

Final Program of JSST2019

Tuesday, 5 November

Opening Ceremony

9:30–9:45, Main Hall

Plenary Talk 1 (Numerical Simulation and Visual Analytics of Nonlinear Problems)

9:45–10:45, Main Hall

Chair: Soichiro Ikuno (Tokyo University of Technology)

Mathematical model for the dynamics of endothelial cells in angiogenesis,

Prof. Tetsuji Tokihiro (University of Tokyo)

10:45–11:00 Break

Symposium 1 on Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 01, Invited and Tutorial Talks, 11:00–12:00, Hall A

Chair: Kyoko Hasegawa (Ritsumeikan University)

1. (Invited) Visualization of river plumes in coastal seas using satellite observations and land-sea simulations,

Prof. Satoshi Nakada (National Institute for Environmental Studies)

2. (Tutorial) How to make your own pre- and post-processors using ADVENTURE AutoGL?,

Prof. Hiroshi Kawai (Toyo University)

OS1: Verified Numerical Computations

Session 05, 11:00–12:00, Hall B

Chair: Kazuaki Tanaka (Waseda University)

1. Generation of Floating-point Ill-conditioned Matrices,

Katsuhisa Ozaki

2. Verification method for sparse least squares problems,

Atsushi Minamihata

3. Verified Numerical Computations for Standard Eigenvalue Problems on Supercomputers,

Takeshi Terao, Katsuhisa Ozaki and Takeshi Ogita

OS6: Simulation, Design and Control of Robotics and Mechatronics Systems

Session 09, 11:00–11:40, Hall C

Chair: Masami Iwase (Tokyo Denki University)

1. Kinematics Analysis of Lizard Inspired Robot utilizing Four Bar Linkage Mechanism,

Shunsuke Nansai, Ryo Akai, Yuki Ando, Norihiro Kamamichi and Hiroshi Itoh

2. An unscented Kalman filter framework incorporating the embedded Runge-Kutta method,
Takuma Nemoto

12:00–13:30 Lunch Break

Symposium 1 on Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 02, 13:30–14:30, Hall A

Chair: Taku Itoh (Nihon University)

1. Visualization of vortices in Osaka Bay based on a tsunami simulation of Nankai Trough massive earthquake,
Ikuya Morimoto, Katsuya Nakano, Naofumi Ibushi, Liang Li, Kyoko Hasegawa, Satoshi Nakada and Satoshi Tanaka
2. An Interactive Visualization Toolkit for Yin-Yang-Zhong Grid Dataset,
Kaoru Uemori, Naohisa Sakamoto, Akira Kageyama and Nobuaki Ohno
3. A High Quality Sampling Method of 3D Scanned Point Clouds based on Improved Poisson Disk Sampling,
You Zhou, Kyoko Hasegawa, Liang Li, Atsushi Okamoto and Satoshi Tanaka

OS1: Verified Numerical Computations

Session 06, 13:30–14:10, Hall B

Chair: Katsuhisa Ozaki (Shibaura Institute of Technology)

1. Numerical verification for positive global-in-time solutions of Allen-Cahn equation in three space dimensions using sub- and super-solution method,
Yuta Matsushima, Kazuaki Tanaka and Shin'ichi Oishi
2. Numerical verification for asymmetric solutions of the Henon equation,
Taisei Asai, Kazuaki Tanaka and Shin'ichi Oishi

OS6: Simulation, Design and Control of Robotics and Mechatronics Systems

Session 10, 13:30–14:30, Hall C

Chair: Shunsuke Nansai (Tokyo Denki University)

1. Experimental verification of power assisted scissors with electromyogram measurement,
Naoka Nagashima, Norihiro Kamamichi, Taro Fujikawa, Masami Iwase and Kazuyoshi Takahashi
2. Experimental Verification of Obtaining Longer EMD of EMG Using Multi-sensor and SR,
Teruyoshi Sadahiro, Yumi Hamasaki and Toru Furukawa
3. Pneumatic Networks (PneuNets) Actuator Controlled by Pneumatic Input Using a Soft Valve,
Atsushi Takano, Anik Islam, Kento Yamagishi and Michinao Hashimoto

