

Program of JSST2023

Tuesday, 29 August

Opening Ceremony

10:00–10:15, room A

Plenary Talk 1 (Multi-Dimensional Communication Networks)

10:15–11:15, room A

Chair: Keisuke Nakano (Niigata University)

(Plenary) An innovative decoupling method for MIMO antenna element,
Prof. Hisashi Morishita (National Defense Academy)

11:15–11:30 Group Photo

Symposium 3 on Multi-Dimensional Communication Networks

Session 1, Invited Talks, 11:30–12:30, room A

Chair: Naobumi Michishita (National Defense Academy)

1. **(Invited)** Multi-Agent Simulation for Urban Disaster Evacuation,
Prof. Tatsuya Yamazaki (Niigata University)
2. **(Invited)** Development of Emergency Rescue Evacuation Support System (ERESS) for Safe and Secure Life,
Prof. Tomotaka Wada (Kansai University)

OS6: Numerical Harmonic Analysis and Signal Processing

Session 5, 11:30–12:30, room B

Chair: Kensuke Fujinoki (Kanagawa University)

1. An improvement for image compression using the discrete wavelet transform and the linear quantization,
Kouta Yamamoto, Toshio Suzuki and Emiko Ishiwata
2. Feature Extraction Based on Curvelet for Defect Detection in a Sewer Pipe Image,
Tomoki Suka, Hajime Omura and Teruya Minamoto
3. Watermarking Using Gyrator Transform and Dyadic Lifting Schemes,
Junya Noda, Hajime Omura and Teruya Minamoto

OS1: Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 9, 11:30–12:30, room C

Chair: Ayumu Saitoh (Yamagata University)

1. Comparison of Total-Field and Scattered-Field Physics-Informed Neural Networks for Impedance Simulations,

Kazuhiro Fujita

2. Parallel calculations of the extremely large number of MPI processes in Fugaku,
Hiroki Nakano, Norikazu Todoroki and Hiroto Tadano
3. Estimating radiation source distribution from measured γ -ray energy spectra,
Katsuhiko Yamaguchi, Yuka Kumada, Taiyo Sato, Yuto Kondo, Kenji Suzuki and Masaharu Matsumoto

12:30–14:00 Lunch Break

Symposium 3 on Multi-Dimensional Communication Networks

Session 2, 14:00–15:00, room A

Chair: Kenichi Ito (Niigata Institute of Technology)

1. Improvement of Efficiency of Simulation for Mobile Communication Networks,
Kazuyuki Miyakita, Naoyuki Karasawa and Keisuke Nakano
2. Evaluation of Virtual Accumulation and Reaccumulation by Information Floating in a Crossroad Network,
Keisuke Nakano, Yuhei Nemoto, Kazuyuki Miyakita, Naoyuki Karasawa and Hiroshi Tamura
3. Beam-steering in 4x4element 2port circular polarized antenna at 300 GHz-band,
Seiji Nishi, Kazuhiko Tamesue, Toshio Sato, San Hlaing Myint, Takuro Sato and Tetsuya Kawanishi

OS6: Numerical Harmonic Analysis and Signal Processing

Session 6, 14:00–15:00, room B

Chair: Kensuke Fujinoki (Kanagawa University)

1. Numerical analysis of nonlinear circuits with non-polynomial nonlinearity using Haar wavelet transform,
Haruto Shitanaka and Seiichiro Moro
2. The Representation of p -adic Fourier Transform of a Locally Constant Test Function,
Munehiro Kobayashi and Toshio Suzuki
3. A new pre-coding approach for MPROT based image compression,
Keita Ashizawa and Katsu Yamatani

OS1: Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 10, 14:00–15:00, room C

Chair: Teruo Takayama (Yamagata University)

1. Application of Modified ICCGH to Linear System Appearing in Shielding Current Analysis of HTS Film,
Ayumu Saitoh
2. Development and performance evaluation of the Block GPBiCGrQ method with variable grouping strategy,
Hiroto Tadano
3. Linear System Solvers for Large-Scale Asymmetric EFG-Type Saddle-Point Problem: Are There Any Variants of AiVRM?,

Atsushi Kamitani and Teruou Takayama

OS7: Computational electromagnetics and its applications

Session 13, 14:00–15:00, room D

Chair: Yoshihisa Fujita (Nihon University)

