

No. 19-206 Proceedings of the International Workshop on Environmental Engineering 2019 IWEE2019

(Organized by the Environmental Engineering Division of the Japan Society of Mechanical Engineers (JSME))

Supporting societies:

Japan Society of Energy and Resources/The Society of Chemical Engineers, Japan/Society of Environmental Science, Japan/The Resources Processing Society of Japan/The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan/The Society of Polymer Science, Japan/Japan Environmental Management Association for Industry/The Mining and Materials Processing Institute of Japan/Society of Automotive Engineers of Japan, Inc./Japanese Geotechnical Society/The Institute of Electrostatics Japan/Japan Waste Management Association/Japan Society for Atmospheric Environment/The Institute of Electronics, Information and Communication Engineers/Japan Society of Civil Engineers/The Japan Institute of Energy/Japan Ozone Association/Acoustical Society of Japan/The Chemical Society of Japan/Japan Environmental Facilities Manufactures Association/Japan Environmental Sanitation Center/Japan Air Cleaning Association/Architectural Institute of Japan/The Japanese Society for Multiphase Flow/The Japan Society of Industrial Machinery Manufacturers/Japan Industrial Waste Information Center/Japan Water Works Association/The Ceramic Society of Japan/Institute of Noise Control Engineering of Japan/Japan Solar Energy Society/The Iron and Steel Institute of Japan/Japanese Society of Soil Science and Plant Nutrition/Combustion Society of Japan/Heat Island Institute International/The Japan Society for Analytical Chemistry/Japan Society on Water Environment/The Society for Risk Analysis Japan/Japan Society of Refrigerating and Air Conditioning Engineers/Japan Waste Research Foundation/Japan Society of Material Cycles and Waste Management/The Society of Powder Technology, Japan/Smart Sound Design Society

Period: June 25th (Tue.)–28th (Fri.), 2019

Venue: Bankoku Shinryokan Resort MICE Facility
(1792 Kise, Nago City, Okinawa)
<http://www.shinryokan.com/index.jsp>

◆Registration◆

*Registration fees include proceedings book, access to the technical tour, the banquet, the excursion, shuttle buses, and lunchboxes.

<Early-bird Registration> From December 3, 2018 to April 15, 2019

Member (including members of supporting societies): 40,000JPY,
Student member: 20,000JPY, Accompanying person: 15,000JPY

<Late Registration> From April 16 to June 15, 2019

Member (including members of supporting societies): 50,000JPY,
Student member: 25,000JPY, Accompanying person: 18,000JPY

<On site Registration>

Member (including members of supporting societies): 60,000JPY,
Student member: 30,000JPY, Accompanying person: 23,000JPY

*Early-bird Registration and Late Registration: Please register

from the following page:

<https://www.jsme.or.jp/env/iwee/2019/>

Registration Deadline: June 15 (Sat.), 2019

*Registration after the abovementioned deadline will be accepted at the symposium venue.

*Additional purchase of proceedings: 4,000JPY (special price during symposium)

*We will give you the proceedings book at the symposium venue.

*If you wish to purchase only the proceedings book:

We will distribute the proceedings book at 5,000JPY for members of JSME or supporting societies (special price for members) and 10,000JPY for non-members (list price) per one book.

If you do not wish to participate in the symposium, please place a purchase order from the following page:

https://www2.jsme.or.jp/fw/index.php?action=kousyu_index

We will dispatch the proceedings book after the symposium.

Please note that we will not sell the proceedings books after the

symposium. Therefore, kindly place the orders prior to the symposium.

Publications

The contributed papers will be distributed to conference participants as the Proceedings of the International Workshop on Environmental Engineering 2019. Electronic versions of the contributed papers can be downloaded from the conference website from June 25 to July 10, 2019.

Password: Described in the proceedings

<Notes>

- *Please complete the payment of the registration fees for Early-bird registration and Late registration by the deadline. Please note that the registration fees are non-refundable.
- *When you register, please check the boxes of the events that you would like to participate in, lunchboxes, and shuttle buses in order to provide a head count.
- *Members of supporting societies can participate in the symposium at the JSME Member's rate.
- *Accompanying persons can be registered on the personal site of each registered participant.
- *Accompanying persons may join the technical tour, the banquet, and the excursion and utilize the shuttle buses. Children aged 12 years or younger (up to elementary school) may join the events and utilize the shuttle buses and venue at no additional cost. Furthermore, children aged between 13 and 18 years (junior high school and high school) may participate in the events and utilize the shuttle buses and venue at an extra fee of 5,000 JPY per person. If the children are aged 19 years or older, please register them as an accompanying person. Kindly include their names upon registration. Moreover, note that lunch is not included in the fees. However, we will sell individual lunchboxes at 1,500JPY each. Therefore, please specify the dates (26th or 27th) and the required number of lunchboxes.

Schedule

June 25: Technical Tour and Welcome Reception

June 26: Opening Ceremony, Plenary Lecture, Invited Talks,
General Talks, Company Exhibitions,
Welcome Dinner

June 27: Plenary Lectures, Invited Talks, General Talks,

Poster Presentations, Company Exhibitions, Banquet

June 28: Invited Talks, General Talks, Company Exhibitions,

Awards Ceremony, Closing

Plenary speakers

Tsumoru Shintake (Okinawa Institute of Science and Technology
Graduate University (OIST), Japan) (一般公開)

Jun Y. Choi (Korea Testing Laboratory, Korea)

Ali bin Selamat (Malaysia-Japan International Institute of
Technology (MJIT), Malaysia)

Invited speakers

Wiratni Budhijanto (Gadjah Mada University (UGM), Indonesia)

Jintawat Chaichanawong (Thai-Nichi Institute of Technology,
Thailand)

Moo Been Chang (National Central University, Taiwan)

James S. Cotton (McMaster University, Canada)

Chaobin Dang (The University of Tokyo, Japan)

Nito A. Debacher (Federal University of Santa Catarina, Brazil)

Giovanni Di Nicola (Marche Polytechnic University, Italy)

Cle-Anne Gabriel (University of Queensland Business School,
Australia)

Hirofumi Hara (Malaysia-Japan International Institute of
Technology (MJIT), Malaysia)

Markus Hecht (Technical University of Berlin, Germany)

Yukihiro Higashi (Kyushu University, Japan)

Jongsoo Jeong (Waseda University, Japan)

Weikang Jiang (Shanghai Jiao Tong University, China)

Bidyut Baran Saha (Kyushu University, Japan)

Jong-Shinn Wu (National Chiao Tung University (NCTU),
Taiwan)

Jun Wu (Guangzhou & Chinese Academy of Sciences (GZIS),
China)

Keping Yan (Hangzhou University, China)

Social Events

(1) Technical Tour / Welcome Reception

The Technical Tour will start from Naha Airport at 12:30 on Tuesday, June 25. Participants will visit Okinawa Institute of Science and Technology (OIST), acclaimed worldwide for a sustainable environment design, followed by a visit to the Orion Beer Factory in Nago City where the Welcome Reception will be held. Furthermore, we will conduct the registration process during the reception.

OIST: <https://www.oist.jp/>,

Orion beer factory: <https://www.orionbeer.co.jp/en/>

(2) Welcome dinner

The Welcome Dinner for expansion of friendship among

participants will be held on Wednesday, June 26 from 19:30 at the restaurant near Hotel Yugf Inn Okinawa.

(3) Banquet

The banquet will be held on Thursday, June 27 at the IWEE/SEE venue. We would like you to enjoy the elegant Summit Hall, the view of the scenery and sunset from the courtyard, and the traditional art of Okinawa.

(4) Excursion

The excursion will be held on Friday, June 28 after the Closing ceremony. Starting from the IWEE venue and passing by each hotel, we will have lunch at Ufuya (an old Japanese-style house restaurant) in Nago city, and visit the Churaumi Aquarium and its backyard.

<Notes>

- * Please check the boxes of the events that you would like to participate in when you apply.
- *Please note that if you do not apply, you will not be able to participate in the events.
- *Please use the shuttle buses between the designated hotels in Nago city and the symposium venue.

Contact

Please feel free to contact us if you have any questions or comments.

IWEE2019/2019SEE office: env-symp2019_admin@jsme.or.jp

Address: The Japan Society of Mechanical Engineers, Environmental Engineering Division, Shinanomachi-Rengakan Bldg, Shinanomachi 35, Shinjuku-ku Tokyo 160-0016 Japan (Ms. Takako Endo)

Tel: (03)5360-3506, FAX: (03)5360-3508,

E-mail: endo@jsme.or.jp

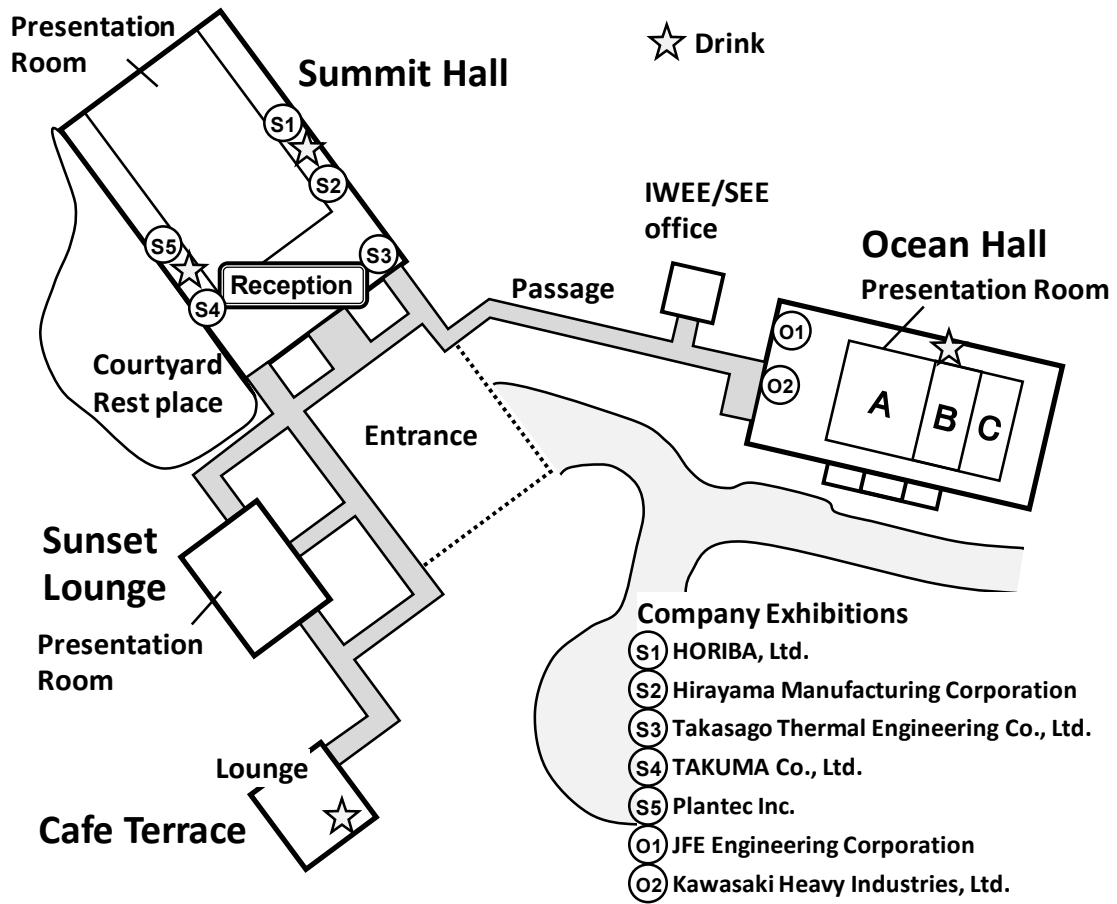
Wednesday, June 26, 2019 (E:IWEE(English), J:SEE(Japanese))				
時間	Summit Hall A (Large)	Ocean-Hall B & C (Large)		Sunset Lounge
		B (Small)	C (Small)	
9:00	Opening			
9:15	Plenary Lecture 1			
9:30				
9:45				
10:00	Break			
10:15				
10:30	(Topic 1E) Test and analysis technique of noise and vibration (1)			(Topic 2E) Technology Development and Standardization of Solid Biomass Energy Part I
10:45	(Topic 4) Invited Lectures	(Topic 3E) Environmental fundamental phenomena		
11:00				
11:15				
11:30				
11:45				
12:00				
12:15				
12:30	Lunch	Lunch		International Committee, Lunch
12:45				
13:00				
13:15				(Topic 2E) Global Prospects and Issues of IoT and AI Technologies in the field of Waste Management
13:30	(Topic 4E) Heat exchangers and pipes	(Topic 1J) Test and analysis technique of noise and vibration (2)	(Topic 4J) Frost formation and ice thermal storage	(Topic 3E) Particles / Measurement / Applications
13:45				(Topic 2E) Waste power generation and biomass power generation, Heat utilization technology
14:00				Break
14:15				
14:30	Break			
14:45	(Topic 4E) Low grade thermal energy	(Topic 3J) Atmospheric Environment Conservation / Environmental Impact	(Topic 4J) Heat exchanger and Energy saving	(Topic 2E) Utilization of Biomass Resources and its Future Prospects
15:00				Break
15:15				
15:30	Break			
15:45				(Topic 2E) Current Efforts and Future Challenges of Sustainable Technologies and Systems
16:00				
16:15	(Topic 4E) Renewable energy	(Topic 1J) Improvement technology of noise and vibration (1)	(Topic 4J) Air conditioning, Hot water supply and Heat supply	
16:30				
16:45				
17:00				
17:15				
17:30				Steering Committee, General Affairs Committee
17:45				
18:00				