RS:

Session 14, 13:30–14:30, Hall D

Chair: Seiki Saito (Yamagata University)

1. Self-position Estimation of Unmanned Spaceprobe by Image Classification of Moon Using Deep Learning,
Takeo Miki, Yosuke Komatsubara, Keisuke Tsuda, Shizuka Ohara and Hiroyuki Kamata
2. Study on Stream Cipher Using a Chaotic Map,
Takashi Arai, Taichi Sato and Hiroyuki Kamata
3. Time-delay Estimation using Persistent Homology focusing on Specific Hole,
Koya Oyama and Hiroyuki Kamata

14:30–14:45 Break

Symposium 1 on Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 03, 14:45–15:45, Hall A

Chair: Taku Itoh (Nihon University)

1. Numerical Simulation of Superconducting Linear Acceleration System: Improvement of Pellet Speed,
Teruou Takayama, Takazumi Yamaguchi, Ayumu Saitoh and Atsushi Kamitani
2. Neutron transmittance on bubble formed tungsten material,
Seiki Saito and Hiroaki Nakamura
3. Geometric Modeling of Tungsten Fuzz using Fractal Structure,
Yoshihisa Fujita, Soichiro Ikuno, Hiroaki Nakamura and Susumu Nakata

Symposium 2 on Analysis of Optical Vortex Field and Applications

Session 07, 14:45–15:45, Hall B

Chair: Masahiro Katoh (Hiroshima University)

1. Molecular dynamics simulation on structural formation of chiral nanoneedle by optical vortex,
Hiroaki Nakamura, Shu Habu, Seiki Saito and Shin Kubo
2. Evaluation of beam focusing in microwave vortex using FDTD and Runge-Kutta methods,
Hideki Kawaguchi and Takeru Kushida
3. Dispersion singularity and non-reciprocal conical refraction in bi-anisotropic materials,
Kei Sawada, Kohei Iida and Atsushi Sanada

OS5: Simulation Technology in Origami

Session 11, 14:45–15:45, Hall C

Chair: Sachiko Ishida (Meiji University)

1. Study on the sound insulation of the Origami core,
Aya Abe, Haruki Yashiro, Kousuke Terada and Ichiro Hagiwara
2. A super excellent and ultra-cheap energy absorber for vehicle body,
Ichiro Hagiwara and Xile Zhao
3. Development of easily foldable PET bottles,
Yang Yang, Xiaoshi Chen, Chie Nara and Ichiro Hagiwara

RS:

Session 15, 14:45–15:45, Hall D

Chair: Hiroto Tadano (University of Tsukuba)

1. Comparison review of the planner shapes for flapping wing inspired dipteran insect,
Atsushi Kase, Kaede Nozaki and Kiyoshi Kawaguchi
2. Millimeter Wave Band Slit Type Chipless RFID Tag,
Yuta Watanabe
3. Development of an agent-based model for the analysis of the effect of consumer panic buying on supply chain disruption due to a disaster,
Rithika Dulam, Kazuo Furuta and Taro Kanno

15:45–16:00 Break

Symposium 1 on Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 04, 16:00–17:00, Hall A

Chair: Ayumu Saitoh (Yamagata University)

1. Numerical Evaluations of Variable k -skip MrR Method,
Akira Matsumoto, Yoshihisa Fujita, Taku Itoh, Kuniyoshi Abe and Soichiro Ikuno
2. Performance evaluation of the Block GWBiCGSTAB method with dynamic grouping strategy,
Hiroto Tadano
3. On Convergence Speed of Parallel Variants of Hybrid Bi-CG Methods for Solving Linear Equations,
Kuniyoshi Abe and Soichiro Ikuno

Symposium 2 on Analysis of Optical Vortex Field and Applications

Session 08, 16:00–17:20, Hall B

Chair: Hideki Kawaguchi (Muroran Institute of Technology)

