holdings Limited)

How to Get to the Recommended Hotels?

To Hotel Jen Hong Kong

<https://www.hoteljen.com/hongkong/westerndistrict/about/map-directions/>

To Grand City Hotel Hong Kong

<http://www.grandcityhotelhongkong.com/en/location.html>

From the Recommended Hotels to HKU

From Hotel Jen Hong Kong

Enter “HKU Station” (a MTR station) via its Exit B2 and exit through its Exit A2. Take the lift to the Upper Level of University Street to reach HKU campus.

From Grand City Hotel Hong Kong

Enter “Sai Yan Pun Station” (a MTR station) via its Exit B1. Take MTR to arrive at “HKU Station” and exit through its Exit A2. Take the lift to the Upper Level of University Street to reach HKU campus.

Cards for Taxi Drivers

Please go to The University of Hong Kong at
Pokfulam Road, Hong Kong
請去香港薄扶林道，香港大學

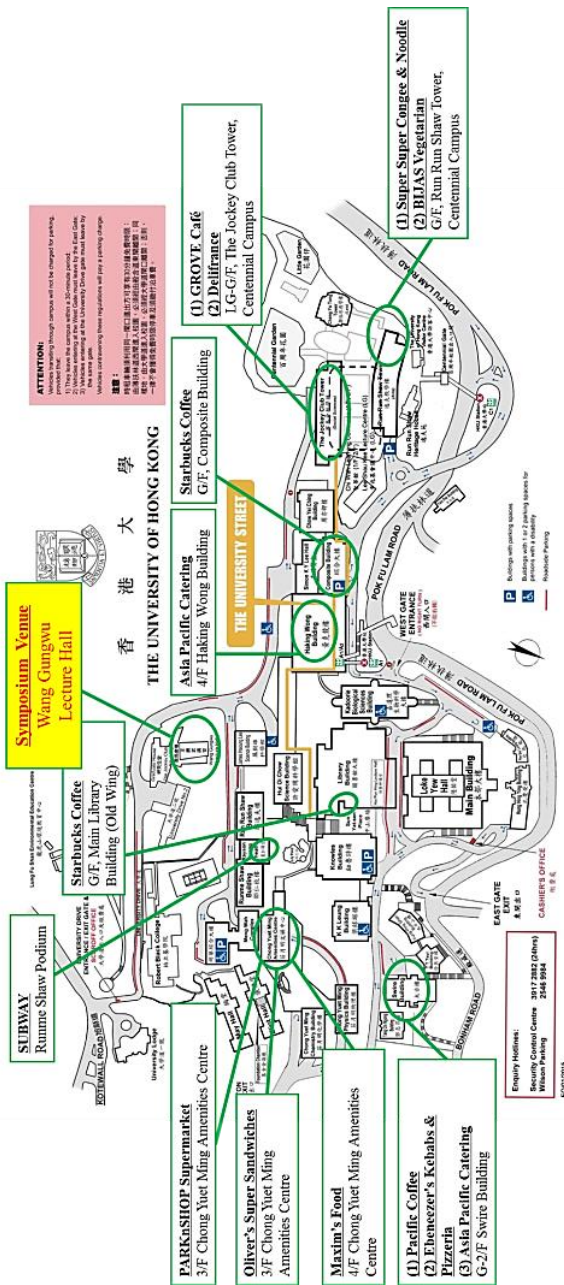
Please go Wang Gungwu Lecture Hall in Graduate House of The
University of Hong Kong at
No. 3 University Drive, The University of Hong Kong, Pokfulam Road,
Hong Kong
請去香港大學研究生堂，大學道 3 號，香港大學
香港大學王賡武講堂

Please go to the Hotel Jen Hong Kong at
508 Queen's Road West, Hong Kong
請去香港皇后大道西 508 號，香港今旅酒店

Please go to Grand City Hotel, Hong Kong at
338 Queen's Road West, Hong Kong
請去香港皇后大道西 338 號，香港華麗都會酒店

Please go to Airport Express Hong Kong Station, flight boarding pre-
registration counters.
請去機場快線香港站，預辦登機服務櫃位

HKU Catering



Main Campus

Chong Yuet Ming Amenities Centre Restaurant (Maxim's FOOD)

[Canteen]

Location: 4/F, Chong Yuet Ming Cultural Centre

Tel: 2857-5511

Operation Hours: 7:30 a.m. - 9:30 p.m. (Daily)

Chong Yuet Ming Amenities Centre Cafeteria (New Life Support Enterprises Ltd.)