1. MoM analysis of scattered fields from nano-size spiral structure in UV vortex,
Hideki Kawaguchi, Masahiro Katoh and Koichi Matsuo
2. Numerical analysis of electric field surrounding a live-line worker climbing a 330kV transmission tower,
Atsuki Takayama and Shoji Hamada
3. Calculation of electrostatically induced steady-state current through human body near a tree under power transmission lines,
Hiroki Tanaka and Shoji Hamada

15:00–15:15 Break

Symposium 3 on Multi-Dimensional Communication Networks

Session 3, 15:15–16:15 room A

Chair: Kazuyuki Miyakita (Niigata University)

1. On Graph Coloring and Its Appearance Probability for Wireless Communication,
Hiroshi Tamura and Keisuke Nakano
2. Simulation of Sub-terahertz Leaky Wave Antenna for Beyond 5G,
Hiroshi Hashiguchi and Naobumi Michishita
3. On Closeness Centrality Functions,
Masakazu Sengoku and Hiroshi Tamura

OS5: Complex Networks and Complex Systems

Session 7, 15:15–16:15 room B

Chair: Atsushi Tanaka (Yamagata University)

1. Social network structures that achieve both infection control and knowledge discovery efficiency,
Tetsuo Imai and Ryo Yashiki
2. A Classification Algorithm for Facial Expression by Face Landmark Detection and Deep Neural Network,
Siu Kang and Kohei Otomo
3. Triple Neural Network,
Zhongda Liu, Hitoaki Yoshida and Satoshi Kawamura

Symposium 2 on Simulation, machine learning and/or XR for science and technology

Session 11, 15:15–16:15 room C

Chair: Yuichi Tamura (Konan University)

1. ~~Influence of the MR-HMD system on the gait motion for the elderly people, (cancelled)~~

~~Shigeho Noda, Daigo Ikano and Hideo Miyachi~~

2. Three-Dimensional Ion Crescent-Shaped Velocity Distribution in Magnetic Reconnection,
Shunsuke Usami and Seiji Zenitani
3. Analysis of plasma particle orbits in boundary layers with the efficient electrostatic particle-in-cell simulation code,
Hiroki Hasegawa and Seiji Ishiguro

OS7: Computational electromagnetics and its applications

Session 14, 15:15–16:15 room D

Chair: Hideki Kawaguchi (Muroran Institute of Technology)

1. Effects of lung model specifications on calculated electric field around the heart when using AED,
Shoji Hamada
2. FE Analysis of Numerical Human Body Model with 270 Million DOFs in Electromagnetic Field - Heat Conduction Coupled Problem,
Shin-ichiro Sugimoto, Amane Takei and Masao Ogino
3. Simulation of a Beam Dechirper using Dispersionless FDTD Scheme,
Kazuhiro Fujita

16:15–16:30 Break

Symposium 1 on Advanced Concept and Methodology in Bioscience

Session 4, 16:30–17:30 room A

Chair: Susumu Fujiwara (Kyoto Institute of Technology)

1. An estimation of produced oxygen in the track of heavy-ion using Geant4-DNA,
Yoshiyuki Hirano, Tsukasa Aso and Yoshuya Horii
2. Droplet autonomous motion induced by laser irradiation,
Shoichiro Handa, Satoshi Takatori and Takahiro Kenmotsu
3. Vibrational motion of cm-size object induced by CW laser irradiation,
Kosuke Imanaka, Satoshi Takatori and Takahiro Kenmotsu

OS5: Complex Networks and Complex Systems

Session 8, 16:30–17:10 room B

Chair: Tetsuo Imai (Hiroshima City University)

1. Cellular Automaton Traffic Simulation Considering Drivers' Characteristics,
Atsushi Tanaka and Ayumu Hashimi
2. Proposal of Extension of Ant System Algorithm for Traveling Salesman Problem,
Atsushi Tanaka and Shota Miyazaki

Symposium 2 on Simulation, machine learning and/or XR for science and technology

Session 12, 16:30–17:30 room C

Chair: Hiroaki Ohtani (National Institute for Fusion Science)