1. Optical vortex creates a jet with spin,
Haruki Kawaguchi, Ryosuke Nakamura, Muneaki Iwata, Akihiro Kaneko, Kohei Toyoda, Katsuhiko Miyamoto and Takashige Omatsu
2. Orbital angular momentum mode property of broad-area VCSEL studied by optical injection,
Yasunori Toda, Kohki Nakagawa, Keisaku Yamane, Ryuji Morita and Yoshinari Awaji
3. Phase structure of elliptically polarized undulator radiation,
Yoshitaka Taira, Masaki Fujimoto, Shien Ri, Masahito Hosaka and Masahiro Katoh
4. Generation of short wavelength coherent optical vortex from relativistic electron beam,
Masahito Hosaka, Atushi Mano, Yukihiro Matunaga, Yoshifumi Takashima, Masaki Fujimoto and Masahiro Katoh

OS5: Simulation Technology in Origami

Session 12, 16:00–17:00, Hall C

Chair: Yang Yang (Meiji University)

1. Numerical analysis of cylindrical honeycomb cores,
Sachiko Ishida, Nur Asyikin binti Ahmad, and Kohki Oka
2. Foldable Tent Design thought Iconic Representation,
Yonlay Cabrera, Luis Diago, Ichiro Hagiwara and Akihiro Kubota
3. 3D Simulated Robotic Origami Performing Using Deep Reinforcement Learning,
Luis Diago, Ichiro Hagiwara, Yang Yang and Liudmila Rodriguez

OS3: Complex Networks and Complex Systems

Session 16, 16:00–17:20, Hall D

Chair: Atsushi Tanaka (Yamagata University)

1. Nonlinear-correction method for computational fluid dynamics: leading to accurate evaluation of all fluid-dynamic instability, thermal efficiency, and pollutant emissions in engines and reactors,
Remi Konagaya and Ken Naitoh
2. Unsteady three-dimensional computation and shock-tube experiment revealing the level of focusing compression by pulsed supermulti-jets colliding,
Remi Konagaya and Ken Naitoh
3. Clustering of nursing research journals based on co-occurrences in co-author relationships,
Tetsuo Imai and Takayasu Kawaguchi
4. Effective Cellular Automaton Model for Resolving Railway Traffic Jam,
Atsushi Tanaka and Atsushi Numata

[Wednesday, 6 November](#)

Plenary Talk 2 (Analysis of Optical Vortex Field and Applications)

9:00–10:00, Main Hall

Chair: Hideki Kawaguchi (Muroran Institute of Technology)

Spatial Structure of Radiation from Relativistic Electrons,
Prof. Masahiro Katoh (Hiroshima University)

10:00–10:15 Break

Symposium 1 on Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 17, 10:15–11:15, Hall A

Chair: Teruo Takayama (Yamagata University), Takazumi Yamaguchi (SOKENDAI)

1. FDTD optical simulation for organic solar cells incorporated with antireflection nanostructures,
Shigeru Kubota, Kensaku Kanomata, Bashir Ahmmad, Jun Mizuno and Fumihiko Hirose
2. Analysis of a domain wall displacement in a cluster with many voids using LLG equation,
Katuhiko Yamaguchi and Kosuke Miyashita
3. Improved Linear Notch Mechanics to Evaluate Tensile Strength of Notched Materials,
Wataru Fujisaki, Haruka Iwatsubo and Ryo Yamasaki

Symposium 2 on Analysis of Optical Vortex Field and Applications

Session 19, Invited Talks, 10:15–11:15, Hall B

Chair: Hiroaki Nakamura (NIFS)

1. (Invited) Parametric amplification of quantum vacuum fluctuation with dissipation in terms of complex spectral analysis of Floquet-Liouvillean,
Prof. Satoshi Tanaka (Osaka Prefecture University)
2. (Invited) Electron Cyclotron Emission with a Helical Wavefront in the Cyclotron Auto-resonance Acceleration,
Mr. Yuki Goto (Nagoya University)

Symposium 3 on Advanced Numerical Analysis and Software Technology

Session 21, 10:15–11:15, Hall C

Chair: Akihiro Kudo (NIT, Tomakomai College)

