

Japan Society on Water Environment (JSWE) Green-Plaza-Fukagawa-Tokiwa #201 2-9-7 Tokiwa, Koto-ku, Tokyo 135-0006 Japan Tel. +81-3-3632-5351 Fax. +81-3-3632-5352 http://www.jswe.or.jp

August 28, 2016

# This is to certify that

# Dr. NOORVY, Dian Thribhuwana Tunggadewi University, Indonesia

had participated in the Water and Environment Technology Conference (WET2016) officially organized by Japan Society on Water Environment from 27<sup>th</sup> to 28<sup>th</sup> August, 2016, held at Chuo University Korakuen campus (1-13-27, Kasuga, Bunkyo-ku, Tokyo),

and had presented her presentation entitled "The Influence of Slope, Innitial Water Content and Compaction Soil on Runoff and Infiltration for Urban Drainage".

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SANO Daisuke,

Secretary of WET2016,

Japan Society on Water Environment

Associate Professor.

Hokkaido University



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June 22, 2016

Dr. Dian Noorvy Khaerudin

Faculty of Engineering, Tribuwana Tunggadewi University, Indonesia

Jl. Telaga warna Blok C Tlogomas, Malang, East Java, 65144, Indonesia -

Dear Dr. Dian Noorvy Khaerudin,

We are pleased to invite you to the Water and Environment Technology Conference (WET2016) officially organized by Japan Society on Water Environment from 27<sup>th</sup> to 28<sup>th</sup> August, 2016, held at the Chuo University Korakuen campus (1-13-27, Kasuga, Bunkyo-ku, Tokyo, Japan).

It is our pleasure to announce you that your presentation entitled "The Influence of Slope, Innitial Water Content and Compaction Soil on Runoff and Infiltration for Urban Drainage" has been accepted as hybrid-type (both oral and poster) presentation.

Please refer to our web site for details of this event.

(http://www.jswe.or.jp/extra/wet2016/index.html)

We are looking forward to welcoming you in Tokyo.

Sincerely yours,

SANO Daisuke,

Secretary of WET2016,

/左野大車

Japan Society on Water Environment

Associate Professor,

Hokkaido University



## WET2016 PROGRAM AND ABSTRACT

### Water and Environment Technology Conference August 27th-28th, 2016 Korakuen campus, Chuo University

#### DEAR COLLEAGUES,

Welcome to the Water and Environment Technology Conference 2016 (WET2016), held in Tokyo, Japan on the 27th-28th August 2016. The conference focuses on topics related to water environment, and provides a hybrid-type forum to promote exchange of information, ideas and knowledge among scientists, engineers and students. Scientific committee encourages participants to submit their manuscripts to the Journal of Water and Environment Technology (JWET), which is an official journal of the Japan Society on Water Environment (JSWE). Manuscripts submitted to JWET are subjected to the normal peer-review process.

#### **CONFERENCE TOPICS**

Conference topics include, but are not limited to the following:

- · Analysis of water and environment quality
- · Modeling of water and environment
- · Treatment of water and wastewater
- · Restoration of contaminated environment
- · Hazardous chemicals and waste management
- · Public health and risk assessment
- · Environmental education and training
- · Water reclamation

#### REGISTRATION

On-line registration was available for participants and speakers on the WET2016 website (<a href="http://www.jswe.or.jp/extra/wet2016/">http://www.jswe.or.jp/extra/wet2016/</a>) by 28th July 2016 for early-bird registration. The registration fee is collected by cash (in Japanese Yen) on site. The fee covers participation to all scientific sessions and the abstract proceedings. The conference banquet is free of charge for all registered participants.

Students are required to show their student ID at the registration desk, otherwise the full registration fee is charged.

Full registration fee

	Participant	Speaker
Early-bird	5,000 JPY	5,000 JPY
On site	7,000 JPY	

Student registration fee

	Participant	Speaker		
Early-bird	3,000 JPY	3,000 JPY		
On site	4,000 JPY			

#### PRESENTATION STYLE

All the presentations and discussions are made in a hybrid-type forum. Brief introduction should be made in the oral session prior to the poster viewing session. The official language is English.

#### PROGRAM OUTLINE

#### 27th August

Morning: Registration desk open

Morning Japan-YWP 5th International Symposium (Pre-conference event organized by Japan-YWP)

Noon : Lunch Break

Afternoon: Opening Ceremony (Invited lecture)

Afternoon: Conference (Oral introduction and poster viewing)

Evening: Banquet (sponsored by Swing Corporation)

#### 28th August

Morning : Conference (Oral introduction and poster viewing)
Noon : Farewell lunch (sponsored by Swing Corporation)

Afternoon: Closing Ceremony

#### **AWARDS**

#### WET Excellent Paper Award

The WET Excellent Paper Award will be given for outstanding papers submitted to *JWET* (*Journal of Water and Environment Technology*) for WET conference, to acknowledge their scientific contribution to the field of Water and Environment Technology.