Thursday, June 27, 2019 (E:IWEE, J:SEE)				
時間	Summit Hall A (Large)	Ocean-Hall B & C (Large)		Sunset Lounge
		B (Small)	C (Small)	
9:00				
9:15	Plenary Lecture 2			
9:30				
9:45	Break			
10:00				(Topic 2E) Cross-sectional topics
10:15				
10:30	(Topic 1E) Test and analysis technique of noise and vibration (3)		(Topic 3E) Technology for the conservation of water environments	
10:45		(Topic 4E) Cooling		Break
11:00			(Topic 4J) Renewable Energy	(Topic 2J) Resource Recovery and Recycling
11:15				
11:30				
11:45				
12:00				
12:15				
12:30	Setup for Poster Presentation / Lunch		Technical Committee, + Waiting Room 1&2	Lunch
12:45				
13:00				
13:15	Poster Preparation			
13:30				
13:45	(Topic 2EJ, 4EJ) Short Presentation		Break	(Topic 3EJ) Short Presentation
14:00		(Topic 1EJ) Short Presentation		
14:15				
14:30				
14:45				
15:00	(Topic 1-4) Poster Presentation			Break
15:15				
15:30				
15:45				
16:00			Break	
16:15				
16:30			Plenary Lecture 3	
16:45				
17:00				
17:15				
17:30			Divisional Award Ceremony	
17:45			Break	
18:00				
				Banquet

Friday, June 28, 2019 (E:IWEE, J:SEE)				
時間	Summit Hall A (Large)	Ocean-Hall B & C (Large)		Sunset Lounge
		B (Small)	C (Small)	
9:00				
9:15	(Topic 1J) Test and analysis technique of noise and vibration (4)	(Topic 4E) Heat pumps and Air conditioning	(Topic 2J) (OS) General technologies related to waste treatment and biomass utilization	(Topic 3EJ) Technology for the conservation of air environments
9:30				
9:45				
10:00			Break	
10:15	Break			
10:30	(Topic 1J) Test and analysis technique of noise and vibration (5)	Break	(Topic 2E) Technology Development and Standardization of Solid Biomass Energy Part II	Break
10:45		(Topic 4E) Energy utilization and storage		(Topic 3EJ) Technology for the conservation of air environments
11:00				
11:15				
11:30	IWEE Award Ceremony, Closing Ceremony			
11:45				

Events & Instructions

June 25 Technical Tour and Welcome Reception (Please meet at Exit B, Domestic Arrivals of Naha Airport. The departure time is at 12:30.)
Shuttle Bus (Please meet at Exit B, Domestic Arrivals of Naha Airport. The departure time is at 17:00. Destinations: Hotels in Nago city)
June 26 Welcome Dinner & Environmental Engineering Salon (Izakaya 21 (fee-charging), for more details please check IWEE2019 website.)
June 27 Banquet (Ticket is required. Summit Hall, Bankoku Shimryokan, 18:00-20:00)
June 28 Excursion (Ticket is required. Please meet at Bankoku Shimryokan. Departure time is at 12:00. We will go directly to "Ufuya" for lunch, then Churaumi Aquarium. If you go to Naha Airport directly from Churaumi Aquarium, please leave the excursion midway to get a highway bus.
Shuttle Bus (heading for Naha Airport. Please meet at Bankoku Shimryokan. Departure time is at 12:10. Light meal will be served.)
June 26-27 Lunchbox (Ticket is required. Please take it at the Summit Hall.)
June 26-28 We will arrange for shuttle buses between hotels in Nago city and the Bankoku Shimryokan. Please check the timetable.
 *We will hand a registration receipt, tickets for events and lunchboxes with a name card at the reception desk. Please wear a name card during a congress.
 *Dress code: We recommend business casual/cool biz (without a tie, light dress, Kariyushi). Smoking is not allowed except the designated smoking place.
 *Free Wi-Fi is available. Network name (SSID): Guest, Password: None
 *The venue boasts the beautiful Busena Beach, an underwater observatory, and a facility in which one can experience a glass-bottom boat, just a few minutes' walk from the IWEE venue. We hope you will enjoy these facilities during the IWEE. (fee-charging)



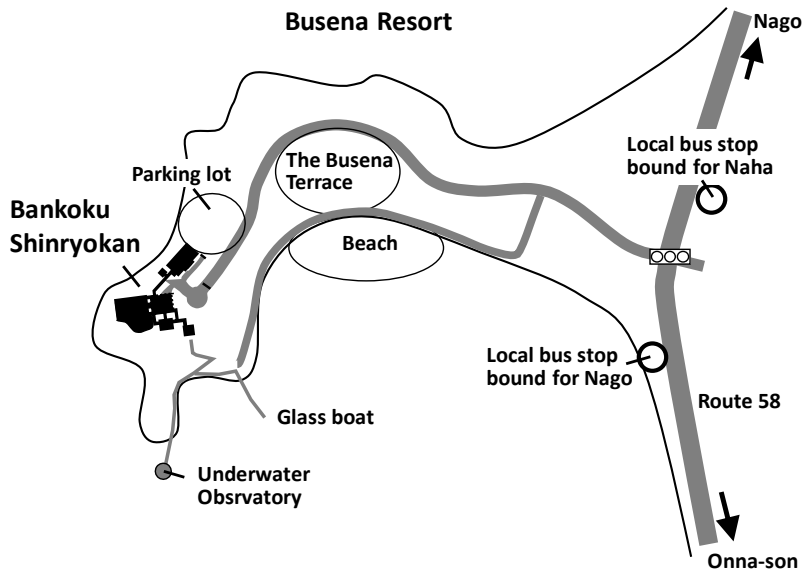
Venue map

	Nago-->Bankoku Shinryokan			
	Yugaf Inn	Route Inn	Kouki (Bus stop)	Venue
June 26	7:45	7:50	8:00	8:05
	10:00	10:05	10:15	10:20
	12:00	12:05	12:15	12:20
	14:00	14:05	14:15	14:20
	16:00	16:05	16:15	16:20
June 27	8:00	8:05	8:15	8:20
	10:00	10:05	10:15	10:20
	12:00	12:05	12:15	12:20
	14:00	14:05	14:15	14:20
	15:40	15:45	15:55	16:00
June 28	8:00	8:05	8:15	8:20
	11:00	11:05	11:15	11:20

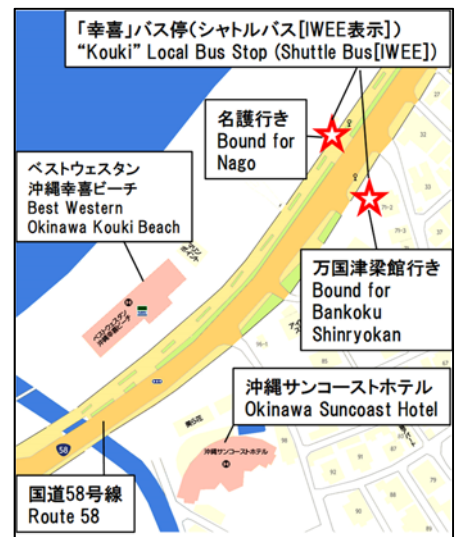
	Bankoku Shinryokan --> Nago			
	Venue	Kouki (Bus stop)	Route Inn	Yugaf Inn
June 26	9:00	9:05	9:15	9:20
	11:00	11:05	11:15	11:20
	13:00	13:05	13:15	13:20
	15:00	15:05	15:15	15:20
	17:30	17:05	17:15	17:20
	18:30	18:35	18:45	18:50
June 27	9:00	9:05	9:15	9:20
	11:00	11:05	11:15	11:20
	13:00	13:05	13:15	13:20
	15:00	15:05	15:15	15:20
	16:20	16:25	16:15	16:20
	20:10	20:15	20:25	20:30
June 28	10:15	10:20	10:30	10:35

*The above times are rough estimate. We have only 1 bus service except for the buses on 7:45 June 26, 8:00 June 27, 8:00 June 28 (from Yugaf Inn to the Venue), and the buses on 18:30 June 26, 20:10 June 27 (from the Venue to the Yugaf Inn).

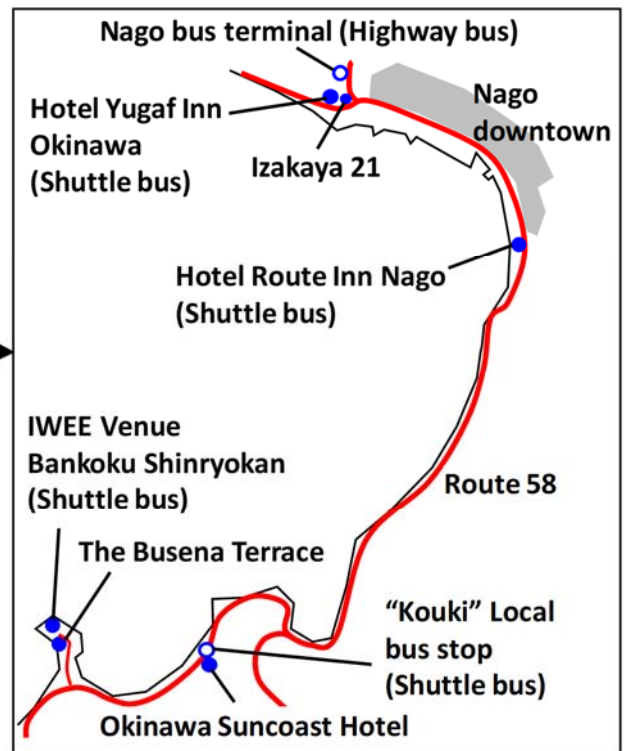
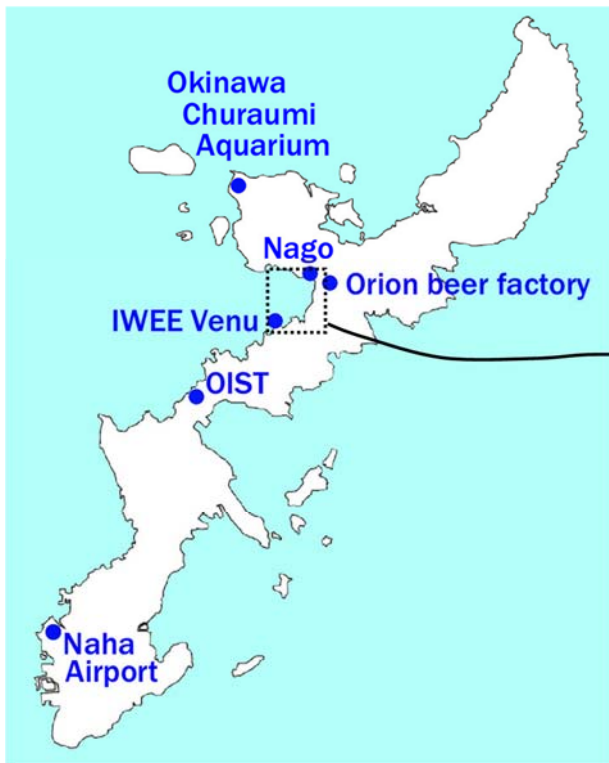
Time table of shuttle bus



Surrounding map of the IWEE



Location of bus stop of Shuttle bus for Okinawa Suncoast Hotel



Maps of Okinawa main island and Nago city

International Workshop on Environmental Engineering 2019 (IWEE2019)

Organized by the Environmental Engineering Division of the Japan Society of Mechanical Engineers (JSME).

Venue: Bankoku Shinryokan Resort MICE Facility, Okinawa, Japan

Period: June 25–28, 2019

Schedule:

June 25: Technical Tour/Welcome reception/

Pre-registration

June 26: Opening/Plenary/Invited/

General presentations/Company exhibitions/

Welcome dinner

June 27: Plenary/Invited/General/Poster presentations/

Company exhibitions/Banquet

June 28: Invited/General presentations/

Company exhibitions/Awards/

Closing /Excursion

IWEE website: <https://www.jsme.or.jp/env/iwee/2019>

Contact

Please feel free to contact us if you have any questions or comments.

