JSST2016 Final Program

Thursday, October 27, 2016

Opening
9:30-9:45, Room A

Plenary Talk 1 (Symposium on Numerical Simulation and Visual Analytics of Nonlinear Problems)
9:45-10:45, Room A
Chair: ***Soichiro Ikuno (Tokyo University of Technology)***
Molecular Simulation for Soft and Hard Matters,
Hiroaki Nakamura, Susumu Fujiwara, Atsushi M. Ito and Seiki Saito

10:45-11:00 Break

Symposium on Numerical Simulation and Visual Analytics of Nonlinear Problems, Session 01
11:00-12:00, Room A
Chair: ***Susumu Fujiwara (Kyoto Institute of Technology)***
Invited Talk
Precise transparent visualization of laser-scanned cultural heritage objects,
Satoshi Tanaka and Kyoko Hasegawa
Tutorial Lecture
Numerical Simulation with Accelerator
Soichiro Ikuno

OS 05: Motion Dynamics in Human, Animal and Robot, Session 01
11:00-12:00, Room B
Chair: ***Shunsuke Nansai (Singapore University of Technology and Design)***
1. Slipping Link Estimation of Snake-like Robot based on Kinematics,
Shunsuke Nansai, Rajesh Elara Mohan and Masami Iwase
2. Motion control of peristaltic mobile robot - Optimization of mass distribution using PSO algorithm ?,
Taichi Kataoka and Norihiro Kamamichi
3. Comparison of Modeling Method between Quaternion and Euler Angle on Projection Method,
Takeru Yanagida, Rajesh Elara Mohan and Masami Iwase

OS 02: Computational Electromagnetism and Its Applications Session 01
11:00-12:00, Room C
Chair: ***Hideki Kawaguchi (Muroran Institute of Tech.)***
1. Investigation of Current Dependence of Power Factor and Power Transfer Efficiency for Non-Contact Charger (2),
Daigo Yonetsu
2. Numerical Analysis for Structural Coloration of Multilayered Gratings of Non-ideal Type,
Hideaki Wakabayashi, Masamitsu Asai and Jiro Yamakita
3. Representation of Frequency Characteristics of Soft Magnetic Composite Using Cauer-Equivalent Circuit,
Yuki Sato and Hajime Igarashi

Kyoto Symposium on Student Research, Session 01
11:00-12:00, Room D
Chair: ***Miki Kioka (Kyoto University)***
Invited Talk
Future Proofing Japanese Education: The need for flexibility in a complex system
Francesco Bolstad

1. Relationship between score-distribution and winning-rate at Japanese Professional baseball league (tentative),
Yutaro Segawa
2. Opacity Control of Particle-type Volume Data based on Local Particle-number Adjustment,
Yuto Ohta
3. Temperature Prediction Based on RNN,
GuanYuqing

12:00-13:30 Lunch Break

Symposium on Numerical Simulation and Visual Analytics of Nonlinear Problems, Session 02
13:30-14:30, Room A
Chair: ***Hiroaki Nakamura (National Institute of Fusion Science)***
1. Molecular dynamics study of new phase transition in supercooled cyclohexane,
Tomoko Mizuguchi, Soichi Tatsumi and Susumu Fujiwara
2. Consideration of J-integral as a Measure for Non-Linear Crack Mechanics,
Wataru Fujisaki and Hayato Kubota
3. Huge-scale parallel calculations of an eigenvalue problem for sparse matrices with a large dimension,
Hiroki Nakano

OS 05: Motion Dynamics in Human, Animal and Robot, Session 02
13:30-14:30, Room B
Chair: ***Norihiro Kamamichi (Tokyo Denki University)***
1. Stylus vs finger performance of Thai characters writing on Tablet,
Chompoonuch Jinjakam
2. Development of a lizard-type quadruped robot driven by single actuator,
Hidetaka Suzuki and Norihiro Kamamichi
3. Walking Motion Generation of a Hexapod Robot with Cooperative Control,
Keichi Onodera, Masami Iwase and Shoshiro Hatakeyama