1. Simulation of Hydrogen Atoms in Tungsten Material,
Shingo Sato, Miyuki Yajima, Hiroaki Nakamura, Chako Takahashi, Keisuke Takeuchi and Seiki Saito
2. Comparison of Locomotion Methods for VR Experience of Borobudur Temple,
Yasuaki Suzuki, Fadjar I. Thufail, Brahmantara, Hiroshi Yamaguchi, Kyoko Hasegawa, Liang Li and Satoshi Tanaka
3. Object shape dependence of size perception in binocular parallax virtual reality devices,
Yuichi Tamura, Hiroyuki Makino and Nobuaki Ohno

OS7: Computational electromagnetics and its applications

Session 15, 16:30–17:10 room D

Chair: Kazuhiro Fujita (Saitama Institute of Technology)

1. Tilted Gaussian beam coupling with vortex beam mode in cylindrical waveguide,
Yoshihisa Fujita, Hiroaki Nakamura and Hideki Kawaguchi
2. Analysis of Magnetic Device Using Homogenized Finite Element Method and Cauer Circuit,
Qiao Liu and Hajime Igarashi

[Wednesday, 30 August](#)

Plenary Talk 2 (Simulation, machine learning and/or XR for science and technology)

9:00–10:00, room A

Chair: Seiki Saito (Yamagata University)

(Plenary) Statistical-mathematical thinking in fusion research,
Prof. Masayuki Yokoyama (National Institute for Fusion Science)

10:00–10:15 Break

Symposium 2 on Simulation, machine learning and/or XR for science and technology

Session 16, Invited Talks, 10:15–11:15, room A

Chair: Nobuaki Ohno (University of Hyogo)

1. **(Invited)** Simulation and Visualization Using XR technology ~Application to Safety and Environmental Problems~,
Prof. Kazuo Kashiyama (Chuo University)
2. **(Invited)** Development of a neural-network-based turbulent transport model DeKANIS and its application to integrated simulations of fusion plasmas,
Dr. Emi Narita (Kyoto University)

OS4: Advanced Numerical Analysis and Software in Multiphysics

Session 19, 10:15–11:15, room B

Chair: Hiroshi Kawai (Toyo University), Amane Takei (University of Miyazaki)

1. A Generalized SIR Model with Chaos Dynamics,
Masahiro Nakagawa
2. Sound field evaluation with nonsteady state for experimental environment with ADVENTURE_Sound,
Akihiro Kudo and Amane Takei
3. Numerical Analysis of Insect Flight Maneuverability Using Feedback Control Model,
Kaede Sugikawa, Minato Onishi and Daisuke Ishihara

OS1: Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 22, 10:15–10:55, room C

Chair: Taku Itoh (Nihon University)

1. Highlighting the color boundary of 3D scanned point clouds by PCA in color space,
Keigo Furuya, Kyoko Hasegawa, Liang Li and Satoshi Tanaka
2. High-precision rendering of 3D scanned point cloud based on noise transparency method,
Qingyu Mao, Liang Li, Kyoko Hasegawa, Tomomasa Uchida and Satoshi Tanaka

RS: Regular Session

Session 25, 10:15–11:15, room D

Chair: Ryosuke Ueda (Tohoku University)

1. Natural Biocomputing and Brain- like Computer,
Osamu Ono
2. Implementation of Neural Network on FPGA with Algorithm of the Logic Circuit Estimation,
Yuya Adachi and Yusei Tsuboi
3. Validation of Novel Hand-eye Calibration Method for Laser-based Triangulation Camera by Simulation,
Yusei Tsuboi

11:15–11:30 Break

Symposium 2 on Simulation, machine learning and/or XR for science and technology
Session 17, 11:30–12:30, room A

Chair: Masayuki Yokoyama (National Institute for Fusion Science)

1. Development of Supporting Tools for In-Situ Visualization Library VISMO,
Nobuaki Ohno
2. Kinetic-magnetohydrodynamic hybrid simulation study of energetic-particle driven off-axis fishbone instability in tokamak plasmas,
Hanzheng Li, Yasushi Todo, Hao Wang, Jialei Wang and Malik Idouakass
3. Reproduction of Braginskii solutions in anisotropic-ion-pressure fluid scheme using a viscous-flux approximation (VFA) modeling,
Satoshi Togo, Tomonori Takizuka, Yuki Homma, Kenzo Ibano, Keishi Homma, Naomichi Ezumi and Mizuki Sakamoto

OS4: Advanced Numerical Analysis and Software in Multiphysics

Session 20, 11:30–12:30, room B

Chair: Daisuke Ishihara (Kyushu Institute of Technology)