[Cafeteria]

Location: 2/F, Chong Yuet Ming Amenities Centre

Tel: 2794-3778

Operation Hours: 7:30 a.m. - 8:30 p.m. (Mon - Fri)

10:00 a.m. - 6:30 p.m. (Sat, Sun & Public Holidays)

Fong Shu Chuen Amenities Centre Restaurant (Asia Pacific Catering Corporation Ltd.)

[Canteen]

Location: 2/F, Fong Shu Chuen Amenities Centre

Tel: 2548-1109

Operation Hours: 7:30 a.m. - 8:00 p.m. (Mon - Fri)

11:00 a.m. - 2:00 p.m.

Closed (Sun & University Holidays)

Global Lounge Coffee Corner (Pacific Coffee)

[Cafeteria]

Location: G/F, Fong Shu Chuen Amenities Centre

Tel: 2291-0071

Operation Hours: 8:30 a.m. - 9:30 p.m. (Mon - Fri)

9:00a.m. - 5:00 p.m. (Sat)

Closed (Sun & Public Holidays)

HKU Halal Food Corner (Ebenezer's Kebabs & Pizzeria)

[Halal Food Kiosk]

Location: 1/F, Fong Shu Chuen Amenities Centre

Tel: 2915-5168

Operation Hours: 10:00 a.m. - 8:45 p.m. (Mon - Sat)

Closed (Sun & Public Holidays)

HKUSU Cafeteria A (Starbucks Coffee)

[Cafeteria]

Location: G/F, Composite Building, Main Campus

Tel: 2559-9061

Operation Hours: 7:30 a.m. - 10:00 p.m. (Mon - Fri)

7:30 a.m. - 8:00 p.m. (Sat)

11:00 a.m. - 6:30 p.m. (Sun & University Holidays)

HKUSU Cafeteria B (U-Deli)

[Food Kiosk]

Location: G/F, Composite Building, Main Campus

Tel: 2517-3633

Operation Hours: 9:00 a.m. - 6:00 p.m. (Mon - Fri)

10:00 p.m. - 4:00 p.m. (Sat)

Closed (Sun & Public Holidays)

HKUSU Cafeteria C (U-Sweet 小食皇)

[Food Kiosk]

Location: G/F, Composite Building, Main Campus

Tel: 9230-2908

Operation Hours: 12:00 noon - 2:00 a.m. (Mon - Fri)

12:00 noon - 8:00 p.m. (Sat & Sun)

Main Library Coffee Shop (Starbucks Coffee)

[Cafeteria]

Location: G/F, Main Library Building (Old Wing)

Tel: 2546-5251

Operation Hours: 7:30 a.m. - 10:00 p.m. (Mon - Fri)

7:30 a.m. - 7:00 p.m. (Sat), 10:00 a.m. - 7:00 p.m. (Sun & University Holidays)

Union Restaurant (Asia Pacific Catering Corporation Ltd.)

Location: 4/F, Haking Wong Building

Tel: 2546-0347

Operation Hours: 7:30 a.m. - 9:30 p.m. (Daily)

Outpost II (SUBWAY)

[Food Kiosk]

Location: Runme Shaw Podium

Tel: 2561-9002

Operation Hours: 8:00 a.m. - 8:30 p.m. (Mon - Sat)

8:00 a.m. - 6:00 p.m. (Sun & Public Holidays)

Outpost III (Tung Wah Group Hospital (TWGHs) iBakery)

[Food Kiosk]

Location: Run Run Shaw Podium

Tel: 5402-4546

Operation Hours: 8:00 a.m. - 5:00 p.m. (Mon - Fri)

Closed (Sat, Sun & Public Holidays)

Centennial Campus

BIJAS Vegetarian (一念素食)

[Vegetarian Restaurant]