OS 02: Computational Electromagnetism and Its Applications, Session 02
13:30-14:30, Room C
Chair: ***Daigo Yonetsu (Kansai University)***
1. Topology Optimization of Synchronous Reluctance Motor using Evolutionary Algorithm,
Kota Watanabe, Takao Suga and Shinya Kitabatake
2. Analysis of Rotary Machines with Hierarchical Domain Decomposition Method,
Shin-Ichiro Sugimoto
3. 3-D BEM Analysis of Inactivation Process of Bacteria by High-voltage Pulse Electric Field,
Hideki Kawaguchi, Takamasa Kotani and Kohki Satoh

Kyoto Symposium on Student Research, Session 02
13:30-14:30, Room D
Chair: ***Hiroaki Natsukawa (Kyoto University)***

1. The integrated numerical simulation and visual analytics of high beam on driving,
   Ni Junxiong
2. Construction on visualization system of flow of conversation in counseling,
   Tomoya Uetsuji
3. Towards the Initiative for sharing teaching materials,
   Yusuke Yoshida
4. How is the structure of trust in government ?,
   Takuma Ogawa
5. High-quality Transparent Visualization of a Laser-scanned Point Cloud based on Extended Poisson Disk Sampling,
   Shu Yanai

14:30-14:45 Break

Symposium on Numerical Simulation and Visual Analytics of Nonlinear Problems, Session 03
14:45-15:45, Room A
Chair: ***Hideki Kawaguchi (Muroran Institute of Technology)***

1. Fast Solver Using Deflation and CG preconditioner for Electromagnetic field analysis,
   Kota Watanabe, Yuki Taiami and Tsukasa Makabe
2. Speeding up Large Eddy Simulation by Multigrid preconditioned Krylov subspace methods with mixed precision,
   Hiroto Tadano, Ryosaku Ikeda and Hiroyuki Kusaka
3. High-Speed Analysis of Shielding Current Density in HTS Film with Cracks,
   Teruou Takayama, Ayumu Saitoh and Atsushi Kamitani

OS 05: Motion Dynamics in Human, Animal and Robot, Session 03
14:45-15:25, Room B
Chair: ***Masami Iwase (Tokyo Denki University)***

1. Realization of the Throw-Down Yoyo Trick by a Robot Arm,
   Sho Komagata, Mayumi Ozeki, Hokuto Miyakawa, Takuma Nemoto and Masami Iwase
2. UKF-based Flight Control for Multicopter,
   Yuki Kimoto, Yuya Akahori, Takahiro Yoshimoto and Masami Iwase

OS 02: Computational Electromagnetism and Its Applications, Session 03
14:45-15:45, Room C
Chair: ***Kota Watanabe (Muroran Institute of Tech.)***

1. Magnetic Circuit Model of Vibration Energy Harvester Based on Electromagnetic Induction,
   Akito Maruo, Takeshi Sugisawa and Hajime Igarashi
2. Improving convergence of iterative solvers using residual cutting method to solve electromagnetic fields in lossless cavity by method of moments,
   Shoji Hamada
3. Improvement of Convergence Properties of an Inter-face Problem in Iterative Domain Decomposition Method Using Double-Double Precision,
   Takehito Mizuma and Amane Takei

Kyoto Symposium on Student Research, Session 03
14:45-15:45, Room D
Chair: ***Yasuo Ebara (Kyoto University)***

1. Transparent Visualization of a Laser-scanned Point Cloud Fused with a Background Photographic Image,
   Itaru Nii
2. Exhibition of an attractive example for science class education: From the experience of science class for parents and children,
   Tomoyuki Taketani
3. Visualization of Academic Field Disciplines for Promoting Mutual Understanding among Academic Disciplines,
   Shinsuke Imai
4. Development of an interactive SEM system,
   Yoshihiro Ashida
5. Visualization of Client's Remark in Counseling,
   Yuma Hayashida

15:45-16:00 Break

Symposium on Numerical Simulation and Visual Analytics of Nonlinear Problems, Session 04
16:00-17:20, Room A
Chair: ***Koji Koyamada (Kyoto University)***

1. A Fiber Tracking Analysis Method and its Visualization for Press Molding of Carbon Fiber,
   Reinforced Thermoplastics using a Particle Method,
   Shun Fukumoto, Tasuku Tamai, Ryosaku Shino, Seiichi Koshizuka, Takahiro Hayashi and Takeshi Ishikawa
2. High-quality Transparent Visualization of a Laser-scanned Point Cloud based on Extended Poisson Disk Sampling,
   Shu Yanai, Ryohei Umegaki, Kyoko Hasegawa and Satoshi Tanaka
3. Opacity Control of Particle-type Volume Data based on Local Particle-number Adjustment,
   Yuto Ota, Takafumi Kishida, Kyoko Hasegawa, Kohei Murotani, Seiichi Koshizuka and Satoshi Tanaka
4. Transparent Visualization of a Laser-scanned Point Cloud Fused with a Background Photographic Image,
   Itaru Nii, Kyoko Hasegawa and Satoshi Tanaka

