

(As of November 20, 2015)

Oral Session

16:20-18:00

Room A

OS 1-1 Reconstruction innovationSession Organizer/Chair **Akira Iwabuchi** (Iwate University, Japan)**OS 1-1-1****The 2011 Tohoku Earthquake Tsunami and its Reconstruction****Fumihiko Imamura** (IRIDeS (International Research Institute of Disaster Science, Tohoku University), Japan)**OS 1-1-2****Present Situation of Reconstruction and/or Revitalization in Damaged Area after The Great East Japan Earthquake Disaster at 2011.03.11 and Accidents of Fukushima Daiichi NPS****Yoshihito Ozawa** (Faculty of Symbiotic Systems Science and Technology, Fukushima University, Japan)**OS 1-1-3****Human Responses to Coastal Flooding: Engineering, social innovation and coastal communities****Sebastien P. Boret** (International Research Institute of Disaster Science, Tohoku University, Japan)**OS 1-1-4****Role of Funding Agency in Disaster Recovery and Revitalization****Satoru Ohtake** (Japan Science and Technology Agency, Japan)

16:20-18:00

Room B-1

OS 2-1 Wider applications for fossil resources: Conventional and non-conventional resourcesSession Organizer **Masahiko Matsukata** (Department of Applied Chemistry, Waseda University, Japan)Chairs **Masahiko Matsukata** (Department of Applied Chemistry, Waseda University, Japan)**Toru Shiraha** (Central Technical Research Laboratory / Frontier Research Laboratory, JX Nippon Oil & Energy Corporation, Japan)**OS 2-1-1****Current Status of Petroleum Refinery and New Design Approaches for Future Refining Processes****Chunshan Song** (EMS Energy Institute, Department of Energy and Mineral Engineering and Department of Chemical Engine, The Pennsylvania State University, United States)**OS 2-1-2****The Pivotal Role of Industrial and Environmental Processes in the Sustainable Development of Canada's Oil Sands****E. Eddy Isaacs** (Alberta Innovates - Energy & Environment Solutions, Canada)**OS 2-1-3****Developing processes for the efficient use of oil****Yuichiro Fujiyama** (Fuels Research Laboratory, JX Nippon Oil & Energy Corporation, Japan)

16:20-18:00

Room B-2

OS 3-1 Satellite-based technology, land and marine survey, resource investigation, disaster monitoringSession Organizer/Chair **Masanori Homma** (Japan Aerospace Exploration Agency, Japan)**OS 3-1-1****Disaster Risk Reduction and Remote Sensing****Kenzo Hiroki** (College of Land, Infrastructure, Transport and Tourism (CLITT), Ministry of Land, Infrastructure, Transport and Tourism, Japan)**OS 3-1-2****Engineering Overview of Satellite Remote Sensing****Takashi Hamazaki** (Satellite Applications Mission Directorate, Japan Aerospace Exploration Agency, Japan)**OS 3-1-3****Benefits of Space Technology for Monitoring of Natural Resources****Hansjoerg Dittus** (Member of the Executive Board, German Aerospace Center, Germany)**OS 3-1-4****Navigation by Satellites: Revolutionary Impact and Further Expansion****Satoshi Kogure** (Satellite Navigation Office, Japan Aerospace Exploration Agency, Japan)

16:20-18:00

Room C-1

OS 4-1 Environmental friendly and sustainable cities & housingSession Organizer/Chair **Hiroshi Yoshino** (Tohoku University, Institute of Liberal Arts and Sciences, Japan)**OS 4-1-1****Planning Issues on Smart City Approach to Sustainability of Habitat****Atsushi Deguchi** (Department of Socio-cultural Studies, Graduate School of Frontier Sciences, The University of Tokyo, Japan)**OS 4-1-2****Comprehensive assessment on urban planning and building design to mitigate climate change and adapt to urban warming****Akashi Mochida** (Department of Architecture and Building Science, Tohoku University, Japan)**OS 4-1-3****Towards gracious living -an urban environmental challenge- towards a passive building assessment methodology for the Tropics****Edward Ng** (Architecture, Chinese University of Hong Kong, Hong Kong / School of Architecture, CUHK / Institute of Future Cities, CUHK)**OS 4-1-4****Field survey on blood pressure, physical activity, sleep efficiency of residents and indoor climate of houses to promote smart wellness housing in Japan****Toshiharu Ikaga** (Department of System Design Engineering, Faculty of Science and Technology, Keio University, Japan)

16:20-18:00

Room C-2

OS 5-1 Railway technology, high-speed train, urban transportation, maintenance technology

Session Organizer/Chair **Yoshihiro Suda** (Institute of Industrial Science, The University of Tokyo, Japan)

OS 5-1-1

Development of High-speed Train Technology in China

Zhongping Yang (School of Electrical Engineering, Beijing Jiaotong University, China)

OS 5-1-2

MIHARA Test Center for Advanced Urban Transportation Technology

Yoshiharu Watanabe (Mitsubishi Heavy Industries, Ltd.)

