

# The Sixth International Symposium on Southeast Asian Water Environment Program

**Oct 29, 2008**

**Excursion (8:00-22:00)** (Jatiluhur Dam, PT. Pindodeli Pulp&Paper, Angklung performance, and shopping)

**Oct 30, 2008**

**Registration (8:00-)**

**Opening ceremony and keynote speech (9:00-10:20)**

9:00-9:05	Opening
9:05-9:10	Opening address Rector, Institut Teknologi Bandung
9:10-9:40	Keynote Speech Ir. Rahmat Witoelar, Minister of Environment, Republic of Indonesia
9:40-10:20	Keynote Speech Prof. Wun Jern Ng, Executive Director, Nanyang Environment & Water Research Institute, Nanyang Technological University, Singapore

**Coffee break (10:20-10:45)**

**Session 1 (10:45-12:15)**

<b>Room A</b>	<b>Room B</b>	<b>Room C</b>	<b>Room D</b>
<b>A1: Biological Process (1)</b>		<b>C1: Drinking Water</b>	<b>D1: Soil and Sediment Contamination</b>
A1-1    Lei Zhang		C1-1    M. R. Alavi Moghaddam	D1-1    Reni Desmiarti
A1-2    Rajinikanth Rajagopal		C1-2    Riegel M	D1-2    Sadashiva Murthy.B.M
A1-3    P.C. Sabumon		C1-3    Hiroshi SAKAI	D1-3    Devasena M

**Lunch & Poster exhibition (12:15-14:15)**

**Session 2 (14:15-15:45)**

<b>A2: Biological Process (2)</b>	<b>B2: Water and Wastewater Management</b>	<b>C2: Public Health</b>	<b>D2: Special session: Dialogs on water technology with societies (by "Wisdom of Water"(Suntory), UT)</b>
A2-1    Chavalit Ratanatamskul	B2-1    Md. Mafizur Rahman	C2-1    Aya Yajima	D2-1    Yoshiyuki Yokoo
A2-2    Chandrajit Balomajumder	B2-2    Vishnu P. Pandey	C2-2    A. A. Kazmi	D2-2    Kensuke Fukushi
A2-3    Md. Zahangir Alam	B2-3    Somtip Danteravanich	C2-3    Takayuki Miura	D2-3    Peter Hehanussa



**Coffee break (15:45-16:15)**

**Session 3 (16:15-17:45)**

<b>A3: Biological Process (3)</b>	<b>B3: Urban Environment and Monitoring</b>		<b>D3: Special session: Dialogs on water technology with societies (by "Wisdom of Water"(Suntory), UT)</b>
A3-1    Deokjin Jahng	B3-1    Pham Van Quan		D3-1    Kumiko Oguma
A3-2    Hendrawan Saputra	B3-2    Dwina Roosmini		D3-2    Michio Murakami
A3-3    Tawan Limpiyakorn	B3-3    Shatirah Akib		D3-3    Neni Sintawardani

**Conference dinner (18:00-)**

Oct 31, 2008					
Room A		Room B		Room C	
<b>Session 4 (8:00-9:30)</b>					
<b>A4:</b> Special session: Towards Sustainability in Water Systems (by IR3S, UT)		<b>B4:</b> Physicochemical process (1)		<b>C4:</b> Solid Waste Management for Water Environment	
A4-1	Makhan Maharjan	B4-1	Punyapalukul Patiparn	C4-1	S.M. A. Islam
A4-2	Sok Chea Hak	B4-2	E. S. M. Ameen & S. A. Muyibi	C4-2	Charongpun Musikavong
A4-3	N.A. Molla	B4-3	N. H. Ahmad Tarmizi	C4-3	Chart Chiemchaisri
<b>Coffee break (9:30-9:50)</b>					
<b>Session 5 (9:50-11:20)</b>					
<b>A5:</b> Special session: Towards Sustainability in Water Systems (by IR3S, UT)		<b>B5:</b> Physicochemical process (2)		<b>C5:</b> Groundwater	
A5-1	Carlos M. Pascual	B5-1	Radhiyah Abd Aziz	C5-1	Gemunu Herath
A5-2	Mongtoeun Yim	B5-2	Mohammed S. Jami	C5-2	Setiawan Wangsaatmaja
A5-3	Chengwen Wang	B5-3	Cao The Ha	C5-3	Sri Wahyuni
<b>Farewell lunch (11:40-13:00)</b>					