1. Basic Study on Parallel Finite Element Method for Non-Linear Sound Field Analysis,
Kentaro Koga and Amane Takei
2. Study on Parallel Finite Element Method for Electromagnetic Analysis of large space inside,
Nanako Mizoguchi and Amane Takei
3. Proposal of fast and robust technique to generate large scale tetrahedral mesh,
Hiroshi Kawai

OS1: Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 23, 11:30–12:30, room C

Chair: Hiroto Tadano (University of Tsukuba)

1. Nodal Discontinuous Galerkin schemes with Taylor-type Time Discretization for conservation law systems,
Meng Zhang and Kyosuke Yamamoto
2. Current profile optimization for improving performance of superconducting linear acceleration system,
Teruou Takayama, Ayumu Saitoh and Atsushi Kamitani

3. Fracture strength evaluation of multi-hole materials by improved linear notch mechanics,
Wataru Fujisaki

RS: Regular Session

Session 26, 11:30–12:30, room D

Chair: Seiki Saito (Yamagata University)

1. Overlay Analysis of Fruit Growing and Soil in Agricultural Heritage Systems,
Yoichi Shimazaki
2. Research on improving the accuracy of super-resolution techniques using GANs by sharpening target images and optimizing discriminator learning,
Akihiro Abe and Hiroyuki Kamata
3. A Study on Mask Face Recognition Method Based on Self-Supervised Learning,
Jintaro Kawai and Hiroyuki Kamata

12:30–14:00 Lunch Break

Symposium 2 on Simulation, machine learning and/or XR for science and technology

Session 18, 14:00–15:00, room A

Chair: Emi Narita (Kyoto University)

1. Development of a gyrokinetic simulation model toward whole-volume modeling of stellarators,
Toseo Moritaka, Robert Hager, Seung-Hoe Ku, C-S. Chang and Suguru Masuzaki
2. Development of Digital Twin Radiation Visualization System,
Seiki Saito, Nao Shibata, Shigekazu Suzuki and Eiji Takada
3. Prediction of recycling hydrogen energy distribution by machine learning based on molecular dynamics simulation,
Masato Iida, Seiki Saito, Hiroaki Nakamura, Keiji Sawada, Kazuo Hoshino, Masahiro Kobayashi and Masahiro Hasuo

OS4: Advanced Numerical Analysis and Software in Multiphysics

Session 21, 14:00–14:40, room B

Chair: Akihiro Kudo (National Institute of Technology, Tomakomai College)

1. Deep neural network modeling based on capacity computing of Eulerian elasto-plastic simulation,
Issei Toida, Shoki Mori, Koji Nishiguchi, Tokimasa Shimada, Makoto Tsubokura, Hiroya Hoshiba and Junji Kato
2. Massively Parallel Topology Optimization of Transient Flow Using Building-Cube Method,
Ryohei Katsumata, Koji Nishiguchi, Hiroya Hoshiba and Junji Kato

OS1: Numerical Simulation and Visual Analytics of Nonlinear Problems

Session 24, 14:00–14:40, room C

Chair: Kyoko Hasegawa (Ritsumeikan University)

1. Modeling of Metal Foams with Adjustable Wall Thickness in Targeted Direction,

Naoki Hamano, Taku Itoh, Kohei Tateyama, Susumu Nakata and Keiko Watanabe

2. A Physics-informed neural network-based Surrogate Model for Analyzing Elasticity Problems in Plates with Holes,

Zhongjiang Han, Jiarui Ou and Koji Koyamada

RS: Regular Session

Session 27, 14:00–14:40, room D

Chair: Chako Takahashi (Yamagata University)

1. Effects of Gaussian noise for applying the dynamic network biomarker theory to single-cell RNA-seq data,

Shota Yonezawa, Kensuke Sasaki, Takayuki Haruki, Keiichi Koizumi, Tomonobu M. Watanabe, Kuniya Abe, Yuhki Tada and Yuukou Horita

2. Aerodynamics research of the gliding flight mechanism of a flying snake supposed as a 2D tandem model,

Daiki Hirayama and Ichiro Nakane

15:00–15:15 Break

Student Session: Shotgun Presentation, 15:15–16:00, room A

Chair: Seiki Saito (Yamagata University) and Masafumi Yoshida (National Institute of Technology, Ube College)