IWEE2019 & 2019SEE office:

email: env-symp2019_admin@jsme.or.jp

Address: The Japan Society of Mechanical Engineers, Environmental Engineering Division, Shinanomachi-Rengakan Bldg, Shinanomachi 35, Shinjuku-ku Tokyo 160-0016 Japan

<https://www.jsme.or.jp/env/eng/index.shtml>

Tuesday, June 25, 2019		
Time	Technical Tour	Bus from Naha Airport to Nago City
12:30	Meeting place: Domestic Arrivals Exit B, Naha Airport	
12:45	Departure Time: 12:30	
13:00	Transfer: from Naha Airport to OIST	
13:15	Bus No.1: English explanations	
13:30	Bus No.2 and 3: Japanese explanations *Lunch will not be served.	
13:45		
14:00	Technical Tour of OIST	
14:15	English Explanations: Groups A ~ B (about 20 persons/group)	
14:30	Japanese Explanations: Groups B ~ H (about 20 persons/group)	
14:45		
15:00		
15:15		
15:30	Transfer: from OIST to Orion Beer Factory	
15:45		
16:00	Technical Tour of Orion Beer Factory	
16:15	English groups (Groups A ~ B) will have a tour first. After the tour, they will have a registration process at the reception desk and move to the venue of the welcome reception.	
16:30	Other groups will wait at the explanation corner on the 2nd floor. After the registration process, they will have a tour.	
16:45	Then, they will move to the venue of the welcome reception.	
17:00		Meeting place: Domestic Arrivals Exit B, Naha Airport
17:15		Departure Time: 17:00
17:30	Bus Transfer: Orion Beer Factory → Hotel Yugaf Inn Okinawa → Hotel Route Inn Nago → Okinawa Suncoast Hotel	Bus Transfer: Naha Airport → Okinawa Suncoast Hotel → Hotel Route Inn Nago → Hotel Yugaf Inn Okinawa
17:45		The expected arrival time is around 19:00.
18:00		



Wednesday, June 26, 2019

Time	Summit Hall		Ocean Hall A (Large)	Ocean Hall B & C (Large)		Sunset Lounge
	Lobby	Room		B (Small)	C (Small)	
9:00	Reception, Registration, Preparation for Exhibitions	Opening				
9:15		Plenary1 Tsumoru Shintake 9:10-10:00 (Open Forum)				
9:30						
9:45						
10:00	Reception, Registration, Exhibitions	Break				
10:15		IE401 Giovanni Di Nicola	IE101 Weikang Jiang	IE301 Nito A. Debacher		IE201 Jintawat Chaichanawong
10:30			IE102 Yoshiyuki Maruta	IE302 James Cotton		E201 Hiroyuki Ito
10:45		IE402 Jongsoo Jeong	E101 Xifeng Wang			IE303 Moo Been Chang
11:00			E102 Yosuke Tanabe	E203 Nami Tagami		
11:15		IE403 Chaobin Dang	E103 Shunya Matsushita	E301 Takayuki Ohshima		
11:30			E104 Shogo Hiyama			E205 Yoshihiro Tomita
11:45		Lunch	Lunch	X		International Committee, Lunch 12:15-13:00
12:00						
12:15				Lunch	Lunch	
12:30						
12:45						
13:00						
13:15		E401 Yujin Ohashi	IJ101 Takeshi Kawashima		E302 Erika Kawaguchi Matsumoto	IE202 Jun Wu
13:30		E402 Sihui Hong	IJ102 Takuma Nitta	J401 Haruka Agui	E303 Yojiro Ishino	
13:45		E403 Niccolo Giannetti	J101 Tsugutoshi Kawaguchi	J402 Shohi Yokoyama	E304 Vincente Rodriguez-Gonzalez	E206 Taichi Usuki
14:00		E404 Seichi Yamaguchi	J102 Yasuhiro Shimizu	J403 Yuri Umehara	E305 Koichi Takaki	E207 Ryo Yoshiie
14:15		E405 Minami Kaneko	J103 Tatsuya Inoue	J404 Takayuki Morokuma	E306 Baiqiang Zhang	E208 Arash Piran
14:30		Break	J104 Takeshi Mitsumoji	Break	E317 Yuki Otsuka	Break
14:45	E406 Soichi Sasaki	J105 Takeshi Mitsumoji	J405 Shu Sato	J301 Tomomi Hatsugai	IE203 Wiratni Sugiharto Budhijanto	
15:00	E408 Xi Wu	J106 Daigo Sato	J406 Shun Sawada	J302 Yuki Koizumi		
15:15	E410 Ryusuke Sugimoto	Break	J407 Takashi Kawaguchi	Break	E209 Shuai Wu	
15:30	Break		J408 Shota Taki	J107 Satoshi Tabuchi	Break	
15:45		E105 Soichi Sasaki	Break	J108 Tatsuhiko Goto	IE204 Cle-Anne Gabriel	
16:00	E411 Kohei Terashima	E106 Takuya Omata	J409 Kazuki Takahashi	J109 Mitsuru Saito		
16:15	E412 Hitoshi Kiyokawa	E107 Naoya Isatake	J410 Hiroaki Okamura	J110 Katsuhiko Shibata	E212 Andante Hadi Pandyaswargo	
16:30	E413 Kojiro Enoki	E108 Kentaro Nakahara	J411 Ryo Kikuchi	J111 Hayato Saegusa	E213 Chairunnisa Chairunnisa	
16:45	E414 Naoki Hata	E109 Masato Takahashi	J412 Daiki Yoshidome	J112 Takeshi Matsukawa		
17:00	Reception, Registration		E110 Kota Yamana	J113 Yosuke Miyamoto		
17:15						
17:30	Clearance				Steering Committee, General Affairs Committee 17:30-18:30	
17:45						
18:00						

Thursday, June 27, 2019								
Time	Summit Hall		Ocean Hall			Sunset Lounge		
	Lobby	Room	A (Large)	B (Small)	C (Small)			
9:00	Reception, Registration, Preparation for Exhibitions	Plenary2 Jun Y. Choi 9:00-9:50						
9:15								
9:30	Reception, Registration, Exhibitions	Break						
9:45								
10:00		IE103 Markus Hecht	IE404 Bidyut Baran Saha			E307 Seiji Kanazawa	IE205 Hirofumi Hara	
10:15						E308 Yohei Kayukawa		
10:30		IE104 Yasushi Takano				E309 Masahiro Motosuke	E214 Lusha Qin	
10:45		E111 Takeshi Mitsumoji	E415 Nao Kuniyoshi			E310 Laila Dina Amalia Purba	E215 Mayumi Kawase	
11:00		E112 Toki Uda	E416 Kohei Terashima	J413 Yuki Okamura		E311 Yuki Kawada	Break	
11:15		E113 Takeshi Sueki	E417 Craig Edward Farnham	J414 Ryusei Migita		E312 Chiaki Terashima	J201 Taro Yamagishi	
11:30		E114 Shigeru Ogawa	E418 Kosuke Bizen	J415 Takuya Ishiyama		E313 Yuichi Ito	J202 Masakazu Yamada	
11:45				J416 Shinichi Kanzaki		E314 Keiichiro Yoshida	J203 Naoki Maruyama	
12:00								
12:15			Setup for Poster Presentation / Lunch		Technical Committee, + Waiting Room 1&2 12:15-13:15	Technical Committee 12:15-13:15	Lunch	
12:30								
12:45				Lunch				
13:00								
13:15		Poster Preparation 13:10-13:40						
13:30								
13:45		Short Presentation PE201-202 PE401-411 PJ201 PJ401 13:45-14:30 (2.5 minutes)	Short Presentation PE101-113 PJ101-103 13:45-14:33 (2.5 minutes)	Break	Break	Short Presentation PE301-316 PJ301-303 13:45-14:42 (2.5 minutes)		
14:00								
14:15								
14:30		Poster Presentation PE101-113 PE201-202 PE301-318 PE401-411 PJ101-103 PJ201 PJ301-303 PJ401 -16:00				Break		
14:45								
15:00								
15:15								
15:30								
15:45								
16:00								
16:15				Break				
16:30								
16:45				Plenary3 Ali Selamat 16:20-17:10				
17:00								
17:15								
17:30				Divisional Award Ceremony 17:20-17:35				
17:45	Group Photo 17:45			Break				
18:00		Banquet 18:00-20:00						

Friday, June 28, 2019								
Time	Summit Hall		Ocean Hall			Sunset Lounge	Time	Excursion
	Lobby	Room	A (Large)	B (Small)	C (Small)			
9:00	Reception, Registration, Exhibitions	J114 Suguru Doshida	IE405 Yukihiro Higashi	OS201 Masaharu Okada	J208 Yasuhiro Nakatake	IE304 Keping Yan	12:00	Meeting place: Bankoku Shinryokan, Departure Time: 12:00 *We will go to "Ufuya" directly, and not going to stop by the hotels.
9:15		J115 Akiyoshi Iida		OS202 Kazue Shibata			12:30	
9:30		J116 Hayato Yoshinaga	E420 Kyaw Thu	OS203 Michitaka Furubayashi	J209 Masao Masuda	IE305 Jong-Shinn Wu	13:00	Lunch (Ufuya) If you come to Ufuya by a rented car, please let us know in advance.
9:45		J117 Masaaki Mori	E421 Masamichi Kodera	OS204 Hiroshi Kojima	J210 Fumiya Moriyama		13:30	
10:00		J118 Keisuke Kuribayashi	E422 Ryo Abe	Break	Break	E315 Tomohito Matsuo	14:00	Bus Transfer (from Ufuya to Churaumi Aquarium)
10:15		Break	Break	J204 Yasuo Suzuki	E216 Kimihiro Sugiura	E316 Akitsugu Sakai	14:30	
10:30		J119 Tatsuya Morishita	E423 Tetsunori Haraguchi	J205 Akihisa Ogawa	E217 Satoru Mizuno	Break	15:00	Transfer from the parking area to the Whale Shark Sculpture at the entrance of the Churaumi Aquarium: 14:30-14:45 Backyard Tour: 14:50-15:10 Tour of Aquarium, Ocean Expo Park etc. (free time): 15:10-17:10
10:45		J120 Yoshio Kurosawa	E424 Atsushi Akisawa	J206 Kazutaka Tsukamoto	E218 Raihan Maskuriy	J304 Masaaki Okubo	15:30	
11:00		Clearance	J121 Katsuhiko Kuroda	E425 Seonghee Kim	J207 Satoshi Seo	J305 Kohei Kishimoto	16:00	Meeting place: in front of the Whale Shark Sculpture Meeting Time: 17:10 Transfer to the parking area: 17:10-17:30
11:15			J122 Daisuke Muto	E426 Masatsugu Morimitsu		J306 Eisuke Tamura	16:30	
11:30		IWEE Award Ceremony, Closing Ceremony 11:30-11:50				17:00	Tranfer to hotels in Nago city (about 40-60 minutes)	
11:45						17:30		

Thursday, June 27, 2019 (Poster session program)			
Time	Summit Hall	Ocean Hall A (Large)	Sunset Lounge
13:45 ~ 16:00	Short Presentation PE201 Yuya Sakurai PE202 Yoshikatsu Ueda PE401 Shun Nishimura PE402 Naoki Kikuchi PE403 Presentation withdrawn PE404 Jiaren Li PE405 Presentation withdrawn PE406 Moe Hashiguchi PE407 Frantisek Miksik PE408 Mitsuki Chino PE409 Presentation withdrawn PE410 Takanori Uchida PE411 Kentaro Tsuji PJ201 Shigenori Suzuki PJ401 Yusuke Kimura	Short Presentation PE101 Yasuaki Ito PE102 Yasuhiro Narawa PE103 Kazuki Ogawa PE104 Ayato Endo PE105 Sora Ishihara PE106 Daigo Uchino PE107 Ryosuke Minowa PE108 Rina Miyao PE109 Ryosuke Suzuki PE110 Yukinao Sato PE111 Keigo Ikeda PE112 Tatsuya Morishita PE113 Taro Kato PJ101 Kenichiro Nagai PJ102 Toru Miyairi PJ103 Tetsuya Doi	Short Presentation PE301 Masaaki Yamazato PE302 Hayato Tada PE303 Chia-Hsing Chang PE304 Kairi Muramatsu PE305 Kei Tasaka PE306 Tomoyuki Kuroki PE307 Yukio Hayakawa PE308 Haruki Kanayama PE309 Hiroki Sato PE310 Satoshi Uehara PE311 Takehiko Sato PE312 Mu-Chien Wu PE313 Zhentao Zhang PE314 Kuniko Urashima PE315 (vacant number) PE316 ZhenDong Yuan PJ301 Hiroaki Kurahashi PJ302 Kenya Tokunaga PJ303 Motonobu Kawaguchi
	Poster Presentation PE101-113 PE201-202 PE301-318 PE401-411 PJ101-103 PJ201 PJ301-303 PJ401	Please put your poster on the board of your presentation number from 13:10-13:40. / Please bring your laptop for the presentation. If you don't take a laptop, please provide your presentation file (ppt/pdf). / ONLY D-sub connection is available. / Slides format is not specified. / Presentation time is 2.5 minutes. / Please go on to the poster presentation after completing all the short presentations in each room.	

Company Exhibitions	
June 26-28	
Summit Hall	
EX-S1	HORIBA, Ltd.
EX-S2	HIRAYAMA Manufacturing Corporation
EX-S3	Takasago Thermal Engineering Co., Ltd.
EX-S4	TAKUMA Co., Ltd.
EX-S5	PLANTEC Inc.
Ocean Hall	
EX-O1	JFE Engineering Corporation
EX-O2	Kawasaki Heavy Industries, Ltd.