OS 06: Complex Networks and Complex Systems
16:00-17:20, Room B
Chair: ***Atsushi Tanaka (Yamagata University), Tetsuo Imai (Tokyo University of Information Sciences)***

1. Word-of-Mouth Spread on Social Media,
   Hiroshi Toyoizumi
2. Mathematical Ecosystems for Network Services,
   Nariaki Ikematsu
3. Statistical result of large scale simulations of a dynamic network formation game model,
   Tetsuo Imai, Atsushi Tanaka, Kousuke Yoshizawa and Shuhei Miyake
4. Sampling average of social media networks,
   Atsushi Tanaka

General Session, Session 01
16:00-17:00, Room C
Chair: ***Naohisa Sakmoto (Kobe University)***

1. Slab pull force and shear stress of a subduction zone as inferred from elastic plate models,
   Mitsuru Yoshida
2. Simulation for Improving a Product Recall System by Layered Co-evolution Model,
   Tetsuroh Watanabe, Taro Kanno and Kazuo Furuta
3. Simulation Sinusoidal Oscillator Using Operational Transconductance Amplifier and Distributed RC,
   Supachai Klungtong and Dusit Thanapatay

Friday, October 28, 2016

Plenary Talk 2
9:45-10:45, Room A
Chair: ***Satoshi Tanaka (Ritsumeikan University)***

A big challenge for safe automated driving - Potential problems of Human Factors,
Satoshi Kitazaki (AIST)

10:45-11:00 Break

Symposium on Technology and application in HPC, Session 01
11:00-12:00, Room A
Chair: ***Hiroaki Honda (Kyushu University)***

1. Electron hybrid code simulations with OhHelp load balancer for the study of relativistic electron acceleration in planetary magnetospheres,
   Yuto Katoh, Yoshiharu Omura, Yohei Miyake, Hiroshi Nakashima, Hideyuki Usui and Keiichiro Fukazawa
2. Parallel computations for fluid-structure interaction problems in civil engineering using multiphase modeling,
   Daisuke Toriu, Daisuke Yagyu, Kisho Maruyama, Kazuma Aoki, Hiroshi Itada and Satoru Ushijima
3. Performance Evaluation of MHD Simulation Code with X86 CPUs and Manycore Systems,
   Keiichiro Fukazawa, Takayuki Umeda and Takeshi Nanri

Symposium on Numerical Simulation and Visual Analytics of Nonlinear Problems, Session 05
11:00-12:00, Room B
Chair: ***Kota Watanabe (Muroran Institute of Technology)***

1. Numerical Approach Using Methless Method for Solving Interior and Exterior Boundary-Value Problems,
   Ayumu Saitoh, Teruou Takayama and Atsushi Kamitani
2. Interactive Shape Optimization of Waveguide for Electromagnetic Wave using GPU-OpenGL,
   Gong Chen, Taku Itoh, Susumu Nakata and Soichiro Ikuno

OS 04: Numerical Computations, Session 01
11:00-12:00, Room C
Chair: ***Katsuhisa Ozaki (Shibaura Institute of Technology)***

1. An investigation of inspiration air flow pattern in mucused respiratory tract,
   Arthorn Sanpanich, Chaaim Phairoh, Watchara Sroykham, Yongyuth Kajornpredanon, *Kusol Petsarb and Wirasak Angkhananuwat*
2. Port resolving, tsunami and tide simulation to find “tsunami vortexes” for safe vessel evacuation,
   Satoshi Nakada, Mitsuru Hayashi, Sunichi Koshimura and Ei-Ichi Kobayashi
3. Dynamics of a Hairpin-Shaped Vortex Tube in a Transitional Boundary Layer,
   Kazuo Matsuura

12:00-13:30 Lunch

Plenary Talk 3 (Symposium on Technology and application in HPC)
13:30-14:30, Room A
Chair: *Keiichiro Fukazawa (Kyoto University)*
Regularity: A New Important Player in the Game of High-Performance Simulations in Manycore Era,
Hiroshi Nakashima