1. Preconditioned iterative solution for plane waves enriched isogeometric analysis of Helmholtz problem,
Ganesh C. Diwan and M Shadi Mohamed
2. High-performance Finite Element for Large-scale Acoustic Analysis,
Emi Takaoka and Amane Takei
3. High-accuracy Analysis of Full-wave Electromagnetic Field with parallel mesh smoothing,
Amane Takei

OS4: Multi dimensional communication networks

Session 23, 10:15–11:15, Hall D

Chair: Hisashi Morishita (National Defense Academy of Japan)

1. A consideration on dynamic control of transmittable areas of information floating for generation of a map of available routes,
Naoyuki Karasawa, Kodai Kobayashi, Kazuyuki Miyakita, Hiroshi Tamura and Keisuke Nakano
2. On the number of colors in graph coloring and channel assignment in wireless communication,
Hiroshi Tamura, Shohei Tomita, Iori Yuhara and Keisuke Nakano
3. Signal transmission characteristic and biosafety evaluation on magnetically coupled intra-body communication,
Kenichi Ito

11:15–11:30 Break

Shotgun Presentation, 11:30–12:15, Hall A

12:15–13:30 Lunch Break

Student Session, 13:30–15:00, Main Hall

Chair: Hiroshi Tamura (Chuo University) and Seiki Saito (Yamagata University)

- P01. Modeling of linear robot vertical arm and verification of boundary condition optimization,
Yakabe Keishi, Akihito Ito, Nobutaka Tujiuchi
- P02. AC transport-current properties of four-layer REBCO superconducting power cable,
Satoshi Ota, Hideki Noji
- P03. Study of AC loss properties of two-layer REBCO superconducting power cable,
Ryo Okadome, Hideki Noji
- P04. AC loss analysis of single-layer CORC superconducting cable,
Asato Kobun, Hideki Noji
- P05. Efficient Algorithm for Vertex Connectivity Problem on Circular Trapezoid Graphs,
Yuto Tamori, Kento Nishimura, Yoko Nakajima, Hirotoshi Honma, Toshihiro Fujito
- P06. An Algorithm for the All-pair Shortest Path Problem on Circular Trapezoid Graphs,
Tsendsuren Urangoo, Yoko Nakajima, Hirotoshi Honma
- P07. Estimation system of daylight hours using hemispherical photograph,
Taisei Hirakawa, Taro Mori, Satoshi Asamizu
- P08. On effects of one-way roads on generation of a map of available routes by information floating,
Taisei Satomi, Kazuyuki Miyakita, Keisuke Nakano
- P09. A consideration on configuration of transmittable area of information floating to adapt to the change of traffic volume,
Yusuke Matsukawa, Kazuyuki Miyakita, Akira Otuka, Keisuke Nakano
- P10. Fluid-solid multiphase flow simulation using coupling method of E-MPS and DEM,
Takumi Inoue, Takayoshi Higuchi, Takahiro Saitoh, Yoshihiko Shimizu