Advertisements	
HORIBA, Ltd.	
Sanki Engineering Co., Ltd.	
Kyoto Electronics Manufacturing Co., Ltd.	
JFE Engineering Corporation	
Kenix Co., Ltd.	
Takasago Thermal Engineering Co., Ltd.	
STRAWB Inc.	
Kubota Corporation	
TOYO Corporation	
Hitachi Zosen Corporation	

Support	
General Incorporated Foundation, Okinawa Convention & Visitors Bureau (OCVB)	

June 28: Shuttle bus heading for Naha Airport, Meeting place: Bankoku Shinryokan, Departure Time: 12:10, Light meal will be served.

If you are going to participate in the excursion without using the bus, please let the IWEE&SEE2019 Office know in advance (env-symp2019_admin@jsme.or.jp).

◆◆◆ Program ◆◆◆

Plenary: Plenary Lecture

I: Invited talk

E: IWEE (Oral, English)

J: SEE (Oral, Japanese)

PE/PJ: Poster (IWEE/SEE)

◆Plenary Lecture◆

●June 26th (Wed) ● [Summit Hall]

9:10 ~ 10:00

(Chair: Kuniko Urashima (NISTEP))

Plenary1 OIST Wave Energy Project: Harnessing Power from Breaking Wave at Maldives
Tsumoru Shintake
(Okinawa Institute of Science and Technology Graduate University (OIST), Japan)

●June 27th (Thu) ● [Summit Hall]

9:00 ~ 9:50

(Chair: Jongsoo Jeong (Waseda Univ.))

Plenary2 A Design and a Pilot Plant Demonstration for Combined OTEC (Ocean Thermal Energy Conversion) using Plant Exhausted Thermal Energy
Jun Y. Choi
(Korea Testing Laboratory, Korea)

●June 27th (Thu) ● [Ocean Hall (Large)]

16:20 ~ 17:10

(Chair: Tamio Ida (Kindai Univ.))

Plenary3 Building Information Modelling with IoT and AI Technologies as an approach to construction waste minimization
Ali Bin Selamat
(Malaysia-Japan International Institute of Technology (MJIT), Malaysia)

◆Noise and vibration control technology (Topic 1) ◆

<Organizers >

Tatsuya Morishita (Tokai Univ.), Takumi Asakura (Tokyo Univ. of Science), Toshiyuki Aoki (Kyushu Univ.), Akihiko Arimitsu (Chuo Univ.), Akiyoshi Iida (Toyohashi Univ. of Tech.), Masanobu Iida (Railway Technical Research Inst.), Akihiko Enamito (Toshiba Corp.), Takeshi Kawashima (Kanagawa Inst. of Tech.), Shinya Kijimoto (Kyushu Univ.), Toshiya Kitamura (Univ. of Yamanashi), Takeshi Kurita (East Japan

Railway Company), Yasushi Takano (Kyoto Univ.), Yosuke Tanabe (Hitachi, Ltd.), Takeshi Toi (Chuo Univ.), Tetsuya Doi (Kobayasi Inst. of Physical Research), Hiromitsu Hamakawa (Oita Univ.), Hidechito Hayashi (Nagasaki Univ.), Teruo Hioki (Chiyoda Corp.), Yoshiyuki Maruta (Chuo Univ.), Gaku Minorikawa (Hosei Univ.), Mizue Munekata (Kumamoto Univ.), Hiroaki Morimura (Tokyo Inst. of Tech.), Ichiro Yamagiwa (Kobe Steel, Ltd.), Toru Yamazaki (Kanagawa Univ.), Shoji Yamada (Mitsubishi Electric Corp.), Masanori Watanabe (Hitachi, Ltd.)

●June 26th (Wed) ● [Ocean Hall A (Large)]

10:15 ~ 12:00 / Test and analysis technique of noise and vibration (1)

(Chair: Yasushi Takano (Kyoto Univ.))

IE101 Acoustic imaging to locate noise sources in environments with unknown acoustical disturbance / ○(Non-member) Weikang Jiang (Shanghai Jiao Tong Univ.), Liang Yu

IE102 Vortex flow mechanism of self-excited tone with acoustic resonance / ○(Member) Yoshiyuki Maruta (Chuo Univ.), Takeshi Toi

E101 Behavior of acoustic and hydrodynamic pressure fluctuation in aerodynamic sound source region / ○(Non-member, Student) Xifeng Wang (Toyohashi Univ. of Tech.), Kenta Mizushiri, Hiroshi Yokoyama, Akiyoshi Iida

E102 Model-based analysis of acoustic energy flow of an impact sound generator / ○(Member) Yosuke Tanabe (Hitachi, Ltd.)

E103 Numerical simulation of the flow through the rotating porous body / Eru Kurihara (Oita Univ.), ○ (●) Shunya Matsushita, Takaya Sasaki, Hiromitsu Hamakawa

E104 Study of self-excited sound from expansion valve in air conditioner / ○(Student Member) Shogo Hiyama (Kyushu Univ.), Satoshi Ishikawa, Naoki Yaegashi (Mitsubishi Electric Corp.), Koji Tanaka, Shinya Kijimoto (Kyushu Univ.), Yosuke Koba

13:15 ~ 15:15 / Test and analysis technique of noise and vibration (2)

(Chair: Tatsuya Morishita (Tokai Univ.))

- IJ101 Appropriate combination of vibration patterns for a chair with built-in vibrator with driving situation / Akio Toyoda (Clarion Co., Ltd.), Shoichiro Morita (Clarion Co., Ltd.), ◯(Member) Takeshi Kawashima (Kanagawa Inst. of Tech.)
- IJ102 Noise reduction effect by configuration of sound barriers in Sanyo Shinkansen railway line / ◯(Non-member) Takuma Nitta (West Japan Railway Company), Nobuaki Yamauchi, Atsushi Satou, Yuuki Kawai, Toshiki Kitagawa (Railway Technical Research Inst.)
- J101 Contributions of wheel and rail radiations to squeal noise generated on a curved section in test line / ◯(Member) Tsugutoshi Kawaguchi (Railway Technical Research Inst.), Takeshi Sueki, Tatsuya Inoue, Toshiki Kitagawa, Hiroyuki Kanemoto, Masahito Kuzuta, Yasuhiro Shimizu
- J102 Evaluation of squeal noise generated by wheel on curved sections in test line / ◯(Member) Yasuhiro Shimizu (Railway Technical Research Inst.), Tsugutoshi Kawaguchi, Takeshi Sueki, Tatsuya Inoue, Toshiki Kitagawa, Hiroyuki Kanemoto, Masahito Kuzuta
- J103 Characteristics of aerodynamic noise from the bogie of a high-speed train / ◯(Member) Tatsuya Inoue (Railway Technical Research Inst.), Toki Uda, Toshiki Kitagawa
- J104 Reduction of aerodynamic noise emitted by pantograph head and its support considering bidirectional operation / ◯(Member) Takeshi Mitsumoji (Railway Technical Research Inst.), Shigeyuki Kobayashi, Kyohei Nagao, Hiromasa Hirawaka, Takayuki Usuda, Yusuke Wakabayashi (East Japan Railway Company)
- J105 A study about applying condition of porous material to pantograph head support considering bidirectional aerodynamic noise reduction / ◯(Member) Takeshi Mitsumoji (Railway Technical Research Inst.), Kyohei Nagao, Shigeyuki Kobayashi, Hiromasa Hirawaka, Takayuki Usuda, Yusuke Wakabayashi (East Japan Railway Company)
- J106 FEM acoustic analysis on Railway Viaduct Considering Sound Insulating Performance / ◯(Member) Daigo Sato (Railway Technical Research Inst. / Kyushu Univ.), Tadashi Toyohara (Railway Technical Research Inst.), Akira Omoto (Kyushu Univ.)
- 15:45 ~ 17:15 / Improvement technology of noise and vibration (1)**
(Chair: Yoshiyuki Maruta (Chuo Univ.))
- E105 Experimental prediction methodology of discrete frequency noise generated from a forward-curved centrifugal fan / ◯(Member) Soichi Sasaki (Nagasaki Univ.)
- E106 Frequency analysis on amplitude fluctuation of rhythms produced by walking monotonously on a track / Takeshi Kawashima (Kanagawa Inst. of Tech.), ◯ (●) Takuya Omata
- E107 Aerodynamic noise radiated from multicopter / ◯(Student Member) Naoya Isatake (Oita Univ.), Masato Takahashi, Hiromitsu Hamakawa, Eru Kurihara
- E108 Relation between acoustic absorption performance of perforated plate and bias flow / ◯(Student Member) Kentaro Nakahara (Oita Univ.), Akira Shimooka, Hiromitsu Hamakawa, Eru Kurihara, Hidechito Hayashi (Nagasaki Univ.)
- E109 Effect of dimples on aerodynamic noise radiated from two-dimensional airfoil / ◯(Student Member) Masato Takahashi (Oita Univ.), Naoya Isatake, Yuji Tujimoto, Hiromitsu Hamakawa, Eru Kurihara
- E110 Experimental study on vortex shedding noise radiated from rectangular cylinders / ◯(Student Member) Kota Yamana (Oita Univ.), Masato Fuchikami, Masato Takahashi, Naoya Isatake, Michiko Sakuta (Sumitomo Mitsui Construction Co., Ltd.), Noriko Tutumi (Oita Univ.), Hiromitsu Hamakawa, Eru Kurihara
- June 26th (Wed) ● [Ocean Hall C (Small)]**
- 15:30 ~ 17:15 /Improvement technology of noise and vibration (2)**

(Chair: Takeshi Kurita (JR East))

- J107 Shape optimization of acoustic mufflers using genetic algorithm / ○(Member) Satoshi Tabuchi (Kobe Steel, Ltd.)
- J108 The proposal of active noise control for the same phase rotation sound sources / ○(Member) Tatsuhiko Goto (Toshiba Corp. Research & Development Center), Akihiko Enamito
- J109 Development of low-noise brake disc for high-speed trains / ○(Member) Mitsuru Saito (East Japan Railway Company), Nobuo Shiraishi, Yusuke Wakabayashi, Takeshi Kurita, Takahiro Fujimoto (Nippon Steel Corp.), Yuki Ichikawa
- J110 Fault diagnosis of pump using unsteady vibration data / ○(Member) Katsuhiko Shibata (Takasago Thermal Engineering Co., Ltd.)
- J111 Development of collecting and displaying system for characteristics of area noise environment / ○(Student Member) Hayato Saegusa (Univ. of Yamanashi), Toshiya Kitamura
- J112 Influence of hearing situation on sound quality evaluation to vacuum cleaners / ○(Student Member) Takeshi Matsukawa (Osaka Inst. of Tech.), Ibuki Hatta, Sosuke Okuno, Junji Yoshida
- J113 Identification of sound source and countermeasure to radiated noise of air handling unit using TPA / ○(Student Member) Yosuke Miyamoto (Osaka Inst. of Tech.), Takuya Hirao, Junji Yoshida

●June 27th (Thu) ● [Summit Hall]

10:00 ~ 11:45 / Test and analysis technique of noise and vibration (3)

(Chair: Takeshi Kawashima (Kanagawa Inst. of Tech.))

- IE103 Freight train noise problems in Europe / ○(Non-member) Hecht Markus (TU-Berlin)
- IE104 Trends and issues of international standard for railway noise / ○(Member) Yasushi Takano (Kyoto Univ.)
- E111 A study on reduction of aerodynamic noise

emitted from pantograph head and its support / ○(Member) Takeshi Mitsumoji (Railway Technical Research Inst.), Takayuki Usuda, Kyohei Nagao, Tatsushi Isono, Yusuke Wakabayashi (East Japan Railway Company)

- E112 Aerodynamic bogie noise generated from high-speed trains / ○(Member) Toki Uda (Railway Technical Research Inst.), Toshiki Kitagawa
- E113 Study on the scale-model test related to curve squeal noise / ○(Member) Takeshi Sueki (Railway Technical Research Inst.), Tsugutoshi Kawaguchi, Hiroyuki Kanemoto, Toshiki Kitawagawa, Yasuhiro Shimizu
- E114 Numerical analysis on aerodynamic noise sources of longitudinal vortex / ○(Member) Shigeru Ogawa (National Inst. of Tech., Kure College), Kota Samura, Hiroki Okada, Kohei Suzuki, Harutaka Honda

●June 27th (Thu) ● [Ocean Hall A (Large) & Summit Hall]

13:45 ~ 16:00 / Poster Session: Short Presentations & Poster Presentations

(Chair: Yosuke Tanabe (Hitachi, Ltd.), Masanori Watanabe (Hitachi, Ltd.))