The awardees of WET Excellent Paper Award for WET2015 are invited to WET2016, give award lectures and win the award at the Opening Ceremony on 27th Aug (from 13:00).

The awardees of WET Excellent Paper Award for WET2016 will be invited to WET2017, where they will give award lectures and win the award.

#### WET Excellent Presentation Award

The WET Excellent Presentation Award will be given for outstanding presentations at WET2016. All presenters will be eligible for the award.

The awardees of WET Excellent Presentation Award will be announced at the closing ceremony on August 28th (from 14:30).

These awards are sponsored by Swing Corporation.

#### **INQUIRY**

Should you have any inquiries, please contact the registration desk.

#### INSTRUCTION FOR PRESENTERS

All presenters are asked to introduce your posters in oral introduction session prior to the poster viewing sessions.

#### 1. Oral introduction presentation

- a) Prepare your presentation slides with Microsoft Powerpoint.
   Laptop Windows PCs equipped with Office 2013 are prepared in the presentation rooms.
   Macintosh PC is not available.
- Bring your presentation file by USB flash memory.
   We strongly recommend you bring your file in more than one USB flash memories just in case.
- c) The file name should be your presentation number and your name.

  For example, if my name is "SANO" and my presentation number is 1A-19, then the file name must be "1A-19sano".
- d) Strictly keep presentation time shorter than 4 (four) minutes.
   Session chair may interrupt your presentation when 4 min passed.
- e) All the questions and discussion should be made at the poster viewing session. No time for questions and discussion in the oral presentation.
- f) Install your presentation files to the PC in the session room at earliest occasion, at least by 5 minutes before your session starts.

Ask WET2016 staffs in the session room for assistance.

#### 2. Poster viewing session

- Size of the poster board is 150 cm height and 90 cm width.
   Prepare your poster to fit in the poster board.
- b) Push pins is available at the poster session floor.
- c) Put/remove your poster according to the following schedule;

#### For presenters on August 27th (1st day)

Stick up your poster by 14:00 on 27th.

Please DO NOT remove your poster before the second session ends (18:40 on 27th).

#### For presenters on August 28th (2nd day)

Stick up your poster by 9:00 on 28th.

Please DO NOT remove your poster before the second session ends (13:40 on 28th).

Note: Posters can be displayed during whole WET2016 conference; remaining poster after 15:00 on 28th will be removed and disposed by WET2016 staffs.

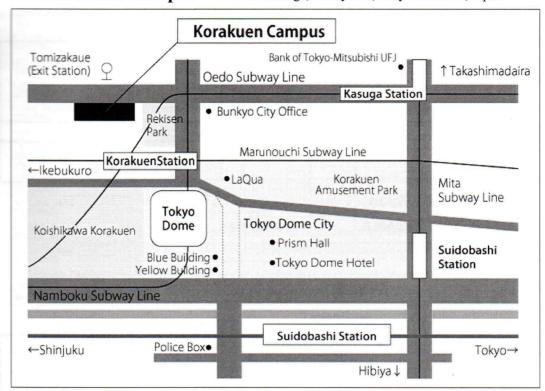
# WET2016 Conference Program at a Glance

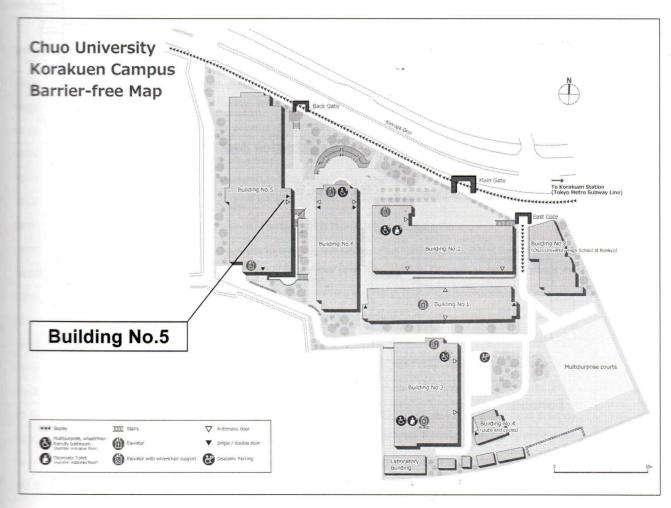
Date	Time slot	Session	Room A(2F)	Room B(2F)	Room C(1F)	Room D(1F)	RoomE(1F)	Room F(1F)
	10:00-12:00	S01	Japan-YWP 5th International Symposium	,		-		
	12:00-13:00		-	Ā	Registration and Lunch break	ich break		
	13:00-13:50	S02		Opening Ceremony				
Sat. 27	14:00-15:20	2	Oral introduction 1A	Oral introduction 1B		a .		
Aug.	15:20-16:20	<u>.</u>	ı	1	Poster viewing 1A	Poster viewing 1B		
	16:20-17:40	6	Oral introduction 2A	Oral introduction 2B				
	17:40-18:40	75		1			Poster viewing 2A	Poster viewing 2B
	18:50-		т.	Con	Conference dinner (complimentary)	nplimentary)		