14:30-14:45 Break

Symposium on Technology and application in HPC, Session 02
14:45-15:45, Room A
Chair: *Keiichiro Fukazawa (Kyoto University)*
Invited Talk
Research and Development of Power Management Framework for Exascale Computing,
Masaaki Kondo
Invited Talk
Effect of Overlapping Halo Exchange with One-Sided Communication,
Takeshi Nanri and Keiichiro Fukazawa

Symposium on Numerical Simulation and Visual Analytics of Nonlinear Problems, Session 06
14:45-15:45, Room B
Chair: *Satoshi Tanaka (Ritsumeikan University)*
1. Automatic generation of 3-dimensional shape model having the structure of foamed aluminum,
Hikaru Fujita, Yuya Mitsudome, Keiko Watanabe and Susumu Nakata
2. Web-based Visualization System for Large-Scale Volume Datasets,
Takashi Shimizu, Naohisa Sakamoto, Jorji Nonaka, Kenji Ono and Koji Koyamada
3. The integrated numerical simulation and visual analytics of high beam on driving,
Junxiong Ni, Yasuo Ebara and Koji Koyamada

OS 04: Numerical Computations, Session 02
14:45-15:45, Room C
Chair: *Atsushi Minamihata (Waseda University)*
1. Computable norm bounds of the evolution operator using spectral properties,
Akitoshi Takayasu, Makoto Mizuguchi, Takayuki Kubo and Shin'Ichi Oishi
2. Enclosure of Product of Three Point Matrices,
Yuki Ohta, Yoshihiro Nakamura and Katsuhisa Ozaki
3. Verification of Positive Definiteness using Block Cholesky Decomposition,
Takeshi Terao and Katsuhisa Ozaki

15:45-16:00 Break

Symposium on Technology and application in HPC, Session 03
16:00-17:20, Room A
Chair: *Yuto Kato (Tohoku University)*
1. Hyper-dimensional Vlasov code for space plasma simulations and its performance on the FX100 supercomputer,
   Takayuki Umeda
2. MHD Relaxation with Flow in a Unit Sphere,
   Kohei Yamamoto and Akira Kageyama
3. Efficient communications of particle data in particle-based simulations,
   Ryutaro Susukita, Yoshiyuki Morie and Takeshi Nanri
4. Development of A Memory Efficient Communication Method for Connecting MPI Programs by using ACP Library,
   Hiroaki Honda, Yoshiyuki Morie and Takeshi Nanri

Symposium on Numerical Simulation and Visual Analytics of Nonlinear Problems, Session 07
16:00-17:00, Room B
Chair: *Ayumu Saitoh (Yamagata University)*
1. Simple 1D grid-refinement for the FDTD method based on coordinate transformation,
   Tetsuji Matsuo
2. FDTD simulation of signal interference for ultrasonic positioning system,
   Shunsuke Matsuoka, Takuya Nishimura and Hideki Kawaguchi
3. Mode Analysis of Electromagnetic Wave Propagation in Polarizer Miter Bend,
   Yoshihisa Fujita, Soichiro Ikuno, Shin Kubo, Toru Tsujimura and Hiroaki Nakamura

OS 04: Numerical Computations, Session 03
16:00-17:00, Room C
Chair: *Akitoshi Takayasu (University of Tsukuba)*
1. Differential Equation Simulator of Based on The Finite Difference Method Which Does Not Require Programming Skills,
   Ryota Ochiai and Katsuhisa Ozaki
2. Improved Extraction Scheme for Accurate Floating-point Summation,
   Atsushi Minamihata, Katsuhisa Ozaki, Takeshi Ogita and Shin'Ichi Oishi
3. A Novel Coupled Algorithm for Shell Structure-Electric field Interaction Analysis in MEMS Piezoelectric Actuator,
   Prakasha Chigahalli Ramegowda, Daisuke Ishihara, Tomoya Niho and Tomoyoshi Horie

18:00-20:00 Banquet
Yoshida Cafeteria in Yoshida-South Campus, Kyoto University

Saturday, October 29, 2016

JASSE Special Session, Session 01
9:45-10:45, Room A
Chair: ***Katsuhisa Ozaki (Shibaura Institute of Technology)***
1. Large-scale DFT simulations with a linear-scaling DFT code Conquest on K-computer,
   Tsuyoshi Miyazaki
2. Development of distributed memory parallel MPS method and some applications,
   Kohei Murotani

