

OPENING AND PLENARY LECTURES

Monday, December 3

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| Opening Lecture: 1F Annex 1, Monday, December 3, 9:05-10:05 |
| Ayao Tsuge (Ex-Executive Member of the Council for Science and Technology Policy, Cabinet Office of Japan; Executive Member of Science Council of Japan; Executive Science and Technology Adviser of Mitsubishi Heavy Industries, Ltd., Japan) <i>Comprehensive Strategy for Creating Science & Technology Driven Innovation in Japan: Innovation and the Computational Science & Technology</i> |

Tuesday, December 4

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| PL1: 1F Annex 1, Tuesday, December 4, 8:15-10:15 |
| PL1-1: (Time: 8:15-8:55) Somasundaram Valliappan (University of New South Wales, Australia) <i>Computational Mechanics Applied to Safety Analysis of Ageing Structures</i> |
| PL1-2: (Time: 8:55-9:35) Herbert Mang (Vienna University of Technology, Austria) <i>Upscaling of Viscoelastic and Strength Properties of Matrix-Inclusion Materials in the Framework of Multiscale Modeling</i> |
| PL1-3: (Time: 9:35-10:15) Wing Kam Liu (Northwestern University, USA) <i>Multiresolution Mechanics: Linking Material Properties to Evolving Microstructure</i> |
| PL2: 2F Room B-1, Tuesday, December 4, 8:15-10:15 |
| PL2-1: (Time: 8:15-8:55) Eugenio Oñate (Technical University of Catalonia, Spain) <i>Possibilities of the Particle Finite Element Method in Computational Mechanics</i> |
| PL2-2: (Time: 8:55-9:35) Tayfun E. Tezduyar (Rice University, USA) <i>Air-Fabric Interaction Modeling with the Stabilized Space-Time FSI Technique</i> |
| PL2-3: (Time: 9:35-10:15) Roger Ohayon (Conservatoire National des Arts et Métiers, France) <i>Vibrations of Structures Coupled with Internal Fluids</i> |
| PL3: 2F Room B-2, Tuesday, December 4, 8:15-10:15 |
| PL3-1: (Time: 8:15-8:55) Ted Belytschko (Northwestern University, USA) <i>Multiscale Methods for the Failure of Heterogeneous Materials</i> |
| PL3-2: (Time: 8:55-9:35) David Roger Jones Owen (Swansea University, United Kingdom) <i>Multi-Field Coupling Strategies for Large Scale Problems Involving Multi-Fracturing Rock and Particulate Media</i> |
| PL3-3: (Time: 9:35-10:15) Worsak Kanok-Nukulchai (Asian Institute of Technology, Thailand) <i>On the Convergence of the Kriging-based Finite Element Method</i> |

Wednesday, December 5

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| PL4: 1F Annex 1, Wednesday, December 5, 8:15-10:15 |
| PL4-1: (Time: 8:15-8:55) Eduardo Romano de Arantes e Oliveira (Technical University of Lisbon, Portugal) <i>From the Mechanics of Generalized Continua to Hybrid and Block Element System Models</i> |
| PL4-2: (Time: 8:55-9:35) Byung Man Kwak (KAIST, Korea) <i>Developments in Robust and Reliability-based Design Optimization of Structural and Mechanical Systems</i> |
| PL4-3: (Time: 9:35-10:15) Manolis Papadrakakis (National Technical University of Athens, Greece) <i>Metamodel Techniques for Solving Seismic Probabilistic-Based Design Optimization Problems</i> |
| PL5: 2F Room B-1, Wednesday, December 5, 8:15-10:15 |
| PL5-1: (Time: 8:15-8:55) Bernhard A. Schrefler (University of Padua, Italy) <i>Thermo-electro-mechanically Coupled Problems for Superconducting Coils</i> |
| PL5-2: (Time: 8:55-9:35) Djordje Peric (Swansea University, United Kingdom) <i>Progress in Computational Strategies for Problems with Moving Interfaces and Fluid-Structure Interaction</i> |
| PL5-3: (Time: 9:35-10:15) Mingwu Yuan (Peking University, China) <i>Advances in Computation of Large Generalized Eigenvalue Problem</i> |
| PL6: 2F Room B-2, Wednesday, December 5, 8:15-10:15 |
| PL6-1: (Time: 8:15-8:55) Gui-Rong Liu (National University of Singapore, Singapore) <i>The LC-PIM Method for Certified Solution with Bounds, Adaptive Analysis and Real-time Computation</i> |
| PL6-2: (Time: 8:55-9:35) Andrew Yee-tak Leung (City University of Hong Kong, China) <i>The Finite Spectral Element Method in Computational Mechanics</i> |
| PL6-3: (Time: 9:35-10:15) Grétar Tryggvason (Worcester Polytechnic Institute, USA) <i>Computations of the Dynamics of Heterogeneous Continuum Systems</i> |

The following two plenary lectures are presented separately as follows:

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| PL9-1: 2F Room K, Wednesday, December 5, 16:10-16:45 (MS38-3) |
| Antonio Huerta (Technical University of Catalonia, Spain) <i>NURBS-Enhanced Finite Element Method (NEFEM)</i> |
| PL9-2: 5F Room 510, Wednesday, December 5, 16:10-16:45 (GS15) |
| Noboru Kikuchi (University of Michigan, USA) <i>Biomechanics Related Impact Simulation by using Coupled FEM-SPH/MPS</i> |

Thursday, December 6

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| PL7: 1F Annex 1, Thursday, December 6, 8:15-10:15 |
| PL7-1: (Time: 8:15-8:55) Tadashi Watanabe (RIKEN, Japan) <i>Next Generation Supercomputer Project in Japan</i> |
| PL7-2: (Time: 8:55-9:35) Yoon Young Kim (Seoul National University, Korea) <i>Higher-order Beam Theory and Implementation for Automobile Pillar-like Structures</i> |
| PL7-3: (Time: 9:35-10:15) Jiun-Shyan Chen (University of California at Los Angeles, USA) <i>Galerkin and Collocation Meshfree Methods: From Continuum to Quantum</i> |
| PL8: 2F Room B-1, Thursday, December 6, 8:15-9:35 |
| PL8-1: (Time: 8:15-8:55) Jacob Fish (Rensselaer Polytechnic Institute, USA) <i>Multiscale Design System</i> |
| PL8-2: (Time: 8:55-9:35) Ahmad Kamal Ariffin (National University of Malaysia, Malaysia) <i>Crack Propagation Simulation and Fatigue Reliability</i> |