Room F(1F)				Poster viewing 4B		
RoomE(1F)				Poster viewing 4A		
Room D(1F)		Poster viewing 3B			olimentary)	
Room C(1F)		Poster viewing 3A			Farewell Lunch (complimentary)	~
Room B(2F)	Oral introďuction 3B	ī	Oral introduction 4B	1	Fa	1
Room A(2F)	uo	,	Oral introduction 4A	1		Closing Ceremony
Session	83		i	χ 2		S03
Time slot	9:00-10:20	10:20-11:20	11:20-12:40	12:40-13:40	13:40-14:30	14:30-
Date	Sun. 28 Aug.					

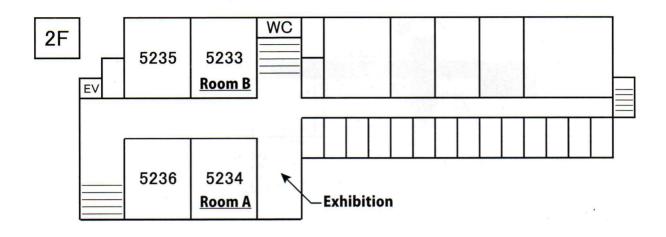
# Access Map

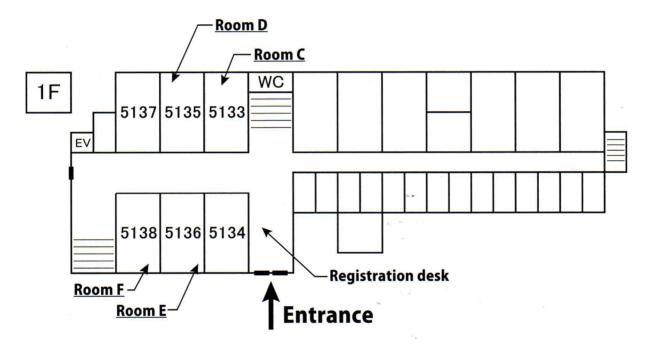
Korakuen Campus (1-13-27 Kasuga, Bunkyo-ku, Tokyo 112-8551, Japan)