16:00–16:15 Break

Student Session: Poster Presentation, 16:15–18:00, 1F Hall

- P01. Research on transmission characteristics of disaster relief signals using Bluetooth,

Ryusei Koike and Tatsuya Kabasawa

- P02. Molecular dynamics simulation of gapped DNA labeled with fluorescent probes,

Takumi Timothy Hashi, Susumu Fujiwara, Tomoko Mizuguchi, Yoshiteru Yonetani, Naoya Shikazono, Ken Akamatu and Hiroaki Nakamura

- P03. Effects of the Chain Length on the Aggregate Structure of Perfluoroalkyl substances,

Ryunosuke Yonemori and Tomoko Mizuguchi

- P04. Prognostic medication: whether the macroscopic equation model can also predict dog's medical data of illness by considering difference of division speed of ES cells for human beings and dogs,

Shun Tomita and Ken Naitoh

- P05. Classification of six macroscopic molecular group in the theoretical model on biochemical reaction processes : for prognostic medication,

Kami Okazaki, Ken Naitoh and Koichi Shibasaki

- P06. RoI Editing Tool with AI Segmentation for Radiotherapy Simulation,

Xiaoru Xie and Akinori Kimura

- P07. A consideration on setting charging fee for charging while doing something in electric vehicles,
Kouta Yamamoto, Kazuyuki Miyakita and Keisuke Nakano
- P08. Improvement of Accuracy of Object Detection by Super-Resolution Using Neural Network,
Aoi Shishime, Shota Furukawa and Takashi Hara
- P09. Proposal of Parameter Processing in Neural Network,
Eiyu Tomimori, Kazuhiro Takeda and Takashi Hara
- P10. Consideration of Double Array Structure in Language Model,
Sora Yanagihara, Shota Furukawa and Takashi Hara
- P11. Hand Gesture AI Recognition for Alphabets of Nepali Sign Language,
Gurung Sanjeev and Akinori Kimura
- P12. Numerical analysis on expansion dynamics of fuel pellet after ignition in reactor chamber for heavy-ion inertial fusion,
Wenzhen Hou, Kazumasa Takahashi, Toru Sasaki and Takashi Kikuchi
- P13. Molecular dynamics simulation of fluorescent dye-labeled DNA with apurinic/aprimidinic sites,
Kotaro Masumoto, Susumu Fujiwara, Tomoko Mizuguchi, Yoshiteru Yonetani, Naoya Shikazono, Ken Akamatu and Hiroaki Nakamura
- P14. Particle-Scale and Macro-Scale Computations on the Swelling Process of Superabsorbent Polymer Particles,
Niku Guinea, Satoru Ushijima, Takahiro Shiba, Kazumitsu Suzuki and Yusuke Matsubara
- P15. Explicitly Hermitian Quadrilateral elements with completeness for bending Kirchhoff-Love plates
Masaki Sakai and Kyosuke Yamamoto
- P16. Estimating Regions of Japanese Folk Songs Using Machine Learning,
Tatsuki Ioka and Hiroshi Tamura
- P17. Base Station Placement for 5th Generation Mobile Communication System Considering Obstacles,
So Katayama and Hiroshi Tamura
- P18. Performance evaluation of Japanese traditional drum performance with machine learning,
Koki Kamiyama and Hiroshi Tamura
- P19. Effective deployment method of Edge Computer in 5th generation mobile communication systems,
Shun Sasaki and Hiroshi Tamura
- P20. A delivery method using Drone in areas with high aging populations,
Kensuke Shiina and Hiroshi Tamura
- P21. Channel assignment in wireless communication and graph distance edge coloring,
Keita Suzuki and Hiroshi Tamura
- P22. The probability of coloring with the maximum number of colors by greedy colorings,
Tatsuya Murayama and Hiroshi Tamura
- P23. Cs film thickness stabilization conditions on the plasma grid in an ITER-scale negative ion source,
Shunsuke Hayashi and Masafumi Yoshida
- P24. Improved grid point arrangement in 2D CIP-Soroban method,
Zhehao Lin, Kazumasa Takahashi, Toru Sasaki, Takashi Kikuchi and Atsushi Sunahara
- P25. Simulation of Particles in Tungsten Material,
Keisuke Takeuchi, Shingo Sato, Hiroaki Nakamura and Seiki Saito