- P11. Verified Numerical Computations for Finding Vectors with the Maximum Sum,
Yuki Uchino, Katsuhisa Ozaki
- P12. Computations and Shock Tube Experiments on Focusing Compression in Pulsed Supermulti-jets
Engine,
Remi Konagaya, Ken Naitoh
- P13. Computations of free-surface flows in porous media composed of swelling objects,
Kodai Nagano, Daisuke Toriu, Satoru Ushijima
- P14. Feature value for Japanese drum rhythm and drum performance support,
Shunsuke Ebihara, Shintaro Sato, Hiroshi Tamura
- P15. Investigation of System for Distribution of Regional-Information using Information Floating,
Mamoru Takano, Hiroshi Tamura
- P16. Consideration on "feedback" and purchasing behavior in Internet media – Examples of cosmetics
sales on the Chinese SNS site "weibo"-,
Wu Xingyi, Akira Otsuka
- P17. Computation of Free-Surface Flows Including Particles through Porous Media Structure,
Nobuyuki Hirooka, Satoru Ushijima
- P18. Investigation of mobility spectra obtained by mobility measurement and simulation in high-purity
O₂,
Kazuki Ikeda, Yui Okuyama, Hirotake Sugawara
- P19. Numerical simulation of damping effects on free-surface motions due to deformable bodies,
Satoru Ushijima, Niku Guinea, Daisuke Toriu, Atomu Kuki
- P20. Development of domain decomposition type parallel wave sound analysis code,
Koyu Nakamura, Akihiro Kudo, Amane Takei
- P21. Wearable bioelectric signal measurement and communication system using human body
communication,
Ruka Murayama, Kenichi Ito
- P22. Study for Construction of Discharge Simulation Method Based on FDTD - MPS Coupled
Analysis,
Kazuyuki Tanoue, Yoshihiro Ito, Hideki Kawaguchi, Amane Takei
- P23. Study on Softening Parameter for Multi-Particle Simulation in Malmberg-Penning Trap
Experiment,
Nozomi Suzutani, Youngsoo Park, Yukihiro Soga, Kazumasa Takahashi, Toru Sasaki, Takashi
Kikuchi
- P24. Numerical Simulation for Pulsed Radiation Source Generated by Electron Beam Irradiation Using
Intense Pulsed Power Generator,
Suzuka Fujita, Kenji Kashine, Hideki Tenzo, Kazumasa Takahashi, Toru Sasaki, Takashi Kikuchi
- P25. DDA simulation of localized plasmon resonance of a gold nanodisk excited by an optical vortex,
Shungo Harajiri, Daisuke Tanaka
- P26. Long-term and wide-range shoreline change simulation,
Hiroki Deno, Shingo Yashiki, Shoichi Furuyama
- P27. Modelling of linear flexible objects and simulation for robotic manipulation,

- Wataru Atsumi, Akihito Ito, Nobutaka Tsujiuchi
- P28. Suggestion of Efficient Video Processing in Hadoop,
Shohei Kamezawa, Masaki Maezono, Takashi Hara, Kazuhiro Takeda
- P29. Development of Encryption System in Distributed Parallel Processing using Object Shared Space,
Toshiya Fukunaga, Masaki Maezono, Takashi Hara, Kazuhiro Takeda
- P30. Motion simulation of a leading robot to lead safely power wheelchairs,
Shohei Oka, Katsuhiko Hori
- P31. Localization accuracy of moving sound with non-individualized HRTFs,
Yuya Shimizu, Akihiro Kudo, Amane Takei
- P32. Multidimensional Signal Smoothing Algorithm based on Locally Low-Rank Approach,
Masaki Kamikubo, Katsumi Konishi, Koji Koyamada
- P33. Real-time prediction of human motion based on application of locally low rank approach,
Atsushi Kanayama, Tomoki Shise, Takashi Takekawa, Katsumi Konishi
- P34. Magnetostriction simulation by Monte Carlo method,
Yoshihiro Ueno, Katsuhiko Yamaguchi

15:00–15:15 Break

Symposium 1 on Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 18, 15:15–16:35, Hall A

Chair: Yoshihisa Fujita (Ritsumeikan University)

1. Implicit Function Generated by Piecewise Polynomial and Radial Basis Function,
Yuya Yagi, Yuya Hanaoka, Daisuke Takada and Taku Itoh
2. Shape Modelling of Plateau Borders of Metal Foam by Implicit Surface,
Yuya Hanaoka, Taku Itoh, Susumu Nakata and Keiko Watanabe
3. High-quality Visualization of Large-Scale Noisy Point Clouds Acquired by 3D Scanning,
Tomomasa Uchida, Kyoko Hasegawa, Liang Li, Motoaki Adachi and Satoshi Tanaka
4. Visual Plant Simulation based on Transparent Collision Visualization of 3D Scanned Point Clouds,
Weite Li, Kenya Shigeta, Kyoko Hasegawa, Liang Li, Keiji Yano, Satoshi Tanaka and Motoaki Adachi

OS2: Computational Electromagnetics and Its Applications

Session 20, 15:15–16:15, Hall B

Chair: Hideki Kawaguchi (Muroran Institute of Technology)