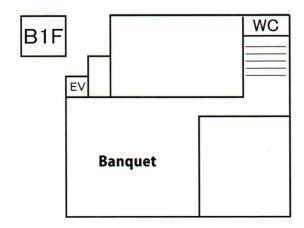




# Building NO. 5







#### WET2016 Technical Program

Saturday	Speaker August 27th Session 1A	Chair: TERADA Akihik	Pag
- a.u. uay,		Chair: TERADA AKINIK ntation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t	
1A-01	Sindhu, NT (00012597)	Assessment of Alternative Disposal Methods to Reduce Greenhouse Gas Emissions from Municipal Solid Waste in India	
IA-02	HARIBOWO, Riyanto (00012599)	Development of Seawater Distiller Using Electrical Energy for Sustainable Clean Water Production	
A-03	KUWAHARA, Hitomi (00012600)	Relationship between Cell Growth and Luminescence of Marine Luminous Bacteria in Artificial Sea Water and Sea Water Medium	
IA-04	LEE, Taeho (00012603)	Biological and Bioelectrochemical Recovery of Selenium by a Selenite-Reducing Bacterium Isolated from Domestic Wastewater	
A-05	QIAO, Wei (00012604)	Comparison of Thermophilic and Hyperthermophilic Pretreatment of Food Waste for Bio-Energy Production	
A-06	KUAN, Wen-Hui (00012608)	Transformation of lodine Speciation in Mn-Oxides Suspension under Artificial Sunlight Source Irradiation	
A-07	HANAOKA, Tsubasa (00012735)	Nitrogen Removal Ability and Biomass Productivity by Various Duckweeds in Different Wastewaters.	
A-08	NOORVY, Dian (00012610)	The Influence of Slope, Innitial Water Content and Compaction Soil on Runoff and Infiltration for Urban Drainage	
IA-09	PHUNGSAI, Phanwatt (00012611)	Reproducibility of Orbitrap Mass Spectrometry in Unknown Screening Analysis of Dissolved Organic Matter in Environmental and Urban Water	
A-10	HAFUKA, Akira (00012615)	Application of Anaerobic Membrane Bioreactor to Digestion and Thickening of Excess Sludge from Aerobic Membrane bioreactor	
A-11	NOZAKI, Takuya (00012616)	Influence of Gd₂O₃ Addition to CeO₂ Photocatalyst on the Removal of Lead Ions from Water	
A-12	ANZAI, Tatsuki (00012617)	Removal of Hazardous Materials in Water Environment by Rice Hull Magnetic Activated Carbon and Magnetic Separation	
IA-13	SUGAWARA, Tsuyoshi	Valuable Resource Recovery from Water Environment by Magnetic Zeolite and High Gradient	••••
A-14	(00012618) WANG, Jianing	Magnetic Separation   Relationship between River Landscape and Fish-habitat in Yamaguchi Prefecture.   ✓	
A-15	(00012619) BHUYAN, Jayatu Kanta	Differences in Maximum Mixing Depth for Positive Net Primary Production of Phytoplankton Due to	
A-16	(00012642) SONAKA, Hideaki	Relationships Between Photosynthesis and Irradiance  Development of Wastewater Treatment System with Resource Recovery for Natural Rubber Industry	
A-17	(00012644) MIKAWA, Masahiro, <b>√</b>	Modelling the Competitive Growth Patterns of Microcystis Aeruginosa and Cyclotella sp. under	
	(00012655)	Various Nitrogen Concentrations and Daily Renewal Rates	
	SUGIYAMA, Kazuya (00012643)  August 27 <sup>th</sup> Session 1B	Isolation and Characterization of Microorganisms Playing a Role of Low Concentration Ammonia Oxidation  Chair: WATANABE Tomohid	'e
	(00012643)  August 27th Session 1B	Oxidation	
aturday, <i>i</i>	(00012643)  August 27th Session 1B	Chair: WATANABE Tomohid	-
aturday, <i>i</i>	(00012643)  August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)	Chair: WATANABE Tomohid ntation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t	-
<b>aturday</b> , <i>i</i> B-01 B-02	(00012643)  August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)	Chair: WATANABE Tomohid  ntation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony	
B-01 B-02 B-03	(00012643)  August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a	h
B-01 B-02 B-03 B-04 B-05	(00012643)  August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia	h
B-02 B-03 B-04 B-05 B-06	(00012643)  August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN,	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia  Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal	h
B-01 B-02 B-03 B-04 B-05 B-06	(00012643)  August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia  Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth  Analyses of Surface Runoff Through a Flexible Sloping Plot	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07	August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)  YAMAMOTO, Yuko(00012629)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t.  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia  Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08	August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27th Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter Assessing Landslide Potential using GIS, Konto River, Indonesia Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth Analyses of Surface Runoff Through a Flexible Sloping Plot Characteristics and Long-term Change of the Groundwater Quality of Sarobetsu Mire Development of Groundwater Level Tank Model (GLTM) which express groundwater level fluctuation	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08	August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)  YAMAMOTO, Yuko(00012630)  MANALO, Cervinia	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t.  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia  Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth  Analyses of Surface Runoff Through a Flexible Sloping Plot  Characteristics and Long-term Change of the Groundwater Quality of Sarobetsu Mire  Development of Groundwater Level Tank Model (GLTM) which express groundwater level fluctuation showing complex behavior  Suspended Solid Deposition and Removal by Hypochlorite and Nanobubble Treatment on Reverse	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10	August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)  YAMAMOTO, Yuko(00012629)  SUENAGA, Yuichi(00012630)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia  Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth  Analyses of Surface Runoff Through a Flexible Sloping Plot  Characteristics and Long-term Change of the Groundwater Quality of Sarobetsu Mire  Development of Groundwater Level Tank Model (GLTM) which express groundwater level fluctuation showing complex behavior  Suspended Solid Deposition and Removal by Hypochlorite and Nanobubble Treatment on Reverse Osmosis Membranes  Nitrogen-removal Performance and Bacterial Community by Mixed-culture of Marine- and Freshwater-	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10	August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)  YAMAMOTO, Yuko(00012629)  SUENAGA, Yuichi(00012630)  MANALO, Cervinia Velasco(00012631)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t.  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia  Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth  Analyses of Surface Runoff Through a Flexible Sloping Plot  Characteristics and Long-term Change of the Groundwater Quality of Sarobetsu Mire  Development of Groundwater Level Tank Model (GLTM) which express groundwater level fluctuation showing complex behavior  Suspended Solid Deposition and Removal by Hypochlorite and Nanobubble Treatment on Reverse Osmosis Membranes  Nitrogen-removal Performance and Bacterial Community by Mixed-culture of Marine- and Freshwater-Anammox Bacteria under Different Salinity Conditions  Estimation of Nitrogen Load under Complex Pollution Sources using SWAT Model: a Case Study in	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11	August 27th Session 1B  Oral presert  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)  YAMAMOTO, Yuko(00012629)  SUENAGA, Yuichi(00012630)  MANALO, Cervinia Velasco(00012631)  KOGA, Yuki(00012632)  TRAN, Bach Viet(00012633)  SHRESTHA,	Chair: WATANABE Tomohid  Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t.  