- P26. Analysis of the Relationship between Performance and Core Body Temperature of Players in Club Activities,
Keisuke Ishigami, Yoshihide Shibata and Yuji Yoshimura
- P27. Magnetic properties of the iron-based material caused Hydrogen embrittlement,
Yuto Ohta, Kenji Suzuki, Masaharu Matsumoto and Katsuhiko Yamaguchi
- P28. Analysis of Conversion Efficiency of Direct Charge Nuclear Battery using Tritium,
Ryuma Kigeuchi, Hibiki Umeda, Fumihiro Tamura, Yuki Uchida, Takashi Kikuchi and Hiroki Takezawa
- P29. Analysis of Conversion Efficiency of Direct Charge Nuclear Battery using High Energy β Particle Source,
Hibiki Umeda, Ryuma Kigeuchi, Fumihiro Tamura, Yuki Uchida, Takashi Kikuchi and Hiroki Takezawa

[Thursday, 31 August](#)

Plenary Talk 3 (Advanced Concept and Methodology in Bioscience)

9:00–10:00, room A

Chair: Takahiro Kenmotsu (Doshisha University)

(Plenary) Data analysis project in medical and engineering collaboration by big data in Kawasaki Disease,

Prof. Ryusuke Ae (Jichi Medical University)

10:00–10:15 Break

Symposium 1 on Advanced Concept and Methodology in Bioscience

Session 28, Invited Talks, 10:15–11:15, room A

Chair: Takahiro Kenmotsu (Doshisha University)

1. **(Invited)** Theoretical investigation of reversible fluorescent photoswitching molecules upon irradiation with visible light,
Prof. Satoshi Yokojima (Tokyo University of Pharmacy and Life Sciences)
2. **(Invited)** Simulation study on “torsion” and local structure of chromosome: Loop structure via one side loop extrusion with twist deformation,
Dr. Hiroshi Yokota (Kyoto University)

OS2: Design and Simulations for System Integration

Session 31, 10:15–11:15, room B

Chair: Shunsuke Nansai (Akita University)

1. Comparison of UKF and EKF for a flow in a volume-changing cylinder,
Teruyoshi Sadahiro and Iori Sakino
2. Material extrusion-based additive manufacturing with multi-legged robot for large scale fabrication,
Koki Jimbo
3. Computational Fluid Dynamics Analysis of Flying Snakes Using OpenFOAM,
Takeru Moriyama and Taro Fujikawa

OS3: Verified Numerical Computations

Session 33, 10:15–11:15, room C

Chair: Kazuaki Tanaka (Waseda University)

1. Fast and accurate symmetric rank- k operation,
Yuki Uchino and Katsuhisa Ozaki
2. Computation method for an upper bound of the maximum norm of a matrix product,
Yaxuan Zhao, Katsuhisa Ozaki and Yuki Uchino
3. Tight enclosure of a matrix product based on BLAS,
Katsuhisa Ozaki

Symposium 2 on Simulation, machine learning and/or XR for science and technology

Session 36, 10:15–11:15, room D

Chair: Hideo Miyachi (Tokyo City University)

1. Single shot machine learning based phase retrieval for the X-ray phase imaging,
Ryosuke Ueda and Atsushi Momose
2. Development of AR Visualization Teaching Materials for 3D Scatter Radiation Distribution in an X-ray Examination Room Using a Head-Mounted Display,
Toshioh Fujibuchi, Hiroyuki Arakawa and Takashi Yoshinaga
3. Investigation of patient release examination training in nuclear medicine using Mixed Reality,
Hiroyuki Arakawa, Toshioh Fujibuchi, Yoshihiro Okada, Kosuke Kaneko and Toshiko Tomisawa

11:15–11:30 Break

Symposium 1 on Advanced Concept and Methodology in Bioscience

Session 29, 11:30–12:30, room A

Chair: Hiroaki Nakamura (National Institute for Fusion Science)