OS 5-1-3

Remote monitoring system of track/rolling stock condition for running safety in commercial line

Masao Tomeoka (Tokyo Metro Co., Ltd., Japan)

OS 5-1-4

Maintenance technology and seismic countermeasure of railway facilities

Yukihiro Tanimura (Structures Technology Division, Railway Technical Research Institute, Japan)

16:20-18:00

Room D

OS 6-1 Creating value and solving social issues through the big data revolution

Session Organizer/Chair **Masaru Kitsuregawa** (National Institute of Informatics/Institute of Industrial Science, The University of Tokyo, Japan)

OS 6-1-1

Data Science: A Common Discipline for Broad Industry and Society Innovation

Sang Kyun Cha (Big Data Institute, Seoul National University, Korea)

OS 6-1-2

Big Data Analytics for Upstream Geoscience

Sunjay Sunjay (GEOPHYSICS, GEOPHYSICS, BHU, VARANASI 221005 INDIA, India)

OS 6-1-3

Three Principles of Profiting from Big Data: Artificial Intelligence is to Sense the Happiness of People

Kazuo Yano (Central Research Laboratory, Hitachi, Japan)

OS 6-1-4

Data Driven Value Co-creation for Smart Infrastructure Operation

Katsumi Emura (Central Research Laboratories, NEC Corp., Japan)

OS 6-1-5

An Effective Use of Tokyo Metro Passengers Flow by Visualization of Smart Card Ticket 'PASMO' Origin-Destination Data for Public Transport Network to be Sustainable

Satoshi Kawamura (Tokyometro Co., Ltd, Japan)

16:20-18:00

Room E

OS 7-1 Design of safe and secure communities, reflections on human and robot

Session Organizer/Chair **Hirohisa Hirukawa** (Robot Innovation Research Center, National Institute of Advanced Industrial Science and Technology, Japan)

OS7-1-1

Leading edge of Cybernics and Promotion of Social Innovation

Yoshiyuki Sankai (Japan Science and Technology Agency (JST)/University of Tsukuba/CYBERDYNE Inc., Japan)

OS 7-1-2

Robotic Care Devices that are Useful for Human Beings -'Goal-Oriented Design Process' based on the ICF-

Yayoi Okawa (Robot Innovation Research Center, National Institute of Advanced Industrial Science and Technology, Japan)

OS 7-1-3

Research and Development for safety technology of personal care robots

Yoji Yamada (Graduate School of Engineering, Nagoya University, Japan)

OS 7-1-4

Service Robots are designed to provide self-support for everybody will enrich the life experiences of the aging society in Japan

Yukio Honda (Osaka Institute of Technology, Japan)

16:20-18:00

Room H

OS 10-1 International Round Table on Engineering

Session Organizer/Chair **Xila Liu** (Civil Engineering Department, Shanghai Jiao Tong University, China)

OS 10-1-1

Urban Mine -Sustainable Development in Construction Industry

Toyoharu Nawa (Faculty of Engineering, Hokkaido University, Japan)

OS 10-1-2

TO BRIDGE THE GAP BETWEEN THE EAST AND THE WEST

Xila Liu (Civil Engineering Department, Shanghai Jiao Tong University, China)

OS 10-1-3

Development of the SIT students English skills by adopting innovative techniques

Muralidhar Miryala (Center for Promotion of Educational Innovation, Shibaura Institute of Technology, Japan)

OS 10-1-4

TECHNICAL AND TECHNOLOGICAL BARRIERS IN INTRODUCING HIGH-SPEED RAIL

Jaroslav Dyduch (Polish Association of Engineers and Technicians of Transportation, Polish Federation of Engineering Associations, Poland)

OS 10-1-5

A Global Vision for the Future of Engineering and Engineering Education

J. P. Mohsen (Vice Chair of the Committee on Engineering Education WFEO, United States)

16:20-17:10

Room F

SKL 8-1 Engineering for the society

Session Organizer/Chair **Tetsuya Miki** (Policy Planning and Research Office, University of Electro-Communications, Japan)

SKL 8-1**Engineering Responsibility and the Social Implications of Technology**

Greg Adamson (Electrical and Electronic Engineering, University of Melbourne, Australia / IEEE Society on Social Implications of Technology)

16:20-17:10

Room G

SKL 9-1 Liberal arts education in engineering

Session Organizers **Takashi Komeda** (Shibaura Institute of technology, Japan)
Yoichi Kemmochi (Japanese Society for Engineering Education, Japan)

Chair **Yoichi Kemmochi** (Japanese Society for Engineering Education, Japan)

SKL 9-1**An Encouragement of Engineering Liberal Arts Toward Engineering for and in the Society: Proposal of Integrated Promotion of Education with Research and Innovation**

Ayao Tsuge (Japan International Science & Technology Exchange Center, Japan / Science Council of Japan / Former President of the Japan Federation of Engineering Societies / Former Executive Member of Council for Science and Technology Policy, Cabinet Office)

17:10-18:00

Room F

SKL 8-2 Risk communication as the essential sociotechnical system

Session Organizer/Chair **Masaki Shiratori** (Yokohama National University, Japan)

SKL 8-2**Risk: Informing a Sceptical Public**

Roderick A. Smith (Mechanical Engineering, Imperial College London, United Kingdom)

17:10-18:00

Room G

SKL 9-2 Promoting female leaders in engineering

Session Organizer **Miyoko O. Watanabe** (Japan Science and Technology Agency, Japan)

Chair **Stacey M. DelVecchio** (Reman, Components, and Work Tools, Caterpillar Inc.)

SKL 9-2**Promoting Female Leaders in STEM**

Yukako Uchinaga (Board Chair, J-Win, Japan)