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia  Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth  Analyses of Surface Runoff Through a Flexible Sloping Plot  Characteristics and Long-term Change of the Groundwater Quality of Sarobetsu Mire  Development of Groundwater Level Tank Model (GLTM) which express groundwater level fluctuation showing complex behavior  Suspended Solid Deposition and Removal by Hypochlorite and Nanobubble Treatment on Reverse Osmosis Membranes  Nitrogen-removal Performance and Bacterial Community by Mixed-culture of Marine- and Freshwater-Anammox Bacteria under Different Salinity Conditions  Estimation of Nitrogen Load under Complex Pollution Sources using SWAT Model: a Case Study in the Cau River Basin, Northern Vietnam  Health Risk Assessment from Enteropathogens through Vegetable Consumption in the Kathmandu	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B-12 B-13	August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)  YAMAMOTO, Yuko(00012629)  SUENAGA, Yuichi(00012630)  MANALO, Cervinia Velasco(00012631)  KOGA, Yuki(00012632)  TRAN, Bach Viet(00012633)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter Assessing Landslide Potential using GIS, Konto River, Indonesia Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth Analyses of Surface Runoff Through a Flexible Sloping Plot Characteristics and Long-term Change of the Groundwater Quality of Sarobetsu Mire Development of Groundwater Level Tank Model (GLTM) which express groundwater level fluctuation showing complex behavior Suspended Solid Deposition and Removal by Hypochlorite and Nanobubble Treatment on Reverse Osmosis Membranes Nitrogen-removal Performance and Bacterial Community by Mixed-culture of Marine- and Freshwater-Anammox Bacteria under Different Salinity Conditions Estimation of Nitrogen Load under Complex Pollution Sources using SWAT Model: a Case Study in the Cau River Basin, Northern Vietnam Health Risk Assessment from Enteropathogens through Vegetable Consumption in the Kathmandu Valley, Nepal. Modified Disability Weights for Diarrhea Diseases Based on Feeling of Flood-affected People in Asian	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B-12 B-13 B-14	August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)  YAMAMOTO, Yuko(00012629)  SUENAGA, Yuichi(00012630)  MANALO, Cervinia Velasco(00012631)  KOGA, Yuki(00012632)  TRAN, Bach Viet(00012633)  SHRESTHA, SHANKAR(00012634)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter Assessing Landslide Potential using GIS, Konto River, Indonesia Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth Analyses of Surface Runoff Through a Flexible Sloping Plot Characteristics and Long-term Change of the Groundwater Quality of Sarobetsu Mire Development of Groundwater Level Tank Model (GLTM) which express groundwater level fluctuation showing complex behavior Suspended Solid Deposition and Removal by Hypochlorite and Nanobubble Treatment on Reverse Osmosis Membranes Nitrogen-removal Performance and Bacterial Community by Mixed-culture of Marine- and Freshwater-Anammox Bacteria under Different Salinity Conditions Estimation of Nitrogen Load under Complex Pollution Sources using SWAT Model: a Case Study in the Cau River Basin, Northern Vietnam Health Risk Assessment from Enteropathogens through Vegetable Consumption in the Kathmandu Valley, Nepal. Modified Disability Weights for Diarrhea Diseases Based on Feeling of Flood-affected People in Asian Developing Countries	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B-12 B-13 B-14 B-15	August 27th Session 1B  Oral presert  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)  YAMAMOTO, Yuko(00012629)  SUENAGA, Yuichi(00012630)  MANALO, Cervinia Velasco(00012631)  KOGA, Yuki(00012632)  TRAN, Bach Viet(00012633)  SHRESTHA, SHANKAR(00012634)  NGUYEN, Gia(00012635)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20  Put up poster by 14:00, Saturday, August 27t.  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia  Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth  Analyses of Surface Runoff Through a Flexible Sloping Plot  Characteristics and Long-term Change of the Groundwater Quality of Sarobetsu Mire  Development of Groundwater Level Tank Model (GLTM) which express groundwater level fluctuation showing complex behavior  Suspended Solid Deposition and Removal by Hypochlorite and Nanobubble Treatment on Reverse Osmosis Membranes  Nitrogen-removal Performance and Bacterial Community by Mixed-culture of Marine- and Freshwater-Anammox Bacteria under Different Salinity Conditions  Estimation of Nitrogen Load under Complex Pollution Sources using SWAT Model: a Case Study in the Cau River Basin, Northern Vietnam  Health Risk Assessment from Enteropathogens through Vegetable Consumption in the Kathmandu Valley, Nepal.  Modified Disability Weights for Diarrhea Diseases Based on Feeling of Flood-affected People in Asian Developing Countries  Biohydrogen Production with Low Tidal Flat Mixed Culture Utilizing Glucose as Substrate	h
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09	August 27th Session 1B  Oral preser  AIHARA, Shingo(00012621)  TSAI, Pei-Chen(00012622)  FUJIHIRA, Takuya(00012624)  KANDA, Ryo(00012625)  SHOLICHIN, Mohammad(00012626)  TAKEDA, Fumihiko(00012627)  SEDYOWATI, Laksni(00012628)  YAMAMOTO, Yuko(00012630)  MANALO, Cervinia Velasco(00012631)  KOGA, Yuki(00012632)  TRAN, Bach Viet(00012633)  SHRESTHA, SHANKAR(00012634)  NGUYEN, Gia(00012635)  ALY, Shahira Said(00012637)	Chair: WATANABE Tomohid Intation: 14:00-15:20, Poster viewing: 15:20-16:20 Put up poster by 14:00, Saturday, August 27t.  Applicability of Gypsum as a Calcium Source for Phosphorus Removal by Crystallization  The Role of Extracellular Polysaccharides and Calcium Ion Inducing Microcystis Aeruginosa Colony Formation  Development of Appropriate Treatment System for Palm Oil Mill Effluent by a Combined System of an Anaerobic Baffled Reactor and Down-flow Hanging Sponge Reactor  Influence of Temperature and COD Loading on Biological Nitrification-Denitrification Process Using a Trickling Filter  Assessing Landslide Potential using GIS, Konto River, Indonesia  Seasonal Variation of Reduction Ability of Biological Effect by Wastewater Treatment Based on Algal Growth  Analyses of Surface Runoff Through a Flexible Sloping Plot  Characteristics and Long-term Change of the Groundwater Quality of Sarobetsu Mire  Development of Groundwater Level Tank Model (GLTM) which express groundwater level fluctuation showing complex behavior  Suspended Solid Deposition and Removal by Hypochlorite and Nanobubble Treatment on Reverse Osmosis Membranes  Nitrogen-removal Performance and Bacterial Community by Mixed-culture of Marine- and Freshwater-Anammox Bacteria under Different Salinity Conditions  Estimation of Nitrogen Load under Complex Pollution Sources using SWAT Model: a Case Study in the Cau River Basin, Northern Vietnam  Health Risk Assessment from Enteropathogens through Vegetable Consumption in the Kathmandu Valley, Nepal.  Modified Disability Weights for Diarrhea Diseases Based on Feeling of Flood-affected People in Asian Developing Countries  Biohydrogen Production with Low Tidal Flat Mixed Culture Utilizing Glucose as Substrate	h