-  Session Supported by “Wisdom of Water” (Suntory), Corporate Sponsored Research Program, UT
-  Session Supported by Integrated Research System for Sustainability Science (IR3S)

## List of Paper for Oral Presentation

October 30

Session 1 (10:45-12:15)

### A1: Biological Process (1)

A1-1 **Enhanced Anaerobic Digestion of Linoleic Acid Containing Piggery Wastewater**

Lei Zhang\* and Deokjin Jahng *Myongji University, Korea*

A1-2 **Development And Evaluation of A Hybrid UASB-UAF Reactor Using Low-Density Packing Media**

1) 2)R. Rajinikanth, 1)P. Kumar\*, 1)I.Mehrotra and 3)M. Torrijos. 1)*Indian Institute of Technology, India.* 2)*Kumaraguru College of Technology, India.* 3)*Laboratoire de Biotechnologie de l'Environnement, France*

A1-3 **Evidence of Anoxic Ammonia Oxidizing and Denitrifying Mixed Cultures as Natural Partners For Nitrogen Removal From Diverse Ecosystem Containing Organic Carbon**

P.C. Sabumon\*. *VIT University, India*

### C1: Drinking Water

C1-1 **Investigation of Nitrate Concentration in Tap Water of Arak City, Iran**

1)Mohamad Saeed Moghadasi, 1)Mohammad Reza Alavi Moghaddam\*, 1)Reza Maknoun and 2)Abdol Reza Moghadasi. 1)*Amirkabir University of Technology, Iran;* 2)*University of Arak, Iran.*

C1-2 **Elimination of Trace Heavy Metals from Drinking Water by Means of Weakly Basic Anion Exchangers**

1)Riegel M\*, 2)Schlitt V, and 1)Höll W H. 1)*Institute of Technical Chemistry,Germany;* 2)*Technologiezentrum Wasser, Germany*

C1-3 **Control of Cyanobacterial Bloom and Cyanotoxin Occurrence by UV Irradiation**

Hiroshi SAKAI\*, Hiroyuki KATAMAYA, Kumiko OGUMA, and Shinichiro OHGAKI. *The University of Tokyo, Japan*

### D1: Soil and Sediment Contamination

D1-1 **Model Analysis of Behavior of Oxytetracycline and Natural Estrogens in Sediment Mud Column**

Reni Desmiarti\*, Fusheng, Roza Amelia and Chihiro Yoshimura. *Gifu University, Japan*

D1-2 **Fate of Nitrate And Phosphate Through Agricultural Sub-Soil Environment**

Sadashiva Murthy.B.M\*, Ramesh. H.S. & Mahadevaswamy. M. *Sri Jayachamarajendra College of Engineering, India*

D1-3 **Quantification of Residual Mercury in The Subsurface**

Devasena M\* and Indumathi M Nambi. *Indian Institute of Technology Madras,India*

Session 2 (14:15-15:45)

### A2: Biological Process (2)

A2-1 **Performance Evaluation of A Pilot-scale Submerged Membrane Bioreactor (SMBR) for Potential Reuse of Department Store Wastewater**

Chavalit Ratanatamskul\* and Preeyanooch Saenkoch. 1)*Chulalongkorn University, Thailand*

A2-2 **Effect of Process Parameters on Adsorptive and Bio-removal of Cyanide Compounds from Contaminated Water**

1)Rajesh R. Dash , 2)Ritesh R. Dash, 3) Chandrajit Balomajumder\* and 3)Arvind Kumar 1)*National Institute of Technology Hamirpur,India ;* 2)*D.S. Toll Roads Ltd., Reliance Energy Ltd., India;* 3)*Indian Institute of Technology Roorkee, India*

A2-3 **Comparison of *Trichoderma Reesei* Rut C-30 and Locally Isolated *Aspergillus* Spp. Cellulases Using Domestic Wastewater Sludge as a Major Substrate**

Md. Zahangir Alam\*, Mariatul F. Mansor, Afifah Drani, Suleyman A. Muyibi, M Ismail A Karim, M Hamzah Salleh, Nassereldeen A Kabbashi. *International Islamic University Malaysia, Malaysia*

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**B2: Water and Wastewater Management**