- PE101 Vibration suppression control for a levitated light weight steel plate: fundamental consideration on attractive force for suspension / ○(Student Member) Yasuaki Ito (Tokai Univ.), Yoshiho Oda, Takayoshi Narita, Hideaki Kato
- PE102 Noncontact guide system of traveling thin steel plate for vibration suppression: Fundamental study on vibration suppression by steel shape analysis / ○(Student Member) Yasuhiro Narawa (Tokai Univ.), Sora Ishihara, Ryo Yamaguchi, R. Nakasuga, Takayoshi Narita, Hideaki Kato
- PE103 Vibration suppression effect in an electromagnetic levitation system for bending steel plate: Fundamental consideration on levitation performance in oscillated system / ○(Student Member) Kazuki Ogawa (Tokai Univ.), Makoto Tada,

- Takayoshi Narita, Hideaki Kato
- PE104 Study on vibration suppressing actuator of active seat suspension: Fundamental consideration on VCM / ○(Student Member) Ayato Endo (Tokai Univ.), Keigo Ikeda, Ryosuke Minowa, Hideaki Kato, Takayoshi Narita
- PE105 Development of noncontact actuator for elevation on ultra flexible structure: Fundamental consideration on vibration suppression / ○(Student Member) Sora Ishihara (Tokai Univ.), Yasuhiro Narawa, Ryo Yamaguchi, Takahiko Bessyo, Takayoshi Narita, Hideaki Kato
- PE106 Development for interior environment using Steer-by-Wire system for ultra-compact electric vehicles: Fundamental consideration on slide adjustment of driving position / ○(Student Member) Daigo Uchino (Tokai Univ.), Xiaojun Liu, Takayoshi Narita, Hideaki Kato
- PE107 Study on vibration control of ultra compact mobility Fundamental consideration on seat surface vibration / ○(Student Member) Ryosuke Minowa (Tokai Univ.), Keigo Ikeda, Ayato Endo, Hideaki Kato, Takayoshi Narita
- PE108 Acoustic analysis of active noise control for compact mobility: Fundamental consideration on $1/f$ fluctuation / ○(Student Member) Rina Miyao (Tokai Univ.), Ryosuke Suzuki, Taro Kato, Hideaki Kato, Takayoshi Narita
- PE109 A study on interior acoustic environment physiological in ultra-compact vehicle: Fundamental consideration on physiological evaluation of ANC / ○(Student Member) Ryosuke Suzuki (Tokai Univ.), Rina Miyao, Taro Kato, Hideaki Kato, Takayoshi Narita
- PE110 Drive control of gasoline engine valve using linear motor: Fundamental consideration on thrust characteristic / ○(Student Member) Yukinao Sato (Tokai Univ.), Takayoshi Narita, Hideaki Kato
- PE111 Using biological information ride comfort improvement technology: Basic study on control considering psychological load / ○(Student Member) Keigo Ikeda (Tokai Univ.), Ryosuke Minowa, Ayato Endo, Hideaki Kato, Takayoshi Narita
- PE112 Finite-difference time-domain simulation of suppression of tunnel blasting noise using passive duct elements / ○(Member) Tatsuya Morishita (Tokai Univ.), Kiyoshi Yoshioka (Sato Kogyo Co., Ltd.), Sachio Maeda
- PE113 Active noise control for ultra-compact EVs using giant magnetostrictive actuator Fundamental consideration on reduction of road noise / ○(Student Member) Taro Kato (Tokai Univ.), Ryosuke Suzuki, Rina Miyao, Takayoshi Narita, Hideaki Kato
- PJ101 Acoustic liner test on small turbofan aero-engine / ○(Member) Kenichiro Nagai (JAXA), Hideshi Oinuma, Tatsuya Ishii
- PJ102 Subjective evaluation of combined noise for home medical equipment / ○(Member) Toru Miyairi (Tokyo Met. Industrial Tech. Research Inst.), Asobu Hattori
- PJ103 Study on methods for localization of the low frequency sound / ○(Member) Tetsuya Doi (Kobayasi Inst. of Physical Research), Keiichiro Iwanaga, Tomohiro Kobayasi, Tsumugi Nakayama (Gakushuin Univ.), Yasutaka Nakajima (RION Co., Ltd.)
- June 28th (Fri) ● [Summit Hall]
- 9:00 ~ 10:15 / Test and analysis technique of noise and vibration (4)**
(Chair: Hiromitsu Hamakawa (Oita Univ.))
- J114 Experiment and numerical analysis on reducing flow noise of a Louver-Type Diffuser / ○(Member) Suguru Doshida (Shinryo Corp.), Hayato Yoshinaga, Gaku Minorikawa (Hosei Univ.), Tsunebumi Mikuni (Shinryo Corp.)
- J115 Numerical simulation of aerodynamic noise from an automobile by using acoustic perturbation equation / ○(Member) Akiyoshi Iida (ToyoHashi Univ. of Tech.), Hiroshi Yokoyama, Chisachi Kato (Inst. of Industrial and Science, the Univ. of Tokyo)

- J116 Evaluation of the accuracy of numerical analysis for fundamental phenomena of flow noise in a duct / ◯(Member) Hayato Yoshinaga (Shinryo Corp.), Suguru Doshida, Gaku Minorikawa (Hosei Univ.), Tsunebumi Mikuni (Shinryo Corp.)
- J117 Study on acoustic and flow induced noise characteristics of L-shaped duct with a shallow cavity / ◯(Member) Masaaki Mori (Cybernet Systems Co.,Ltd.), Kunihiko Ishihara (Tokushima Bunri Univ.)
- J118 Range hood noise analysis / ◯(Student Member) Keisuke Kuribayashi (Nagasaki Univ.), Moemi Inoue, Hidechito Hayashi, Tetsuya Okumura, Shouta Yoshikawa (Panasonic Eco systems)

10:30 ~ 11:30 / Test and analysis technique of noise and vibration (5)

(Chair: Akiyoshi Iida (Toyohashi Univ. of Tech.))

- J119 Analysis of acoustic characteristics of duct silencers using equivalent circuit with parallel transmission line/ ◯(Member) Tatsuya Morishita (Tokai Univ.)
- J120 Vibration and acoustic analysis for panel laminated urethane and rubber / ◯(Member) Yoshio Kurosawa (Teikyo Univ.), Tsuyoshi Yamashita (Parker Corp.), Tetsuya Ozaki, Yuki Fujita, Masayuki Murakami (Parker Asahi), Manabu Takahashi, Naoyuki Nakaizumi
- J121 A study on structural optimization of SEA subsystems using finite element model by arrangement of damping material / ◯(Member) Katsuhiko Kuroda (Nagasaki Inst. of Applied Science)
- J122 Basic study of bayesian estimation method for FRF level of noise and vibration using Markov Chain Monte Carlo Method / ◯(Member) Daisuke Muto (Hitachi, Ltd. Research & Development Group), Wataru Sato, Takashi Yoshizawa

◆Recycling and waste treatment technology (Topic 2) ◆

<Organizers>

Tomohisa OHTA (TAKUMA), Hao HU (Waseda Univ.),

Tamio IDA (Kindai Univ.), Kazuyoshi ITO(Sumitomo Heavy Industries), Masaharu OKADA (Kubota Environmental Service), Mai OGURA (Hitachi Zosen), Yoshihiro ONO (NIPPON STEEL & SUMIKIN ENGINEERING), Hiroshi ONODA (Waseda Univ.), Tomokuki KATAYAMA (Microbes Environment Innovation), Fumiaki KAMBAYASHI (Kubota), Katsuya KAWAMOTO (OKAYAMA Univ.), Jun KOBAYASHI (Kogakuin Univ.), Yasuo SUZUKI (JFE Engineering), Shigenori CHICHIBU (KOBELCO ECO-SOLUTIONS), Tomohiro DENDA (JFE Engineering), Yasuhiro TOMITA (Mitsui E&S Engineering), Hidefumi TOYOTAKE (Tsukushima Kankyo Engineering), Takashi FUJIKI (ShinMaywa), Tomoya MATSUYAMA (SANKI ENGINEERING), Hiroyuki MORITA (Kawasaki Heavy Industries), Mitsutoshi YAMAMOTO (EBARA ENVIRONMENTAL PLANT), Masao YUKUMOTO (CHUBU Univ.), Kunio YOSHIKAWA (Tokyo Inst. of Tech.)

•June 26th (Wed) • [Sunset Lounge]

10:15 ~ 12:00 / Technology Development and Standardization of Solid Biomass Energy Part I

(Chair: Toru Sawai (Kindai Univ.))

- IE201 Development of Biocoke for Industrial Utilization in Thailand / ◯(Non-member) Chaichanawong Jintawat (Thai-Nichi Inst. of Tech.), Tamio IDA (Kindai Univ.)

(Chair: Manabu Fuchihata (Kindai Univ.))

- E201 Influence of oxidation gas conditions on the combustion behavior of single columned biomass briquette / ◯(Member) Hiroyuki ITO (Kanagawa Univ.), Kaito SAKAKIBARA, Yuichi NISHIMAKI, Masayoshi MIURA
- E202 The Effects of Additional Hemicellulose on Japanese Cedar Base Biocoke Characteristics / ◯(Non-member, Student) Supitchaya Cherdkeattikul (Kindai Univ.), Tamio IDA
- E203 Thermal decomposition properties of torrefied Biocoke in different heating rate during torrefaction / ◯(Member) Nami TAGAMI (Kindai Univ.), Satoru MIZUNO, Tamio IDA
- E204 Study on Production and Combustion Ash of Biomass Solid Fuel / ◯(Member) Atsuhiro KAWAMURA (National Inst. of Tech., Kushiro College), Tamio IDA

(Kindai Univ.)

- E205 Behavior of carburization phenomena in iron casting process based on new solid biofuel; Biocoke / ◯(Member) Yoshihiro TOMITA (Kindai Univ.), Satoru MIZUNO, Nami TAGAMI, Tamio IDA

13:15 ~ 13:45 / Global Prospects and Issues of IoT and AI Technologies in the field of Waste Management

(Chair: Hiroshi Onoda (Waseda Univ.))

- IE202 Global Prospects and Issues of IoT and AI Technologies in the field of Waste Management / ◯(Member) Wu Jun (Inst. of software Chinese Academy of Sci.)

13:45 ~ 14:30 / Waste power generation and biomass power generation, Heat utilization technology

(Chair: Jun Kobayashi (Kogakuin Univ.))

- E206 Reduction Mechanism of NOx in a Stoker Type Incinerator Utilizing Counter Flow Combustion / ◯(Member) Taichi USUKI (JFE Eng. Corp.), Tomohiro DENDA, Takashi NAKAYAMA
- E207 Tar Generation behaviors in Downdraft Packed Bed Reactor for Woody Biomass Gasification / ◯(Member) Ryo YOSHIIE (Nagoya Univ.), Yasuaki, UEKI, Ichiro NARUSE
- E208 Effects of modified particle morphology on the reactivity of Victorian brown coal and sugarcane bagasse during steam co-gasification / ◯(Non-member, Student) Arash Piran (Gifu Univ.), Nobusuke KOBAYASH, Yoshinori ITAYSA, Maksym Rybachuk (Griffith Univ.)

14:45 ~ 15:30 / Utilization of Biomass Resources and its Future Prospects

(Chair: Andante Hadi Pandyaswarg (Waseda Univ.))

- IE203 BIOENERGY POTENTIAL FROM AGRICULTURAL RESIDUES AND INDUSTRIAL WASTES IN INDONESIA / ◯(Non-member) Budhijanto Sugiharto Wiratni (Chemical Eng. Dept.UGM Indonesia)

(Chair: Andante Hadi Pandyaswarg (Waseda Univ.))

- E209 Experimental Study on Rice Husks Torrefaction: Technology Development Potential in Myanmar's Unelectrified Area/

Wu Shuai (Waseda Univ.), Pandyaswargo Andante Hadi, hiroshi ONODA

- E210 Presentation withdrawn

- E211 Presentation withdrawn

15:45 ~ 16:45 / Current Efforts and Future Challenges of Sustainable Technologies and Systems

(Chair: Hiroshi Onoda (Waseda Univ.))

- IE204 Renewable Energy Enterprises in Emerging Markets: Strategic and Operational Challenges / ◯(Non-member) Cle-Anne Gabriel (The Univ. of Queensland)

(Chair: Yuichiro Kimura (Hitachi Zosen))

- E212 Technology Readiness Assessment of Biomass Energy Projects using J-TRA method: Application on Southeast Asian Countries/Issui IHARA (Deloitte Tohmatsu Consulting LLC.), ◯ (●) Andante Hadi Pandyaswargo (Waseda Univ.), Da Pang, Hiroshi ONODA

- E213 Development of High Porosity Activated Carbons from Dead Tree Leaves by Steam Activation and Its Future Environmental Application / ◯(Non-member, Student) Chairunnisa (Kyushu Univ.), Nobuo TAKATA, Kyaw Thu, Takahiko MIYAZAKI, Koji NAKABAYASHI, Jin MIYAWAKI

●June 27th (Thu) ● [Sunset Lounge]

10:00 ~ 11:00 / Cross-sectional topics

(Chair: Manabu Fuchihata (Kindai Univ.))