## **WET2016 Technical Program**

Saturday, August 27th Session 1A

Chair: TERADA Akihiko

Oral presentation: 14:00-15:20, Poster viewing: 15:20-16:20

Put up poster by 14:00, Saturday, August 27th

1A-01	Sindhu, NT	Assessment of Alternative Disposal Methods to Reduce Greenhouse Gas		
	(00012597)	Emissions from Municipal Solid Waste in India		
1A-02	HARIBOWO, Riyanto	Development of Seawater Distiller Using Electrical Energy for Sustainable		
	(00012599)	Clean Water Production		
1A-03	KUWAHARA, Hitomi	Relationship between Cell Growth and Luminesscence of Marine Luminous		
	(00012600)	Bacteria in Artificial Sea Water and Sea Water Medium		
1A-04	LEE, Taeho	Biological and Bioelectrochemical Recovery of Selenium by a		
	(00012603)	Selenite-Reducing Bacterium Isolated from Domestic Wastewater		
1A-05	QIAO, Wei	Comparison of Thermophilic and Hyperthermophilic Pretreatment of Food		
	(00012604)	Waste for Bio-Energy Production		
1A-06	KUAN, Wen-Hui	Transformation of Iodine Speciation im Mm-Oxides Suspension under		
	(00012608)	Artificial Sunlight Source Irradiation		
1A-07	HANAOKA, Tsubasa	Nitrogen Removal Ability and Biomass Productivity by Various Duckweeds		
	(00012735)	in Different Wastewaters.		
1A-08	NOORVY, Dian	The Influence of Slope, Innitial Watter Committeent and Compaction Soil on		
	(00012610)	Runoff and Infiltration for Urban Drainage		
1A-09	PHUNGSAI, Phanwatt	Reproducibility of Orbitrap Mass Spectmonmetry in Unknown Screening		
	(00012611)	Analysis of Dissolved Organic Matter in Environmental and Urban Water		
1A-10	HAFUKA, Akira	Application of Anaerobic Membrane Biomeactor to Digestion and Thickening		
	(00012615)	of Excess Sludge from Aerobic Membrane bioreactor		
1A-11	NOZAKI, Takuya	Influence of Gd <sub>2</sub> O <sub>3</sub> Addition to CeO <sub>2</sub> Photocatallyst on the Removal of Lead		
	(00012616)	Ions from Water		
1A-12	ANZAI, Tatsuki	Removal of Hazardous Materials im Whatter Emvironment by Rice Hull		
	(00012617)	Magnetic Activated Carbon and Magnetic Separation		
1A-13	SUGAWARA, Tsuyoshi	Valuable Resource Recovery from Watter Emvironment by Magnetic Zeolite		
	(00012618)	and High Gradient Magnetic Separation		
1A-14	WANG, Jianing	Relationship between River Landscappe and Fish-habitat in Yamaguchi		
	(00012619)	Prefecture.		
1A-15	BHUYAN, Jayatu Kanta	Differences in Maximum Mixing Depth four Positive Net Primary Production of		
	(00012642) Phytoplankton Due to Relationships Between Photosynthesis and Irradiano			
1A-16	SONAKA, Hideaki	Development of Wastewater Treatment System with Resource Recovery for		
	(00012644) Natural Rubber Industry			
1A-17	MIKAWA, Masahiro	Modelling the Competitive Growth Patterns of Microcystis Aeruginosa and		
	(00012655)	Cyclotella sp. under Various Nitrogen Concentrations and Daily Renewal		
		Rates		
1A-18	SUGIYAMA, Kazuya	Isolation and Characterization of Microorganisms Playing a Role of Low		