Location: G/F, Run Run Shaw Tower, Central Podium, Centennial Campus

Tel: 2964-9011

Operation Hours: 8:00 a.m. - 9:00 p.m. (Mon - Fri)

11:30 a.m. - 9:00 p.m. (Sat and Public Holidays)

Closed (Sun)

Delifrance

[Restaurant]

Location: G/F, The Jockey Club Tower, Central Podium, Centennial Campus

Tel: 2546-2121

Operation Hours: 7:30 a.m. - 10:00 p.m. (Mon - Fri)

8:00 a.m. - 8:00 p.m. (Sat, Sun & Public Holidays)

GROVE Café

[Restaurant]

Location: LG/F, The Jockey Club Tower, Centennial Campus

Tel: 2530-0043

Operation Hours: 7:30 a.m. - 10:00 p.m. (Mon - Fri)

8:00 a.m. - 10:00 p.m. (Sat)

8:00 a.m. - 9:30 p.m. (Sun & Public Holidays)

Super Super Congee & Noodle (一粥麵)

[Restaurant]

Location: G/F, Run Run Shaw Tower, Central Podium, Centennial Campus

Tel: 2857-2807

Operation Hours: 7:30 a.m. - 9:30 p.m. (Mon - Sat)

Closed (Sun & Public Holidays)

Useful Information

Conference Package

Each registrant will receive a conference bag, symposium programme and materials, a flash memory with e-proceeding, a name badge and a receipt of the registration fee. A certificate of attendance will be distributed during the final coffee break on 10 November.

Oral Presentations

The time allotted to each presentation is 15 minutes (except keynote speeches), including 3 minutes for questions and answers. Please kindly respect each speaker's rights and adhere strictly to the time scheduled. Standard software packages (Office 2010, Acrobat, RealPlayer, Windows Media Player, etc) are installed on presentation computers, which run on Windows 7. Presenters are requested to do the following before the start of their session:

(i) load the presentation files onto the computer provided at the registration desk, and (ii) test the files (especially videos) on the presentation computers in the corresponding session rooms right before the sessions begin. To save time and the trouble, presenters should not use their own computers for the presentation unless absolutely necessary.

Poster Presentations

Poster presentation session is scheduled on 9 November at Postgraduate Hub P3-07. A poster can be mounted all day from 08:45am on 9 November and must be removed by 16:00 on 10 November.

A poster board (W90cm × H200cm) will be available. The poster can be attached to them using adhesive tape provided by the symposium. Please give the paper title and list all the authors at the top of the poster.

Symposium Dinner and Dining at/nearby HKU

Delegates with full registration and eligible for Symposium Dinner will find an invitation card (with a table number on the card) in their registration envelope. The Symposium Dinner will start at 19:00 on 10 November at Jumbo Kingdom Floating Restaurant (Shum Wan Pier Drive, Aberdeen) and it will be followed by the Closing Ceremony of the symposium. Symposium buses transporting delegates from HKU to the dinner restaurant will depart at 17:40 in front of the Graduate House.

The registration fee of APLAS 2016 does not include lunches and the dinner on 9 November. There are 10+ dining choices on campus (mostly less than HK\$50 for a meal, but may be more crowded during lunch time) and way more choices nearby HKU Station (largely near its exits B1, B2 and C2). We strongly suggest you taking these opportunities to try some local flavours nearby!

Conveniently located on Hong Kong Island, HKU Station is also only a few stations away from the heart of the city - Central Station. After the first day of symposium, you can easily go enjoy numerous fine dining opportunities while exploring the city's Central, Wan Chai, Causeway Bay areas (if not even areas at Kowloon side).

Technical Tour on 11 November 2016

Due to a limited number of visitor capacity regulated by the touring facilities, pre-registration before the starting of APLAS 2016 (9 November) is required to join this technical tour. Confirmed participants of this technical tour also need to sign up again during the registration procedure. Details of the technical tour will be distributed to the signed up participants at the registration desk. Lunch sandwiches and water will be provided during the tour.