- IE205 Characterization and Application of Oil Palm Waste Degrading Bacteria from Tropical Environment / ◯(Non-member) Hirofumi HARA (Malaysia-Japan International Inst. of Tech., Universiti Teknologi Malaysia), Anahuda Abdullah Tahir, Nadia Farhana Azman, Fatimah Azizah Riyadi, Nor'azizi Othman, Zuriati Zakaria

- E214 Bi-functional -Cl and -SO₃H Doped Carbon Acid Catalysts for Cellulose hydrolysis to glucose / ◯(Non-member, Student) Qin Lusha (Busan Natl. Univ.), Oi Lun Helena Li

- E215 The Effect of Design Thinking Method in

Environmental Engineering/ Mayumi
KAWASE (Gifu Univ.), Kuniko
URASHIMA (National Inst. of Science
Tech. Policy)

11:15 ~ 12:00 / Resource Recovery and Recycling

(Chair : Tomohiro Denda (JFE Eng. Corp.))

- J201 Separation behavior of metal-resin composite film using high frequency induction heating / ○(Student) Taro YAMAGISHI (Kogakuin Univ.), Sota MURAKAMI, Jun KOBAYASHI
- J202 Improve of bio (diesel) fuel performance on low temperature / ○(Student) Masakazu YAMADA (Chubu Univ.), Masao YUKUMOTO
- J203 Energy Consumption Analysis for the Practical Application of Superheated Steam Degreasing System applied for Oily Waste Metal Cutting Chips / ○(Member) Naoki MARUYAMA (Mie Univ.), Fumiya MATOBA, Ryota SHIMANAKA, Masafumi HIROTA

•June 27th (Thu) • [Summit Hall]

13:45 ~ 16:00 / Poster Session: Short Presentations & Poster Presentations

(Chair: Andante Hadi Pandyaswarg (Waseda Univ.), Satoru Mizuno (Kindai Univ.))

- PE201 Effect of minerals in mangrove on pyrolysis and gasification at water vapor atmosphere / ○(Non-member) Yuya SAKURAI (Kogakuin Univ.), Yuji SAKAI, Jun KOBAYASHI
- PE202 Radioactive cesium distribution measurement by using KURAMA in Iitate village, Fukushima. / ○(Non-member) Yoshikatsu Ueda (Kyoto Univ.), Naoto NIHEI (The Univ. of Tokyo), Minoru TANIGAKI (Kyoto Univ.), Rattanaporn Norarat (Rajamangala Univ. of Tech. Lanna)
- PJ201 Effect of mixture on soil organic matter determination by ignition loss / ○(Student) Shigenori SUZUKI (Kogakuin Univ.), Jun KOBAYASHI

•June 28th (Fri) • [Ocean Hall B (Small)]

9:00 ~ 10:00 / (Organized session) General technologies related to waste treatment and biomass utilization

(Chair : Yasuo Suzuki (JFE Engineering))

- OS201 Utilization of Waste Plastic as an Auxiliary Fuel in the Rotating Melting Furnace / ○(Member) Masaharu OKADA (Kubota Environmental Service), Eiichi TSUJI, Fumiki HOSHO (KUBOTA Corp.)
- OS202 Operation pattern observation and rule assemble of crane for waste treatment / ○(Non-member) Kazue SHIBATA (SANKI ENGINEERING), Satoshi NISHIMURA (National Inst. of Advanced Industrial Science and Tech.), Noriaki SHIRAISHI (sanki kakou), Tomoya MATSUYAMA (SANKI ENGINEERING), Kenichiro FUKUDA (National Inst. of Advanced Industrial Science and Tech.), Takuichi NISHIMURA
- OS203 Mercury adsorption characteristics of activated carbon / ○(Non-member) Michitaka FURUBAYASHI (HITACHI ZOSEN), Yasuhiro KUSANO
- OS204 Automatically operation with AI&Big data for WtE plant / ○(Non-member) Hiroshi KOJIMA (JFE Engineering), Mitsutoshi Seno, Takayuki Kawano, Kosuke Tamagawa

10:15 ~ 11:15 / Waste power generation and biomass power generation, Heat utilization technology

(Chair : Tomoya Matsuyama (Sanki Engineering))

- J204 Boiler Cleaning System for Municipal Solid Waste Incineration Plant / ○(Member) Yasuo SUZUKI (JFE Engineering), Yohei TAKEYAMA, Keiju MORISHITA, Yusuke YAMAMOTO, Tatsuyuki NODA
- J205 Environmental and economic evaluation of combined system of the garbage facility and sewage treatment facility / ○(Student) Akihisa OGAWA (Waseda Univ.), Daichi WATANABE, Kou KO, Hiroshi ONODA, Yoichi WATANABE, Junji YAMAGUCHI (Japan Waste Research Foundation)
- J206 NOx formation behaviors in char combustion of waste incineration process / ○(Student) Kazutaka TSUKAMOTO (Nagoya Univ.), Ryo YOSHIIE, Ichiro

NARUSE, Yasuaki, UEKI (Nagoya Univ.),
Tomohiro Denda, Taichi USUKI (JFE
Engineering)

- J207 A numerical analysis of two-phase flow
inside drum type sewage sludge dryer /
○(Member) Satoshi SEO (IHI), Takeomi
IDETA, Hisakazu ONIZUKA

●June 28th (Fri) ● [Ocean Hall C (Small)]

9:15 ~ 10:00 / Technology Development and
Standardization of Solid Biomass Energy (1)

(Chair : Hiroyuki Ito (Kanagawa Univ.))

- J208 Trial Production and Characteristics of Bio-
coke with General Waste / ○(Member)
Yasuhito NAKATAKE (National Inst. of
Tech., Kurume College), Katsuhiro
WATANABE, Satoru MIZUNO (Kindai
Univ.), Tamio IDA
- J209 Study on waste heat utilization for algae
biomass culture / ○(Member) Masao
MASUDA (Takasago Thermal
Engineering), Atsushi TAKAHASHI
- J210 Estimation of HHV of reaction
intermediates of Torrefied Cedar Wood
powder based on Two-step pyrolysis model
/ ○(Student) FUMIYA MORIYAMA
(Kindai Univ.), TORU SAWAI

10:15 ~ 11:00 / Technology Development and
Standardization of Solid Biomass Energy Part II

(Chair: Jun Kobayashi (Kogakuin Univ.))

- E216 Development of High Functional Direct
Carbon Fuel Cell / ○(Member) Kimihiko
Sugiura (Osaka Pref. Univ. College of
Tech.), Daichi Takahara, Yasuhiko Itoh,
Toshiya Matsuyama (IHI.), Takatsugu
Kanatani, Masato Tamura
- E217 Non-destructive evaluation of Biocoke by
gloss value / ○(Member) Satoru MIZUNO
(Kindai Univ.) Nami TAGAMI, Tamio IDA
- E218 Exploring the potential to adopt smart
technologies in construction waste
management practice in Malaysia / ○(Non-
member, Student) Maskuriy Raihan
(MJIT), Selamat Ali

◆Technology for the conservation of air
and water (Topic 3) ◆

<Organizers>

Shinji Kambara (Gifu Univ.), Yoshiyasu Ehara (Tokyo
City Univ.), Yojiro Ishino (Nagoya Inst. of Tech.),
Satoshi Uehara (Tohoku Univ.), Kuniko Urashima
(NISTEP), Hisashi Endo (Tsukushima Kikai Co., Ltd.),
Masaaki Okubo (Osaka Pref. Univ.), Kotaro Kawajiri
(AIST), Ichiei Kitagawa (Japan Sewage Works Agency),
Nobusuke Kobayashi (Gifu Univ.), Takehiko Sato
(Tohoku Univ.), Shinichi Kinoshita (Osaka Pref. Univ.),
Hiroshi Nagaoka (Tokyo City Univ.), Takashi Miyahara
(Shizuoka Univ.), Hisao Yamaguchi (Kubota Corp.),
Ryo Yoshiie (Nagoya Univ.), Atsumasa Yoshida (Osaka
Pref. Univ.), Keiichiro Yoshida (Osaka Inst. of Tech.)

●June 26th (Wed) ● [Ocean Hall B & C (Large)]

10:15 ~ 11:45 / Environmental fundamental
phenomena

(Chair: Shinji Kambara (Gifu Univ.), Keping Yan
(Hangzhou Univ., China))

- IE301 Applications of plasma in environmental
and chemical processes / ○(Non-member)
Debacher A. Nito (Federal Univ. of Santa
Catarina, Brasil)
- IE302 Integrated community energy and
harvesting systems (ICE-HARVEST) /
○(Non-member) Cotton James (McMaster
Univ., Canada), K. Freidrich, V. Lakhain
- IE303 Application of Plasma Catalysis for the
Removal of Gaseous Pollutants / ○(Non-
member) Moo Been Chang (National
Central Univ., Taiwan)
- E301 Inactivation of bacterial spore on spherical
solid surface by dielectric barrier discharge
under reduced pressure / ○(Member of
Supporting Societies) Ohshima Takayuki
(Gunma Univ.), Tanino Takanori, Uehara
Kensuke, Mastui Masayoshi

●June 26th (Wed) ● [Ocean Hall C (Small)]

13:15 ~ 14:45 / Particles / Measurement /
Applications

(Chair: Koichi Takaki (Iwate Univ.), Takayuki
Ohshima (Gunma Univ.))

- E302 New solution to identify tracing
contamination source using PX-375 /
○(Special Member (Corporate Member))
Kawaguchi Matsumoto Erika (HORIBA,

- Ltd.), Mizuno Yusuke, Aoyama Tomoki
- E303 Study on Combustion Incineration of CFRP (SEM Observations of Nano Level Sharpening of Carbon Fiber Residue Tips and Temperature Measurements based on Heat Radiation Images) / ◯(Member) Yojiro Ishino (Nagoya Inst. of Tech.), Madoka Tabata, Santa Onuma
- E304 Plasma In-liquid Treatment for Sustainable Plant Factory Inspired in Rainstorm Natural Events. / ◯(Member) Vicente Rodriguez-Gonzalez (Instituto Potosino de Investigacion Cientifica y Tecnologica/Tokyo Univ. of Sci.) Norihiro Suzuki (Tokyo Univ. of Sci.), Shoki Suzuki, Yoshiteru Mizukoshi, Akira Fujishima, Chiaki Terashima, Chiaki Mukai
- E305 Pulsed Power and Plasma Applications for Agriculture and Food processing / ◯(Member) Takaki Koichi (Iwate Univ./ Agri-Innovation Center), Takahashi Katsuyuki
- E306 Effect of particle properties on the characteristics of plasma in a DBD plasma enhanced spouted bed / ◯(●) BAIQIANG ZHANG (Gifu Univ.), Nobusuke Kobayashi, Yoshinori Itaya
- E317 Individual difference in skin blood flow with air temperature variation / ◯ (Non-member) Yuki Otsuka (DAIKIN Inds. Ltd./Osaka Univ.), Maeda Takafumi (kyushu Univ.), Sumio Shiochi, Matsuo Tomohito (Osaka Univ.), Shimadera Hikari, Koue Jinichi, Kondo Akira
- combined process non-equilibrium plasma and a wet reactor / ◯(Student Member) Yuki Koizumi (Osaka Pref. Univ.), Haruhiko Yamasaki, Tomoyuki Kuroki, Masaaki Okubo

●June 27th (Thu) ● [Ocean Hall C (Small)]

10:00 ~ 12:00 / Technology for the conservation of water environments

(Chair: James S. Cotton (McMaster Univ. Canada), Yojiro Ishino (Nagoya Inst. of Tech.))