ogram (4/4)

Saturday, August 27th

Session 1A Oral presentation: 14:00-15:20, Poster viewing: 15:20-16:20

Chair: TERADA Akihiko

1A-01

## Assessment of Alternative Disposal Methods to Reduce Greenhouse Gas Emissions from Municipal Solid Waste in India

Sudhakar YEDLA\*, Sindhu NT\*\*

\*Indira Gandhi Institute of Development Research, Mumbai

Open dumping, the most commonly practiced method of solid waste disposal in Indian cities, creates serious environment and economic challenges, and also contributes significantly to GHG emissions. The present paper attempts to analyse and identify economically effective ways to reduce GHG emissions from municipal solid waste (MSW). The paper looks at the selection of appropriate methods for the control of methane emissions. Multivariate functional models are presented, based on theoretical considerations as well as the field measurements to forecast the GHG mitigation potential for all the methodologies under consideration. Economic feasibility is tested by calculating the unit cost of waste disposal for the respective disposal process. The Purpose Built Landfill System (PBLF) system proposed by Yedla and Parikh has shown promise in controlling GHG and saving land. However, these studies show that aerobic composting offers the optimal method both in terms of controlling GHG emissions and reducing costs, mainly by requiring less land than other methods.

1A-02

# **Development of Seawater Distiller Using Electrical Energy for Sustainable Clean Water Production**

Riyanto HARIBOWO\*, Emma YULIANI\*, Andi G PRASETYA\*

\*Department of Water Resources Engineering, Brawijaya University, Malang 65145 Indonesia

Distillation is one of the methods used to process seawater into fresh water. The purpose of this study was to develop seawater distiller that can be used to purify water by utilizing electrical energy to power heating elements used in the condensation phase of distillation. Variations on the number of water heating elements and the water level in the evaporator unit were analyzed to determine the ideal device configuration. The distillation instrument consisted of three parts: a container unit, water level control unit, and evaporation chamber unit. The distillation process was conducted with a water level in the evaporation unit of 8 cm in Experiment 1 and 4 cm in Experiment 2, and one to six water heating elements in various configurations over eight tests in each experiment. The seawater used was taken from the Indian Ocean off Balekambang Beach, Malang Regency, Indonesia. The largest quantity of purified water obtained among the 16 experimental conditions was the 3.94 liters obtained in test number VIII, which used six centralized heating elements and a water level of 4 cm in the evaporation unit.