Inquiries

APLAS 2016 Organizing Committee (Local)

Ms. Ruby Kwok (Mobile: **+852 5135 2421**, this number is only available during the period of **8-11 November 2016**)

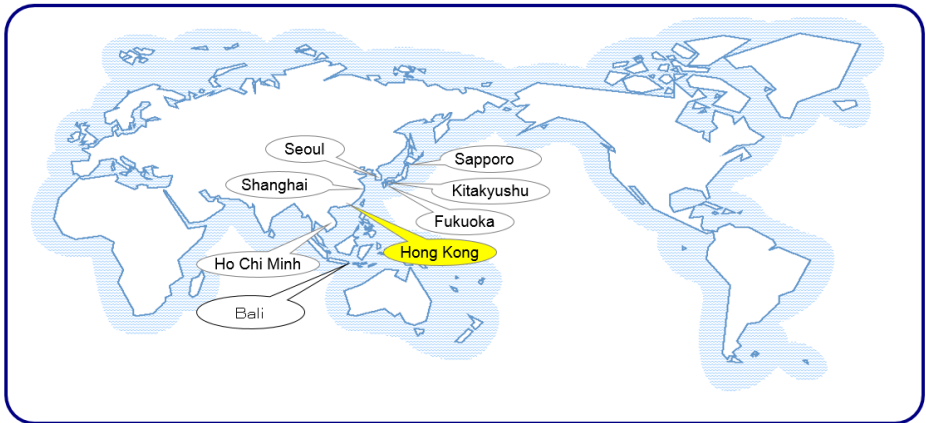
Dr. Minhua Su (Mobile: **+852 5131 8186**, this number is only available during the period of **8-11 November 2016**)

Address: Department of Civil Engineering, The University of Hong Kong, Pokfulam Road, Hong Kong

E-mail: aplas@hku.hk

Website: www.aplas.hku.hk

History of APLAS



	APLAS 2000	APLAS 2002	APLAS 2004	APLAS 2006	APLAS 2008	APLAS 2010	APLAS 2012	APLAS 2014
Holding city	Fukuoka Japan	Seoul Korea	Kitakyushu Japan	Shanghai China	Sapporo Japan	Seoul Korea	Bali Indonesia	Ho Chi Minh Vietnam
Date	Oct.11-13 2000	Sep.25-28 2002	Oct.27-29 2004	Oct.18-20 2006	Oct.22-24 2008	Oct.27-29 2010	Oct.8-11 2012	Oct.23 2014
Place	Fukuoka Health Promotion Center	JW Marnot Hotel National Institute of Environmental Research (NIER)	Kitakyushu International Conference Center	Shanghai Exhibition Center	Keio Plaza Hotel Sapporo	Seoul Palace Hotel	Sanur Beach Hotel	Windsor Plaza Hotel
Turnout	250 people	300 people	350 people	400 people	800 people (including 300 people in exhibition)	350 people	400 people	141 people
Participating countries	14 countries	26 countries	19 countries	24 countries	21 countries	11 countries	23 countries	7 countries
Presentation	Oral: 32 Poster: 27	Oral: 60 Poster: 60	Oral: 67 Poster: 52	Oral: 85 Poster: 43	Keynote: 4 Oral: 62 Hybrid: 40 Poster: 33	Keynote: 5 Oral: 33 Poster: 57	Keynote: 5 Oral: 83 (Lecture: 10) Poster: 36	Keynote: 2 Oral: 17 Business session: 11 Poster: 12 Business exhibition: 15
Organizer	JSMCWM	KSWM SLC	City of Kitakyushu JSMCWM NPO-LSA	7 Shanghai Environment Groups NPO-LSA	City of Sapporo JSMCWM NPO-LSA	KSWM SLC KOWASTE NPO-LSA	Ministry of Public Works Institute Teknologi Bandung IATPI NPO-LSA Ministry of Environment	NPO-LSA Ho Chi Minh City University of Technology

NPO-LAS: The Landfill System & Technologies Research Association of Japan, NPO

JSMCWM: Japan Society of Material Cycles and Waste Management

KSWM: Korea Society of Waste Management

SLC: Sudokwon Landfill Site Management Corporation

IATPI: Indonesian Society for Sanitary and Environmental Engineers

ITB: Institute Technologies Bandung HCMUT: Ho Chi Minh City University of Technology

More information: http://www.npo-lsa.jp/aplus/index_en.html

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