1. Cubic arrangement of helices as a particle for a quasi-isotropic chiral medium,
Masamitsu Asai, Hideaki Wakabayashi and Jiro Yamakita
2. Structural Coloration by Slanted Subwavelength Gratings in Conical Mounting,
Hideaki Wakabayashi, Masamitsu Asai and Jiro Yamakita
3. Unified 3-D modeler for electromagnetic field simulations with FDM/FEM/BEM by using motion sensor,
Hideki Kawaguchi

Symposium 3 on Advanced Numerical Analysis and Software Technology

Session 22, 15:15–16:15, Hall C

Chair: Daisuke Ishihara (Kyushu Institute of Technology)

1. Direct Method for Parallel Eddy Current Analyses with High Order Edge Element,
Takehito Mizuma and Amane Takei
2. Performance evaluation of the parallel multi-grid method and various linear solvers for large-scale current density analysis inside a human body,
Masamune Nomura, Yuki Nakamura, Hiroo Tarao and Amane Takei
3. Leaf Function and Nonlinear Duffing Equation,
Kazunori Shinohara

OS4: Multi Dimensional Communication Networks

Session 24, 15:15–15:55, Hall D

Chair: Kenichi Ito (Niigata Institute of Technology)

1. A Low-profile Antenna by Loading Oblique Short Elements to Trapezoidal Plate with Capacitance Disk,
Kazuya Matsubayashi, Naobumi Michishita and Hisashi Morishita
2. Characteristics Analysis of Two Slots on a Metal Case and Inner Folded Dipole Antenna,
Kunihisa Gamo, Kazuya Matsubayashi, Naobumi Michishita, Kazuhiro Matsumoto, Tetsuya Hishikawa and Hisashi Morishita

16:35–18:00 Break

Banquet & Award Ceremony

18:00–20:00, Main Hall

[Thursday, 7 November](#)

Plenary Talk 3 (Advanced Numerical Analysis and Software Technology)

9:00–10:00, Main Hall

Chair: Amane Takei (University of Miyazaki)

Parallel Partitioned FSI Simulation of Flapping Aerodynamics of MAV Using ADVENTURE and FFB,

Prof. Shinobu Yoshimura (University of Tokyo)

10:00–10:15 Break

Symposium 1 on Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 25, 10:15–11:15, Hall A

Chair: Katsuhiko Yamaguchi (Fukushima University)

1. Volumetric 3D Reconstruction Based on Tomographic Image Data: Acceleration by Global ICCG Method,

Ayumu Saitoh, Yuji Hirabuki, Hiroto Tadano, Teruou Takayama and Atsushi Kamitani

2. Fully explicit computational method for thermal interactions between solids and compressible low Mach number gas flows,

Daisuke Toriu and Satoru Ushijima

3. Structural change of tritium-substituted macromolecules by beta decays: A molecular dynamics study,

Susumu Fujiwara, Hiroaki Nakamura, Haolun Li, Hisanori Miyanishi, Tomoko Mizuguchi, Takuo Yasunaga, Ayako Nakata, Tsuyoshi Miyazaki, Takao Otsuka, Takahiro Kenmotsu, Yuji Hatano and Shinji Saito

OS2: Computational Electromagnetics and Its Applications

Session 28, 10:15–11:15, Hall B

Chair: Keiichi Itoh (NIT, Akita College)

1. Multi-Phase Topology Optimization Using Radial Basis Function for Design of Permanent Magnet Motor,

Hayaho Sato, Shingo Hiruma and Hajime Igarashi

2. Topology optimization of IPM motor considering moment of inertia,

Eisuke Ito and Kota Watanabe

3. Multi-part processing in magnetostatic domain decomposition analysis,

Hiroshi Kanayama, Masao Ogino, Shin-ichiro Sugimoto, and Kaworu Yodo

Symposium 3 on Advanced Numerical Analysis and Software Technology

Session 31, Invited Talks, 10:15–11:15, Hall C

Chair: Hiroshi Kawai (Toyo University)

1. (Invited) Parallel and adaptive simulations in science and engineering using geometric multigrid,
Prof. Andreas Vogel (Ruhr University Bochum)
2. (Invited) Efficient Solution of Transient Problems in the Software UG4,
Prof. Arne Nägel (Goethe-University Frankfurt)