1. Study on effect of oxygen concentration in water radiolysis using Geant4-DNA,
Tsukasa Aso, Shun Fukagawa, Yoshiyuki Hirano, Masanori Hara and Susumu Fujiwara
2. Calorimetric Evidence of New Temperature Anomaly In Trehalose Dihydrate,
Soichi Tatsumi, Reon Oka, Yasunari Yato, Keisuke Yamakawa, Yasuo Saruyama and Haruhiko Yao
3. Investigation of the impact of human contact for the onset of pediatrics infectious diseases and Kawasaki Disease,
Souta Kunii, Yoshihide Shibata, Shinsuke Hoshino, Ryusuke Ae and Hiromichi Hamada

OS2: Design and Simulations for System Integration

Session 32, 11:30–12:30, room B

Chair: Koki Jimbo (Tokyo Denki University)

1. Trajectory Tracking Control of Lizard-Inspired Single-Actuated Robot based on Inverse Kinematics,
Shunsuke Nansai and Norihiro Kamamichi
2. Wall walking of lizard-inspired single-actuated robot,
Haruki Kanakubo, Shunsuke Nansai and Norihiro Kamamichi
3. Numerical Simulation of Butterfly-style Flapping Robot for Turning Flight with Lead-lag Motion,
Hajime Endo, Taro Fujikawa and Koki Kikuchi

OS3: Verified Numerical Computations

Session 34, 11:30–12:10, room C

Chair: Katsuhisa Ozaki (Shibaura Institute of Technology)

1. Numerical studies on preconditioned iterative solvers with minimal residual smoothing,
Arisa Kawase and Kensuke Aihara
2. Iterative refinement for an eigenpairs subset of a real generalized symmetric-definite eigenproblem,
Takeshi Terao

Symposium 2 on Simulation, machine learning and/or XR for science and technology

Session 37, 11:30–12:30, room D

Chair: Masafumi Yoshida (National Institute of Technology, Ube College)

1. Benchmark results for point cloud isosurfaces implemented on VisAssets,
Hideo Miyachi, Shintaro Kawahara and Kazuo Kashiyama
2. Simulation Analysis of the Transport of Dust Particles Injected by the Multi-Species Impurity Powder Dropper in the Large Helical Device,
Mamoru Shoji, Gakushi Kawamura, Roman Smirnov and Yasunori Tanaka
3. Advanced virtual-reality visualization for analysis of fusion plasma simulation data,
Hiroaki Ohtani and Shintaro Kawahara

12:30–14:00 Lunch Break

Symposium 1 on Advanced Concept and Methodology in Bioscience

Session 30, 14:00–15:00, room A

Chair: Takahiro Kenmotsu (Doshisha University)

1. Characterization of two elementary processes in the formation of amino acid precursors in extraterrestrial space by molecular dynamics simulation,
Hiroaki Nakamura, Yoshinori Satake, Masayuki Murai, Kensei Kobayashi, Itsuki Sakon, Shunsuke Usami, Miyuki Yajima, Yuki Goto, Masahiro Kobayashi, Seiki Saito, Hisashi Okumura and Masahiro Kato
2. Molecular dynamics study of defects on fatty acid vesicle induced by magnesium ion,
Ryuta Kawanami and Susumu Fujiwara
3. Molecular dynamics study of OH radical-mediated DNA damage production,
Susumu Fujiwara, Ryuta Kawanami, Tomoko Mizuguchi, Yoshiteru Yonetani, Tsukasa Aso and Hiroaki Nakamura

OS3: Verified Numerical Computations

Session 35, 14:00–14:40, room C

Chair: Katsuhisa Ozaki (Shibaura Institute of Technology)

1. Understanding from solution-enclosures - Using elliptic equations as a case study,
Kazuaki Tanaka
2. The best constants for the projection error on triplet Hilbert spaces,
Munehisa Takahashi, Kouta Sekine and Makoto Mizuguchi

Symposium 2 on Simulation, machine learning and/or XR for science and technology

Session 38, 14:00–15:00, room D

Chair: Ryosuke Ueda (Tohoku University)

1. Performance Evaluation of Neural Networks for various Partial Differential Equation Derivation,
Kunqi Hu, Yu Long and Koji Koyamada

2. Understanding of time trend of cesium layer on the plasma grid in ITER scaled negative ion source,
Masafumi Yoshida and Shunsuke Hayashi
3. Elucidation of the fundamental processes in the time evolution of cesium concentration in the water of
Lake Onuma,
Ikuto Ohtaka, Yuko Hatano, Makoto Nakamura and Seiki Saito

15:00–15:15 Break

Closing Ceremony

15:15–15:45, room A