- B2-1 **Water Resources and Sustainability Issues in Bangladesh**  
Shahriar Quayyum, Syeda Farhana Rahman, Md. Mafizur Rahman\*. Bangladesh University of Engineering & Technology, Bangladesh
- B2-2 **Effect of Scale on Adaptive Capacity of Water Resources System: A Case Study From a Nepalese River Basin**  
1)Vishnu P. Pandey\*, 2)Mukand S. Babel, 3)Sangam Shrestha, and 1)Futaba Kazama. 1)University of Yamanashi, Japan; 2)Asian Institute of Technology, Thailand; 3)Institute for Global Environmental Strategies, Japan
- B2-3 **Management of effluent from STR20 industry in Southern Thailand**  
1)2)Somtip Danteravanich\*. 1)Prince of Songkla University, Thailand; 2)Chulalongkorn University, Thailand
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**C2: Public Health**

- C2-1 **Clonorchiasis Infection and Aquaculture Environment in The Red River Delta, Vietnam**  
1)Aya Yajima\*, 2)Dung Do Trung, 2)Thach Dang Thi Cam, 3)Antonio Montresor and 1)Hisashi Kurokura. 1)The University of Tokyo, Japan; 2)National Institute of Malariology, Vietnam; 3)World Health Organization, Vietnam
- C2-2 **Coliforms and Pathogen Removal Efficiency of Various Municipal Wastewater Treatment Processes in India**  
1)Vinay Kumar Tyagi, A. A. Kazmi\*, 2)A. K. Chopra. 1)Indian Institute of Technology Roorkee, India; 2)Gurukul Kangri University, India
- C2-3 **Evaluation of Detection Methods Targeting Host-Specific Bacteroides Spp. as a Microbial Source Tracking Marker**  
Takayuki Miura\*, Yuen Man Chan, Yoshifumi Masago and Tatsuo Omura. Tohoku University, Japan
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**D2: Special session: Dialogs on water technology with societies (Supported by “Wisdom of Water” (Suntory), Corporate Sponsored Research Program, UT)**

- D2-1 **Representative elementary watershed (REW) modeling approach: A history and a new direction of water balance modeling**  
Yoshiyuki Yokoo<sup>1,2,\*</sup> and Taikan Oki<sup>2</sup> 1) “Wisdom of Water” (Suntory) Corporate Sponsored Research Project, Organization for Interdisciplinary Research Projects, The University of Tokyo, 2) Institute of Industrial Science, The University of Tokyo
- D2-2 **Arsenic in the environment – microbial gasification of arsenic**  
Kensuke Fukushi<sup>1,\*</sup>, S M Atiqul Islam<sup>2</sup>, Khondoker Mahbub Hassan<sup>3</sup> and Takashi Hashimoto<sup>3</sup> 1) Integrated Research System for Sustainability Science, The University of Tokyo, 2) Department of Civil Engineering, Dhaka University of Engineering and Technology, 3) Department of Urban Engineering, The University of Tokyo
- D2-3 **The subak water distribution system in Bali; Bridging tradition, religiousness and environmental sustainability**  
Peter Hehanussa<sup>1</sup> and Gadis Sri Haryani<sup>2</sup> 1) Asia Pacific Center for Ecohydrology LIPI 2) Research Center for Limnology LIPI
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**Session 3 (16:15-17:45)****A3: Biological Process (3)**

- A3-1 **Ammonia Stripping of Piggery Wastewater for Enhanced Methanization**  
Lei Zhang, Giyang Oh and Deokjin Jahng\*. Myongji University, Korea
- A3-2 **Effect of Salinity in Nitrification and Denitrification With High Ammonia Concentration**  
1) Hendrawan Saputra\*, 2) Raj Boopathy, 1) Tjandra Setiadi. 1) Institut Teknologi Bandung, Indonesia; 2) Nicholls State University
- A3-3 **Effect of Ammonium Loads on Communities of Ammonia-Oxidizing Bacteria and Archaea in Laboratory-Scale Continuous Flow Reactors**  
Puntipar Sonthiphand and Tawan Limpiyakorn. Chulalongkorn University, Bangkok, Thailand
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**B3: Urban Environment and Monitoring**