11:15–11:30 Break

Symposium 1 on Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 26, 11:30–12:30, Hall A

Chair: Naohisa Sakamoto (Kobe University)

1. Development of image processing software for DNA image by fluorescence microscope,
Hiroaki Ohtani, Akira Matsumoto, Susumu Fujiwara, Yuji Hatano, Soichiro Ikuno, Takahiro Kenmotsu and Hiroaki Nakamura
2. High-Definition Edge Extraction of Laser-scanned Point Clouds,
Kota Kawakami, Kyoko Hasegawa, Liang Li and Satoshi Tanaka
3. Visualization to Assist Sandplay Therapy based on 3D Scanned Data,
Hiroki Ito, Chieko Kato, Koichiro Aoki, Motoaki Adachi, Kyoko Hasegawa, Liang Li and Satoshi Tanaka

OS2: Computational Electromagnetics and Its Applications

Session 29, 11:30–12:30, Hall B

Chair: Shin-Ichiro Sugimoto (Hachinohe Institute of Technology)

1. Time-Domain Finite Element Analysis of Rectangular Magnetically Shielded Wire Based on Homogenization Method,
Fujita Shogo and Igarashi Hajime
2. Efficient and Accurate Iron Loss Computation of Permanent-Magnet Synchronous Motors Using Behavior Model,
She Wenjie, Hiruma Shingo and Igarashi Hajime
3. Study on performance improvement of waveguide power divider using evolutionary method,
Keiichi Itoh, Kohei Shida and Hajime Igarashi

Symposium 3 on Advanced Numerical Analysis and Software Technology

Session 32, 11:30–12:30, Hall C

Chair: Hiroshi Kawai (Toyo University)

1. Improvement in Interpolation Function of Immersed Finite Element Method for Fluid-Rigid Interactions,
Kosuke Kawakami, Naoto Mitsume and Shinobu Yoshimura
2. Modeling of cambering in insect's flapping wings using finite element shell elements,
Minato Onishi and Daisuke Ishihara
3. Computational control for strongly coupled Piezoelectric-Structure-Interaction,

Vinay Shankar, Daisuke Ishihara, Prakasha Chigahalli Ramegowda, Rei Takata and Tomoyoshi Horie

12:30–13:30 Lunch Break

Symposium 1 on Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 27, 13:30–14:30, Hall A

Chair: Wataru Fujisaki (Kyushu Sangyo University)

1. Deformation of finite element mesh using shape manipulation techniques,
Ryuki Matsumoto, Miran Kobayashi, Yoshihisa Fujita and Susumu Nakata
2. Numerical Simulation of Superconducting Linear Acceleration System by Using Equivalent-Circuit Model: Improvement of Acceleration Performance,
Takazumi Yamaguchi, Teruo Takayama, Atsushi Kamitani and Hiroaki Ohtani
3. Estimation of Radiation Source Distribution using Machine Learning with γ -ray Energy Spectra,
Takero Uemura and Katsuhiko Yamaguchi

OS2: Computational Electromagnetics and Its Applications

Session 30, 13:30–14:10, Hall B

Chair: Hajime Igarashi (Hokkaido University)

1. High-Frequency Electromagnetic Field Analysis with 130 Billion of Degrees of Freedom,
Shin-Ichiro Sugimoto, Amane Takei and Masao Ogino
2. Study of node arrangement in numerical human body analysis based on SPFD method,
Yuki Nakamura, Masamune Nomura, Hiroo Tarao and Amane Takei

Symposium 3 on Advanced Numerical Analysis and Software Technology

Session 33, 13:30–14:10, Hall C

Chair: Amane Takei (University of Miyazaki)

1. How to build your own linear algebraic solver using ADVENTURE AutoLinAS ?,
Hiroshi Kawai
2. Development of Microwave analysis code: ADVENTURE_Fullwave,
Amane Takei and Daiki Mihara

14:30–14:45 Break

Closing Ceremony

14:45–15:15, Hall A