<sup>\*\*</sup>KITCO, Kochi, India

Session 1A Oral presentation: 14:00-15:20, Poster viewing: 15:20-16:20

Chair: TERADA Akihiko

1A-07

# Nitrogen Removal Ability and Biomass Productivity by Various Duckweeds in Different Wastewaters

Tsubasa HANAOKA, Tadashi TOYAMA, Yan LI, Yasuhiro TANAKA, Kazuhiro MORI

Interdisciplinary Graduate School of Medicine, Engineering, and Agricultural Sciences, University of Yamanashi 400-0016 Japan

Duckweeds in the subfamily Lemnaceae are the smallest aquatic plants. Duckweeds are a promising crop that offers a co-benefit culture system combining water purification with bioresource production because of their high growth rate, high nitrogen uptake and high starch accumulation. In this study, nitrogen removal ability and biomass productivity by four duckweed species, *Lemna minor*, *Lemna gibba*, *Landoltia punctata* and *Spirodela polyrhiza*, were compared in bench-scale pot experiment. Each duckweed was cultured in pot containing three different wastewaters, secondary effluent of sewage treatment, swine wastewater and anaerobic digestion effluent. All four duckweeds effectively removed nitrogen from all wastewaters. For example, total nitrogen removal rate of *L. minor*, *L. gibba*, *L. punctata* and *S. polyrhiza* from swine wastewater were 14.2, 13.1, 13.5 and 14.2 N mg/L/d, respectively. *S. polyrhiza* biomass produced in swine wastewater was 33% carbon content, 4.5% nitrogen content, 5.2% starch content and 16 kJ/g calorific value. The *S. polyrhiza* biomass was prepared easily by heating at 121°C for saccharification and fermentation process. The ethanol yield from the biomass was about 0.17 g/g of dry weight. The results strongly indicate that duckweeds are applicable for nitrogen removal from wastewaters and biofuel production.

1A-08

# The Influence of Slope, Innitial Water Content and Compaction Soil on Runoff and Infiltration for Urban Drainage

Dian NOORVY\*, Donny HARISUSENO\*\*, Agus SUHARYANTO\*\*\*

- \*Department of Civil Engineering, Thribhuwana Tunggadewi University, Malang 65144 Indonesia
- \*\*Department of Water Resources Engineering, Brawijaya University, Malang 65145 Indonesia
- \*\*\*Department of Civil Engineering, Brawijaya University, Malang 65145Indonesia

The hydrological processes in the urban drainage are rainfall, runoff, and infiltration. This phenomenon of water balance occurs to be the concept of urban drainage. Hydrological problems cannot be solved just by linking two variables or see the influence of one variable against another variable, so this research aims to find out how the relationship soil density, initial moisture content, and slope of land can influence together in the event of rain, runoff and infiltration. This research with experimental methods using a rainfall simulator. Based on the results of the study, the density and the slope will effect positive against the runoff, the higher the density, the greater the runoff it will occur, but will affect negatively to infiltration. Both of these variables when added with variable initial moisture content, then on the third condition variable it is high, it will be a positive effect against runoff, i.e. the higher the third variable it will be the higher the runoff. However, in the process of rainfall infiltration and runoff, there were other influences, namely time. The time that occurs in the process it is time start percolating, the time is balanced between the runoff and infiltration, and time to constant.



## Yayasan Bina Patria Nusantara Malang

#### UNIVERSITAS TRIBHUWANA TUNGGADEWI MALANG

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HAMPMALL

LAS TENNIK

Program Pascasarjana: Manajemen Agribisnis, Administrasi Publik

Program Diploma: Diploma IV Bidan Pendidik

#### SURAT TUGAS

Nomor: 740/ TB.KP-440 / VII/ 2016

Yang bertanda tangan di bawah ini:

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: Rektor

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Memberikan Tugas kepada Dosen berikut:

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: Dosen Program Studi Teknik Sipil Fakultas Teknik

Universitas Tribhuwana Tunggadewi Malang

Untuk mengikuti kegiatan "The Water and Environment Technology Conference 2016 (WET-2016)" di Chuo University Korakuen Campus (1-13-27, Kasuga, Bunkyo-ku, Tokyo, Japan).

Demikian surat tugas ini dibuat, untuk digunakan sebagaimana mestinya.

Malang, 12 Juli 2016

Dr. Ir. Wani Hadi Utomo

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#### Yayasan Bina Patria Nusantara Malang UNIVERSITAS TRIBHUWANA TUNGGADEWI MALANG FAKULTAS TEKNIK

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#### **SURAT TUGAS**

Nomor: 782/TB.FT/TU-350/VI/2016

#### Yang bertanda tangan di bawah ini:

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Jabatan

: Lektor Kepala / Dekan Fakultas Teknik Universitas Tribhuwana Tunggadewi

#### Menugaskan kepada Saudara:

Nama

: Dian Noorvy Khaerudin, ST., MT

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: 19760319 200501 2 002

Pangkat

: Penata / III c

Jabatan

: Lektor / Dosen DPK Kopertis Wilayah VII Jatim

Untuk mengikuti kegiatan "The Water and Environment Technology Conference 2016 (WET - 2016)" di Chuo University, Tokyo – Jepang pada tanggal 27-28 Agustus 2016 sebagai pemakalah.

Demikian Surat Tugas ini dibuat untuk dapat dilaksanakan.

Malang, 24 Juni 2016

Dekan,

Nawir Rasidi, ST., MT

19710604 199702 1 002