- B3-1 **Surface Water Pollution Due to Discharging From Sewerage System in Downtown of Hanoi**  
Pham Van Quan\*, Hiroaki Furumai, Futoshi Kurisu, and Ikuro Kasuga. *The University of Tokyo, Japan*
- B3-2 ***Ipomoea aquatica* as Biomarker on Study of Heavy Metal Pollution in Cidurian, West Java, Indonesia**  
Dwina Roosmini\*, Mahastuti H. Tjokronegoro, Suphia Rahmawati, Indah Rachmatiah Siti Salami. *Institut Teknologi Bandung, Indonesia*
- B3-3 **Management of Integral Bridge's Scour: Environmental Conservation**  
Shatirah Akib\*, Faridah Othman and Ismail Othman. *University of Malaya, Malaysia*
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**D3: Special session: Dialogs on water technology with societies (Supported by "Wisdom of Water" (Suntory), Corporate Sponsored Research Program, UT)**

- D3-1 **A perspective of communicating microbial health risks based on surveys in Asian water environment**  
Kumiko Oguma<sup>1,\*</sup>, Satoshi Takizawa<sup>2</sup> and Thuong Thi Nguyen<sup>3</sup> 1) *Department of Urban Engineering, University of Tokyo*, 2) *Department of Urban Engineering, University of Tokyo*, 3) *National Institute for Urban and Rural planning, Ministry of Construction*
- D3-2 **Infiltration potential of urban road runoff for groundwater replenishment toward a self-regulated urban water cycle**  
Michio Murakami<sup>1,\*</sup> and Hiroaki Furumai<sup>2</sup> 1) *"Wisdom of Water" (Suntory), Corporate Sponsored Research Program, Organization for Interdisciplinary Research Projects, The University of Tokyo*, 2) *Research Center for Water Environment, Graduate School of Engineering, The University of Tokyo*
- D3-3 **Effectiveness of technology approaches to reduce resistance of potential Bio-Toilet Users**  
Neni Sintawardani<sup>1,\*</sup> and Jovita Tri Astuti<sup>2</sup> 1) *Bureau for Cooperation and Promotion of Science and Technology, the Indonesian Institute of Science (LIPI)*, 2) *Research Center for Physics, the Indonesian Institute of Sciences (LIPI)*
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**October 31**

**Session 4 (8:00-9:30)**

**A4: Special session: Towards Sustainability in Water Systems (Supported by Integrated Research System for Sustainability Science (IR3S))**

- A4-1 **Arsenic Contamination in Groundwater and Skin Manifestations in Three VDC of Kailali District in Terai, Nepal**  
1) Makhan Maharjan\*, 2) Manen Prasad Gorkhaly, 1) Bhushan Tuladhar and 1) Lerica Gorkhaly. 1) *Environment and Public Health organization, Nepal*; 2) *Bir Hospital, Nepal*
- A4-2 **Comparison of tube-well and dug-well groundwater in the arsenic polluted areas in Cambodia**  
1) Davin Uy, 1) Sok Chea Hak\*, 1) Chanveasna Huy, 1) Malish Srey, 1) Thavarith Chunhieng, 1) Sackona Phoeurng, 2) Hassan M. Nasir and 2) David Fredericks. 1) *Institute of Technology, Cambodia*; 2) *World Health Organization, Cambodia*
- A4-3 **Household Level Drinking Water Treatment is a paramount necessity: a trial in Dhaka, Bangladesh**  
1) 2) N.A. Molla\*, 3) K.A. Mollah, 1) A. Hossain. 1) *Bangladesh Council for Scientific and Industrial Research Laboratories, Bangladesh*; 2) *Asian Institute of Technology, Thailand*; 3) *University of Yamanashi, Japan*
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**B4: Physicochemical process (1)**

- B4-1 **Effects of Crystalline Structures and Surface Functional Groups on Ionic Dyes Adsorption By Superparamagnetic Particles Comparing with Modified Mesoporous Silicates**  
1) Punyapalakul Patiparn\*, 2) Satoshi TAKIZAWA. 1) *Chulalongkorn University, Thailand*; 2) *University of Tokyo, Japan*
- B4-2 **Preparation and Optimization of Production of Powdered Activated Carbon From Industrial Oil Palm Solid Waste**

Emad S. M. Ameen\*, Suleyman A. Muyibi\*, Nasreldin A. Kabashi, Md. Zahangir Alam, And Mohammed I. Abdulkarim. *International Islamic University Malaysia, Malaysia.*

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- B4-3 **Development of Nanostructured TiO<sub>2</sub> Photocatalyst Powder for Water Purification**  
Nor Hafizah Ahmad Tarmizi\* and Iis Sopyan. *International Islamic University Malaysia, Malaysia*
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**C4: Solid Waste Management for Water Environment**