- E307 Development of Plasma Reactor for Water Treatment Using Air-Liquid Interfacial Streamer Discharge and the Coanda Effect / ◯(Member of Supporting Societies) Seiji Kanazawa (Oita Univ.), Ryosuke Hanabata, Tomohito Hayashida, Takashi Furuki, Kosuke Tachibana, Ryuta Ichiki, Marek Kocik (Polish Academy of Sci.)
- E308 Precise laboratory/in-situ measurement of absolute salinity for sea-water / ◯(Member) Yohei Kayukawa (Res. Inst. of Engineering Measurement/Natl. Metrology Inst. of JAPAN (NMIJ) /Natl. Inst. of Advanced Industrial Sci. and Tech. (AIST)), Hiroshi Uchida (Ocean Circulation Res. Team, Ocean Climate Change Res. Program, Res. Inst. for Global Change, Japan Agency for Marine-Earth Sci. and Tech. (JAMSTEC))
- E309 Microfluidic handling and evaluation of nanoparticles in water / ◯(Member) Motosuke Masahiro (Tokyo Univ. of Sci.), Yamamoto Ken, K.Fujita, M.Serita, K.Kurita
- E310 Aerobic Granulation Technology for Domestic Wastewater Treatment: A Malaysian Case Study / ◯(Non-member, Student) Laila Dina Amalia Purba (Malaysia-Japan International Inst. of Tech. (MJIT) /Universiti Teknologi Malaysia (UTM) Kuala Lumpur), Norhayati Abdullah (Dept. of Environmental Engineering and Green Tech. (EGT) /Malaysia-Japan International Inst. of Tech. (MJIT) /Universiti Teknologi Malaysia (UTM) Kuala Lumpur), Muhamad Ali Muhammad Yuzir, Arash Zamyadi (Department of Civil, Geology and Mining Engineering (CGM) /Ecole Polytechnique de Montreal)
- 14:45 ~ 15:15 / Atmospheric Environment Conservation / Environmental Impact**
(Chair: Yoshiyasu Ehara (Tokyo City Univ.))
- J301 Development of System for Continuously Forming Ozone Containing Hydrates and application to environmental purification / ◯(Member) Tomomi Hatsugai (IHI Corp.), Shikou Nakamura, Mie Sakurai, Ryo Akiyoshi (IHI Plant Construction), Shirou Nishitsuka, Ryo Nakamura, Ryo Ohmura (Keio Univ.), Satoshi Takeya (AIST)
- J302 NOx removal in exhaust as emitted from semiconductor manufacturing industries by

- E311 Behavior of a water droplet colliding with high speed unsteady flow/Yaga Minoru (Univ. of the Ryukyus), ◯ (●) Kawada Yuki, Nogami Kotaro, Takiya Toshio (Hitachi Zosen), Fujibayashi Takahiro (Hirayama Manufacturing Corp.), Shigeru Fujimura (Tohoku Medical and Pharmaceutical Univ.), Tatsuyuki Nakatani (Okayama Univ. of Sci.)
- E312 Decomposition of Ibuprofen in Water by Solution Plasma Processing / ◯(●) Terashima Chiaki (Tokyo Univ. of Sci.), Hirami Yuki, Suzuki Norihiro, Fujishima Akira, Rodriguez-Gonzalez Vicente (nstituto Potosino de Investigacion Cientificay Tecnologica)
- E313 Ammonia nitrogen sensor that contributes to energy saving in wastewater treatment process / ◯(●) Yuichi Ito (HORIBA advanced Techno, Co., Ltd.), Tatsuoki Muroga, Yoshifumi Ogushi
- E314 TPD Study for the Characteristics of the Gas Desorption Induced by Non-Thermal Plasma / ◯(Member) Yoshida Keiichiro (Osaka Inst. of Tech.)
- PE305 Precise measurements for density of seawater using a hydrostatic weighing method / ◯(Student Member) Kei Tasaka (Nihon Univ.), Katsuyuki Tanaka, Youhei Kayukawa (Advanced Industrial Sci. and Tech.), Hiroshi Uchida (Japan Agency for Marine-Earth Sci. and Tech.)
- PE306 Semi-Dry Plasma-Chemical DeNOx Process for Glass Melting Furnace Flue Gas / ◯(Member) Tomoyuki Kuroki (Osaka Prefecture Univ.), Hashira Yamamoto (Osaka Pref. Univ./Nihon Yamamura Glass Co., Ltd.), Hidekatsu Fujisihma (Osaka Pref. Univ.), Masaaki Okubo
- PE307 Hydrogen purification characteristics from ammonia decomposition gas with a plasma membrane reactor / ◯(Member) Yukio Hayakawa (Gifu univ.), Shintaro Wakazono, Tomonori Miura (Sawafuji Electric co., Ltd.), Shinji Kambara (Gifu univ.)

●June 27th (Thu) ● [Sunset Lounge & Summit Hall]

13:45 ~ 16:00 / Poster Session: Short Presentations & Poster Presentations

(Chair: Nito A. Debacher (Federal Univ. of Santa Catarina, Brazil), Masaaki Ohkubo (Osaka Pref. Univ.))

- PE301 Electrical and Structural Changes of Amorphous Carbon Thin Films induced by Exposure to Iodine Vapor / ◯(Non-member) Seiji Kudou (Univ. of the Ryukyus), Masaaki Yamazato, Akira Higa
- PE302 Development of analysis method of cell movement / ◯(Member) Hayato Tada (Tohoku Univ.), Chia-Hsing Chang, Uehara Satoshi, Takehiko Sato
- PE303 Investigation of Nanosecond Pulsed Current Induced Reorganization of the Cytoskeleton / ◯(Non-member, Student) Chia-Hsing Chang (Tohoku Univ.), Ken-ichi YANO (Kumamoto Univ.), Takehiko SATO (Tohoku Univ.)
- PE304 Development of electrodes for air plasma sterilization / ◯(Student Member) Kairi Muramatsu (Tohoku Univ.), Takehiko Sato, Tomoki Nakajima, Toshikazu Nagasawa
- PE308 Hydrogen production from steam using plasma membrane reactor with a flow channel / ◯(Member) Haruki Kanayama (Gifu univ.), Yukio Hayakawa, Kambara Shinji, Tomonori Miura (Sawafuji Electric co., Ltd.)
- PE309 Hydrogen permeation characteristics of plate-type plasma membrane reactor / ◯(Member) Hiroki Sato (Gifu univ.), Yukio Hayakawa, Shinji Kambara, Tomonori Miura (Sawafuji Electric co., Ltd.)
- PE310 Spectroscopic measurement of streamer discharge in water for water purification / ◯(Member) Satoshi Uehara (Tohoku Univ.), Haruki Ishizuka, Takehiko Sato
- PE311 Effect of nitrogen oxides on ozone sterilization of spores / Koki Oikawa (Tohoku Univ.), ◯ (Member) Takehiko Sato, Tomoki Nakajima, Toshikatsu Nagasawa (Hirayama Manufacturing Corp.), Shigeru Fujimura (Tohoku Medical and Pharmaceutical Univ.), Tatsuyuki Nakatani (Okayama Univ. of Sci.)

- PE312 Experimental Study of the Aging Time of Physicochemical Properties of Plasma Activated Water / ○(●) Wu Mu-Chien (Natl. Chiao Tung Univ.), Hou Chih-Yao (Natl. Kaohsiung Univ. of Sci. and Tech.), Hsiao, Chun-Ping (Natl. Chiao Tung Univ.), Lin Chia-Min (Natl. Kaohsiung Univ. of Sci. and Tech.), Ku Jui-Chun (Natl. Chiao Tung Univ.), Lee Chih-Chia, Huang Shih-Sen, Wu Jong-Shinn
- PE313 Optimization of membrane module and Mechanical Vapor Recompression in Radioactive Waste Treatment/Yunkai Yue (Tech. inst. of physics and chemistry, CAS, Beijing, China), ○(●) Zhentao Zhang
- PE314 Perspective of future in environmental engineering by Foresight survey / ○(Member) Urashima Kuniko (Natl. Inst. of Sci. and Tech.Policy), Masayuki Kawaoka
- PE315 Vacant number
- PE316 Velocity Analysis of Re-entrainment Particle in Electrostatic Precipitator / ○(Non-member, Student) Yuan ZhenDong (Tokyo City Univ.), Fujii Atsuki, Ehara Yoshiyasu, Inui Takashi (Fuji Electric CO., Ltd)
- PJ301 Effect of methane on deNO_x by photochemical reaction using 172 nm wavelength / ○(Member) Hiroaki Kurahashi (Gifu Univ.), Yukio Hayakawa, Shinji Kambara
- PJ302 Development of steam plasma device for hydrogen production / ○(Member) Kenya Tokunaga (Gifu Univ.), Yukio Hayakawa, Shinji Kambara
- PJ303 Effect of ground electrode configuration on ammonia clacking by plasma / ○(Member) Motonobu Kawaguchi (Gifu Univ.), Yukio Hayakawa, Shinji Kambara, Tomonori Miura (Sawafuji Electric Co., Ltd.)
- Taiwan), Keiichiro Yoshida (Osaka Inst. of Tech.)
- IE304 From ESP to NTP for Industrial Applications / ○(Non-member) Keping Yan (Hangzhou Univ., China)
- IE305 Investigation on the Plasma Activated Water Applied for Egg Washing / Chih-Yao Hou (National Kaohsiung Univ.), Chun-Ping Hsiao (National Chiao Tung Univ.), Chia-Min Lin (National Kaohsiung Univ.), Jui-Chun Ku (National Chiao Tung Univ.), Mu-Chien Wu, ○(Non-member) Jong-Shinn Wu
- E315 Evaluation of Air Pollution in Street Canyon using Chemistry-coupled CFD model / ○(Non-member) Tomohito Matsuo (Osaka Univ.), Shingo Sawada, Hikari Shimadera, Akira Kondo
- E316 Characterization of zeolite particles as internals of packed bed plasma reactor / ○(●) Sakai Akitsugu (Gifu Univ.), Hayakawa Yukio, Kambara Shinji, Miura Tomohiro (Sawafuji Electric Co., Ltd.)
- J304 Ions Cluster Formation by Nonthermal Plasma induced by Corona Discharge Toward Indoor Air Cleaning / ○(Member) Masaaki Okubo (Osaka Pref. Univ.), Yuji Hiroyasu, Tomoyuki Kuroki
- J305 Effect of ultrasound irradiation on pulsed discharge in water / ○(Student Member) Kohei Kishimoto (Osaka Pref. Univ.), Yusuke Otaki, Yuya Kumazawa, Tomoyuki Kuroki, Haruhiko Yamasaki, Masaaki Okubo
- J306 Inactivation of wastewater by continuous heat sterilizer / ○(Member) Eisuke Tamura (Sanki Engineering Co., Ltd.), Satoshi Ohmori, Kinji Nakayama, Akihiro Ohnishi (Tokyo Univ. of Agriculture)

◆Environmentally friendly energy technology (Topic 4) ◆

< Organizers >

Katsuyuki Tanaka (Nihon Univ.), Shigeru Bando (Central Research Inst. of Electric Power Industry), Atsushi Akisawa (Tokyo Univ. of Agriculture and Tech.), Tatsu Ito (Tokyo Toshi Service), Seiji Uchiyama (Sanki

●June 28th (Fri) ● [Sunset Lounge]

9:00 ~ 11:30 / Technology for the conservation of air environments

(Chair: Moo Been Chang (National Central Univ.,

Engineering), Shin'ya Obara (Kitami Inst. of Tech.), Shigeki Kametani (Tokyo Univ. of Marine Science and Tech.), Yohei Kayukawa (National Inst. of Advanced Industrial Science and Tech.), Shinji Kimijima (Shibaura Inst. of Tech.), Mitsuo Kojima (Tokyo Univ. of Marine Science and Tech.), Akira Kondo (Osaka Univ.), Kiyoshi Saito (Waseda Univ.), Masanobu Sasaki (TEPCO Energy Partner), Haruki Sato (Keio Univ.), Keisuke Sekiguchi (NTT Facilities), JongSoo Jeong (Waseda Univ.), Chaobin Dang (Univ. of Tokyo), Masaki Toyoshima (Mitsubishi Electric), Nobuya Nishimura (Osaka City Univ.), Kenji Matsuda (Mitsubishi Heavy Industries Thermal Systems), Takahiko Miyazaki (Kyushu Univ.), Seiichi Yamaguchi (Waseda Univ.), Mikhail Rodionov (Toshiba), Tetsuya Wakui (Osaka Pref. Univ.)

•June 26th (Wed) • [Summit Hall]

10:30 ~ 12:00 / Invited Lectures

(Chair: Akira Kondo (Osaka Univ.))

IE401 Low temperature measurements for environmental friendly refrigerants / ◯(Non-member) Giovanni Di Nicola (Universita Politecnica delle Marche), G.Coccia, M.Pierantozzi (Univ. di Camerino), S.Tomassetti (Univ. Politecnica delle Marene)

IE402 Two-phase flow distribution characterization and improvement in microchannel heat exchanger header / ◯(Member) JEONG JONGSOO (Waseda Univ.), M.A.Redo, N.Giannetti, S.Yamaguchi, KIYOSHI SAITO, HYUNYOUNG KIM (Samsung R&D Inst. Japan / Osaka)

IE403 Development of high concentration photovoltaic system combined with efficient waste-heat driving air-conditioning system / ◯(Member) DANG CHAOBIN (The Univ. of Tokyo), Eiji Hihara

13:15 ~ 14:30 / Heat exchangers and pipes

(Chair: Takahiko Miyazaki (Kyushu Univ.))

E401 Numerical Simulation of Falling-Film Absorbers at High Temperature / ◯(Non-member) Yujin Ohashi (Waseda Univ.), Ryosuke Moriwaki, Seiichi Yamaguchi, Kiyoshi Saito

E402 Investigation of novel radial diverging two-

phase minichannel heat exchangers for hybrid PV-CSP thermal management application / ◯(Non-member) Hong Sihui (The Univ. of Tokyo), Chaobin Dang, Eiji Hihara

E403 Theoretical Formulation of Two-phase Flow Distribution in Microchannel Heat Exchangers using Electric Circuit Analogy / ◯(Non-member) Niccolo Giannetti (Waseda Univ.), Mark Anthony Redo, Jongsoo Jeong, Seiichi Yamaguchi, Kiyoshi Saito, Hyunyoung Kim (Samsung Res. and Development Inst. Japan)

E404 Development of Finned-Tube Heat Exchanger Simulator for Heat Pumps / ◯(Non-member) Seiichi Yamaguchi (Waseda Univ.), John Carlo Garcia, Niccolo Giannetti, Kiyoshi Saito

E405 Design and Development of Silicon Heat Pipe for Miniature Turbine Generator / ◯(Member) Minami Kaneko (Nihon Univ.), Katsuyuki Tanaka, Fumio Uchikoba

14:45 ~ 15:30 / Low grade thermal energy

(Chair: Chaobin Dang (Univ. of Tokyo))

E406 Development of Test Plant for Small Output Organic Rankine Cycle in Low Grade Heat Source / ◯(Member) Soichi Sasaki (Nagasaki Univ.), Tomohiko Yamaguchi, Moritaka Hideshiro

E407 Presentation withdrawn

E408 Available working solutions assessment for a closed type reverse electro dialysis power generation system driven by the thermal energy / ◯(Non-member) Xi WU (Dalian Univ. of Tech.), Shuaishuai YANG, Shiming XU, Ying GONG, Debing WU

E409 Presentation withdrawn

E410 Evaluation of technical and economic potentials of solar thermal water heater in Japan using satellite-based irradiation data / ◯(Non-member, Student) Ryosuke Sugimoto (Tokyo Univ. Agriculture and Tech.), Takashi Ikegami

16:00 ~ 17:00 / Renewable energy

(Chair: Seiichi Yamaguchi (Waseda Univ.))

- E411 Community Design in SDGs by Utilizing Solar Thermal and Electricity / ○(Student Member) Kohei Terashima (Keio Univ.), Haruki Sato, Toshiharu Ikaga (Chair: Kenji Matsuda (Mitsubishi Heavy Industries Thermal Systems))
- E412 Hydrate-based continuous CO₂ separation for integrated gasification combined cycle power plants / ○(Non-member, Student) Hitoshi Kiyokawa (Keio Univ.), Shunuke Horii, Ryo Ohmura J405 Analysis of Adsorption of Silica Gel Particles in an Oscillating Flow Field Using CFD / ○(Student) Syu Sato (Tokyo Univ. of Agriculture and Tech.), Atsushi Akisawa, Uki Ueda, Jyunpei Fujiki
- E413 The Effect of Fin Height on Lift Generation for Magnus Wind Turbine / ○(Student Member) Kojiro Enoki (Utsunomiya Univ.), Hiroaki Hasegawa, Tsutomu Ishido J406 Investigation of Plate-type Heat Exchanger using Latent Heat Thermal Storage / ○(Student) Shun Sawada (Tohoku Gakuin Univ.), Akira Hoshi
- E414 Optimization of circular cylinder blades length against scale change of horizontal wind turbine with circular cylinder blades driven by longitudinal vortex / ○(Student Member) Naoki Hata (National Inst. of Tech, Kure College), Shigeru Ogawa, Takahiro Nomura J407 Study on Performance Characteristics of Top-heat-type Thermosiphon / ○(Member) Takashi Kawaguchi (Kanagawa Inst. of Tech.), Toru Fujisawa, Takeshi Kawashima
- J408 A Study on in-cylinder pressure analysis in Diesel Engines / ○(Member) Shota Taki (Waseda Univ.), Takaaki Matsunaga, Jin Kusaka

16:00 ~ 17:00 / Air conditioning, Hot water supply, and Heat supply

(Chair: Keisuke Sekiguchi (NTT Facilities))

•June 26th (Wed) • [Ocean Hall B (Small)]

13:30 ~ 14:30 / Frost formation and Ice thermal storage

(Chair: Katsuyuki Tanaka (Nihon Univ.))

- J401 Effects of wettability of cooling surface on frosting phenomenon / ○(Student) Haruka Agui (Tamagawa Univ.), Hidetoshi Ohkubo, Yuta Suzuki, Takuhiro Hashimoto
- J402 Reduction of frost formation using mesh seat / ○(Student) Shohi Yokoyama (Tamagawa Univ.), Hidetoshi Ohkubo, Haruka Agui, Mitsuo Seki (NATOMICS)
- J403 Investigation on cohesive force of ice particles in ice slurry with high IPF / ○(Member) Yuri Umehara (Chuo Univ.), Kazuomi Maezawa, Rikuto Ayatani, Youtaro Inaba, Koji Matsumoto
- J404 Enhancement of Natural-Convection Boiling Heat Transfer by using Frost Layer / ○(Member) Takayuki Morokuma (Kanagawa Univ.), Hidetoshi Ohkubo (Tamagawa Univ.), Yoshio Utaka (Tianjin Univ.), Toshiki Hirotsu (Tamagawa Univ.), Taiyo Sugino
- J409 Energy saving technology of scroll compressor for air conditioner / ○(Member) Kazuki Takahashi (Mitsubishi Heavy Industries Thermal Systems), Youhei Hotta, Yoshiyuki Kimata, Hajime Sato (Mitsubishi Heavy Industries), Takahide Ito
- J410 Performance Analysis of Vapor Compression Type Air-Conditioning Systems Using Zeotropic Refrigerant Mixture (Cycle Simulation based on Hierarchical Solution Method) / Tetsuya Wakui (Osaka Pref. Univ.), ○ (Student) Hiroaki Okamura, Ryohei Yokoyama
- J411 Actual measurement evaluation and Improvement proposal of Solar-thermal and Ground-thermal Hybrid Energy Supply System for Restaurants / ○(Member) Ryo Kikuchi (Waseda Univ.), Daiki Yoshidome, Hiroshi Onoda
- J412 Measurement and evaluation of renewable energy heat utilization system in business facilities / ○(Student) Daiki Yoshidome (Waseda Univ.), Ryo Kikuchi, Hiroshi Onoda

14:45 ~ 15:45 / Heat exchanger and Energy saving

●June 27th (Thu) ● [Ocean Hall A (Large)]

10:15 ~ 11:45 / Cooling

(Chair: Atsushi Akisawa (Tokyo Univ. of Agriculture and Technology))

IE404 Metal Organic Frameworks as Adsorbents for Heat Pump Applications / ○(Non-member) Bidyut Baran Saha (Kyushu Univ.), M.L.Palash

E415 Possibility of Ejector Cycle for Cooling in SDGs / ○(Member) Nao Kuniyoshi (Tokyo Univ. of Marine Sci. and Tech.), Akira Takatsuka, Haruki Sato (Keio Univ.), Mitsuo Kojima (Tokyo Univ. of Marine Sci. and Tech.)

E416 Possibility of Porous Ceramics Cooling Device in SDGs / ○(Student Member) Kohei Terashima (Keio Univ.), Koki Hakamata (Tokyo Univ. of Marine Sci. and Tech.), Haruki Sato (Keio Univ.), Toshiharu Ikaga, Mitsuo Kojima, Nao Kuniyoshi (Tokyo Univ. of Marine Sci. and Tech.)

E417 Response over time to evaporative mist fan cooling on hot summer days / ○(Member of Supporting Societies) Craig Edward Farnham (Osaka City Univ.), Jihui Yuan (Osaka Univ.), Kazuo Emura (Osaka City Univ.)

E418 Thermal load characteristics of refrigerated display cabinet air curtain by thermal fluid analysis / ○(Non-member) Kosuke Bizen (Waseda Univ.), Seiichi Yamaguchi, Kiyoshi Saito

E419 Presentation withdrawn

●June 27th (Thu) ● [Ocean Hall B (Small)]

11:00 ~ 12:00 / Renewable Energy

(Chair: Masanobu Sasaki (TEPCO Energy Partner))

J413 Development and Performance Evaluation of the Compressed Air Engine Personal Mobility / ○(Student) Yuki Okamura (Waseda Univ.), Kazuki Tomonari, Hiroshi Onoda

J414 Simulation of High Performance Solar Air Heat Collector / Takahiko Miyazaki (Kyushu Univ.), ○(Student) Ryusei Migita, Xianhong Meng, Nobuo Takata

J415 Influence of Splitter-Duct of Double Rotor Turbine for OWC / ○(Student) Takuya Ishiyama (Nagasaki Univ.), Yumi Kurokawa (West Japan Fluid Engineering Laboratory), Tetsuya Okumura (Nagasaki Univ.), Hidechito Hayashi, Hiromitsu Hamakawa (Oita Univ.)

J416 Influence of central seal length in PRO state / ○(Student) Shinichi Kanzaki (Nagasaki Univ.), Konosuke Mochizuki, Tetsuya Okumura, Hidechito Hayashi, Kei Matsuyama (Kyowakiden Industries), Hideyuki Sakai

●June 27th (Thu) ● [Summit Hall]

13:45 ~ 16:00 / Poster Session: Short Presentations & Poster Presentations

(Chair: Keisuke Sekiguchi (NTT Facilities))

PE401 Influence of incomplete airflow separation on thermal environment in data centers / ○(Non-member) Shun Nishimura (NTT Facilities), Yosuke Mino, Akihiro Tsuda

PE402 Development of Spot Cooling System in Savoy-spinach Plant Factory for Cold Region / ○(Student Member) Naoki Kikuchi (Kitami Inst. Tech.), Shin'ya Obara

PE403 Presentation withdrawn

PE404 Study on an energy supply system assuming a pipeline transportation of compressed hydrogen in China / ○(Student Member) Li Jiaren (Kitami Inst. of Tech.), Shinya Obara

PE405 Presentation withdrawn

PE406 A Near-optimal Solution of Coordinated Operation Planning Problem for Power and Heat Interchange Networks Using Column Generation-based Decomposition / Tetsuya Wakui (Osaka Pref. Univ.), ○ (Student Member) Moe Hashiguchi, Ryohei Yokoyama

PE407 Analysis of adsorption thermal energy storage using nano-tailored mesoporous silica / ○(Non-member, Student) Frantisek Miksik (Department of Energy and Environmental Engineering, IGSES, Kyushu Univ./Thermal Sci. and

Engineering Div., I2CNER, Kyushu Univ.),
Takahiko Miyazaki

Tomofuji, Takashi Ikegami, Atsushi
Akisawa

PE408 Effect of dilution using biomass gasified gas
on the characteristics of engine combustion
/ ◦(Student Member) Mitsuki Chino
(Kogakuin Univ.), Naoki Kubo, Jun
Kobayashi, Ichiro Naruse (Nagoya Univ.)

PE409 Presentation withdrawn

PE410 Micro-siting Technique for Wind Turbine
Generator by Using Large-Eddy Simulation
/ ◦(Member) Takanori UCHIDA (Kyushu
Univ.)

PE411 MPPT Control Scheme for a Tidal Current
Power Generation System using DFIG -
Annual Generated Energy for Stator D-axis
Current - / ◦(Non-member) Kentaro Tsuji
(Nihon Univ.), Mitsuhiro Shiono

PJ401 Study on rotating Cylindrical Blades Device
of Vertical Axis Magnus Wind Turbine /
◦(Student) Yusuke Kimura (National
Institute of Technology, Kure College),
Shigeru Ogawa

●June 28th (Fri) ● [Ocean Hall A (Large)]

9:00 ~ 10:15 / Heat pumps and Air conditioning

(Chair: Katsuyuki Tanaka (Nihon Univ.))

IE405 Thermodynamic Property Measurements of
New Refrigerants and Their Mixtures /
◦(Member) Yukihiro Higashi (Kyushu
Univ.)

E420 Heat pump cycle performance using low
GWP ternary mixture of R32, R1234yf and
R744 / Kosei Takezato (Kyushu Univ.), Sho
Senba, U.C.A.Perera, Nobuo Takata,
Yukihiro Higashi, Takahiko Miyazaki,
◦(Non-member) Thu Kyaw

E421 Interfacial tension between liquid water and
model oil pressurized with methane /
◦(Non-member, Student) Masamichi
Kodera (Keio Univ.), Kosuke Watanabe,
Ryo Ohmura

E422 A Potential Analysis in Regional Demand
Response by Air-Conditioner Control /
◦(Student Member) Ryo Abe (Tokyo Univ.
of Agriculture and Tech.), Daisuke

10:30 ~ 11:30 / Energy utilization and storage

(Chair: Yohei Kayukawa (National Institute of
Advanced Industrial Science and Technology))

E423 Round Table on the Purpose of Autonomous
Driving / ◦(Member) Tetsunori Haraguchi
(Nagoya Univ.), Kuniko Urashima, Yuka
Kamitani

E424 Evaluation of regional energy system using
solid oxide fuel cell / Shunya Sumitomo
(Graduate School of Bio-Applications and
Systems Engineering (BASE), Tokyo Univ.
of Agriculture and Tech.), ◦ (●) Atsushi
Akisawa (Engineering Research Inst.,
Tokyo Univ. of Agriculture and Techn.),
Takashi Ikegami

E425 Hybrid Transition Metal/ Nitrogen doped
Carbon Catalysts as Economic and Efficient
Zinc-Air Battery Cathode Materials /
◦(Non-member, Student) KIM
SEONGHEE (Pusan Natl.Univ.), Lun Oi Li
(Guangdong Univ. of Tech.), Z Shi, O.L.Li
(Pusan Natl.Univ.)

E426 High Energy Density Metal Hydride/Air
Rechargeable Battery for Environmentally
Friendly Energy Storage / ◦(Non-member)
Masatsugu Morimitsu (Doshisha Univ.),
Tatsuya Fukumoto, Tsukasa Gejoh, Chika
Baba, Kenji Kawaguchi