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- C4-1 **Solid Waste Management Scenario in Bangladesh: poses a risk of hazardous chemical emission to air and water**  
1)S.M. A. Islam\* and 2)K. Fukushi. 1)*Dhaka University of Engineering & Technology, Bangladesh;* 2)*The University of Tokyo, Japan*
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- C4-2 **Treatment of Organic Matters in Landfill Leachate by Bioextract juice**  
Pinrat Siripanpong, Chaisri Suksaroj, Thunwadee Tachapattaworakul, Jareerat Sakunrat, and Charongpun Musikavong\*. *Prince of Songkla University, Thailand*
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- C4-3 **Effect of Solid Waste Disposal Operations on Leaching of Organic Pollutants in Tropical Landfill**  
Chart Chiemchaisri\*, Wilai Chiemchaisri and Ruwini Weerasekara. *Kasetsart University, Thailand*
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**Session 5 (9:50-11:20)**

**A5: Special session: Towards Sustainability in Water Systems (Supported by Integrated Research System for Sustainability Science (IR3S))**

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- A5-1 **Water Environmental Management and Irrigation Planning Procedures: Irrigation User's Participation and Active Involvement**  
1)Carlos M. Pascual\*, 2)Danilo Cablayan, 3)Alfredo B. Valera. 1) *Mariano Marcos State University, Philippines;* 2)*Irrigation Water Management Institute-Philippines;* 3)*Irrigation Water Management Institute, Sri Lanka*
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- A5-2 **Storm and Dry Weather Water Quality Characteristics in the Phnom Penh Combined Sewer System**  
1)Mongtoeun Yim\*, 1)Saneth Vathna and 2)Kim Irvine. 1)*Royal University of Phnom Penh, Cambodia;* 2)*State University of New York, USA*
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- A5-3 **Sustainable Treatment of Green Waste And Wastewater Based on Urine-Diverting: A Case Study of Beijing Olympic Forest Park in China**  
Kangning Xu, Chengwen Wang\*. *Tsinghua University, PR China.*
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**B5: Physicochemical process (2)**

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- B5-1 **Synthesis of TiO<sub>2</sub>-SiO<sub>2</sub> Powder Using Sol-Gel Method for Photocatalyst Applications**  
Radhiyah Abd Aziz\* and Iis Sopyan. *International Islamic University Malaysia, Malaysia*
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- B5-2 **Physical and Chemically Enhanced Backwashing in Advanced Wastewater Treatment for Water Reclamation and Reuse**  
1)Mohammed S. Jami\*, 2)Than Ohn, 3)E. Iritani. 1)*International Islamic University Malaysia, Malaysia;* 2)*Aichi Science and Technology Foundation;* 3)*Nagoya University, Japan*
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- B5-3 **Study on Pre-Treatment of Dyeing Wastewater By Wet Air Catalytic Oxidation (WACO) And Fenton Oxidation (FO)**  
1)Cao The Ha\*, 2)Vu Ngoc Duy, 1)Nguyen Thanh Mai. 1)*The Center for Environmental Technology and Sustainable Development, Vietnam;* 2)*Vietnam National University, Vietnam.*
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**C5: Groundwater**

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- C5-1 **Groundwater Quality Problems and Issues in the Dry-Zone of Sri Lanka with Special Reference to Fluoride contamination and the Chronic Kidney Disease**  
Gemunu Herath\* and Uditha Ratnayake. *University of Peradeniya, Sri Lanka*
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- C5-2 **Groundwater Quality Management Evaluation In Bandung Basin, Indonesia**  
Rika Winurdiastri, Setiawan Wangsaatmaja\*. *West Java Environmental Protection Agency, Indonesia*
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- C5-3 **Analysis of Water-Level Fluctuations In Aydarkul-Arnasay Lake System And Their Influences on The Surrounding Groundwater Level**

1)Sri WAHYUNI\*, 1)Satoru OISHI, 1)Kengo SUNADA, 2)Kristina TODERICH, and 3)Nikolai E. GORELKIN. 1) *University of Yamanashi , Japan*; 2) *Samarkand Division of the Academy of Sciences of Uzbekistan, Uzbekistan*; 3) *Research Institute of Hydro-Meteorology of Uzbekistan, Uzbekistan*

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\* indicates presenter