OS 07: Simulation Technology in Origami
9:25-10:45, Room B
Chair: ***Sachiko Ishida (Meiji University)***
1. Mathematical Simulation and Optimal Design of Rverse Spiral Origami Tube Processed by Hydroforming,
   Kong Chenghai, Zhao Xilu and Ichiro Hagiwara
2. Origami-performing robot: The optimal geometric design of the plane contact portion of a robot gripper,
   Phuong Thao Thai, Maria Savchenko and Ichiro Hagiwara
3. Strongest foldable helmet based on origami-engineering,
   Yang Yang, Norimasa Ozawa, Chie Nara and Ichiro Hagiwara
4. Norigami Model Construction for 3D-Shape Structures Using Paper-like Materials,
   Julian Romero, Luis Diago, Chie Nara and Ichiro Hagiwara

General Session, Session 02
9:45-10:45, Room C
Chair: ***Jorji Nonaka (RIKEN)***
1. Construction on Visualization System of Flow of Conversation in Counseling,
   Tomoya Uetsuji, Shinsuke Imai, Yosuke Onoue, Minoru Kamata, Yasuo Ebara and Koji Koyamada
2. Web-based Visualization System using OPeNDAP for Earth Environmental Data,
   Yosuke Onoue, Sayaka Hori and Koji Koyamada

10:45-11:00 Break

JASSE Special Session, Session 02
11:00-12:00, Room A
Chair: ***Satoshi Tanaka (Ritsumeikan University)***
1. gMocren: Visualization software for Monte Carlo simulators for radiotherapy,
   Akinori Kimura, Kyoko Hasegawa, Ayumu Saitoh and Satoshi Tanaka
2. KVS: A simple and effective framework for scientific visualization,
   Naohisa Sakamoto and Koji Koyamada

OS 03: Kansei and higher brain functions
11:00-12:20, Room B
Chair: ***Michiko Ohkura (Shibaura Institute of Technology)***

1. Evaluation of feelings of excitement caused by auditory stimulus in driving simulator,
   Kodai Ito, Yoshihiro Harada, Tomoki Tani, Yuya Hasegawa, Haruhiko Nakatsuji, Yousuke Tate, Hiroki Seto, Takeshi Aikawa and Norio Nakayama
2. Affective Evaluation for Material Perception of Bead- coated Resin Surfaces using Visual and Tactile Sensations: Selection of Adjective Pairs to Clarify the Color Effect,
   Michiko Ohkura, Wataru Morishita, Ryuji Miyazaki, Masato Takahashi, Hiroko Sakurai, Kiyotaka Yarimizu and Akira Nakahara
3. Extraction of instruction elements that affect the learning motivation,
   Hiroe Abe, Luis Diago and Ichiro Hagiwara
4. Emotion simulation using emoticons,
   Luis Diago, Hiroe Abe and Ichiro Hagiwara

OS 01: Multi dimensional communication networks
11:00-12:20, Room C
Chair: ***Kenichi Ito (Niigata Institute of Technology), Hiroshi Tamura (Chuo University)***

1. Bit Error Rate and Link Budget Evaluation for Galvanic Coupling Intra-body Communication,
   Kenichi Ito
2. On Information Floating using Epidemic Communication and Covering Problem in Flow Networks,
   Hiroshi Tamura, Atsushi Kashiwabara and Keisuke Nakano
3. Information Renewal and Power Control in Epidemic Communication,
   Naoki Kinoshita, Kazuyuki Miyakita and Keisuke Nakano
4. A Solution about Spectrum Allocation Based on Macro-Femtocell Network,
   Qiaozhi Hua and Takuro Sato

Symposium on Climate Change Adaptation Technology and Social Implementation
13:00-15:00, Room A
Chair: ***Sayaka Hori (Kyoto University)***

1. Climate Change Adaptation and technology development - Role of Municipalities -,
   Fujio Kimura
2. Climate Change Impact and Adaptation Policy in Kyoto Prefecture,
   Katsuya Matsuda
3. Challenges to social implementation of climate change adaptation policy in local community,
   Kenji Baba
4. ICT Center of Excellence and Open Data (JKUAT),
   Muliaro Wafula

Floor Map

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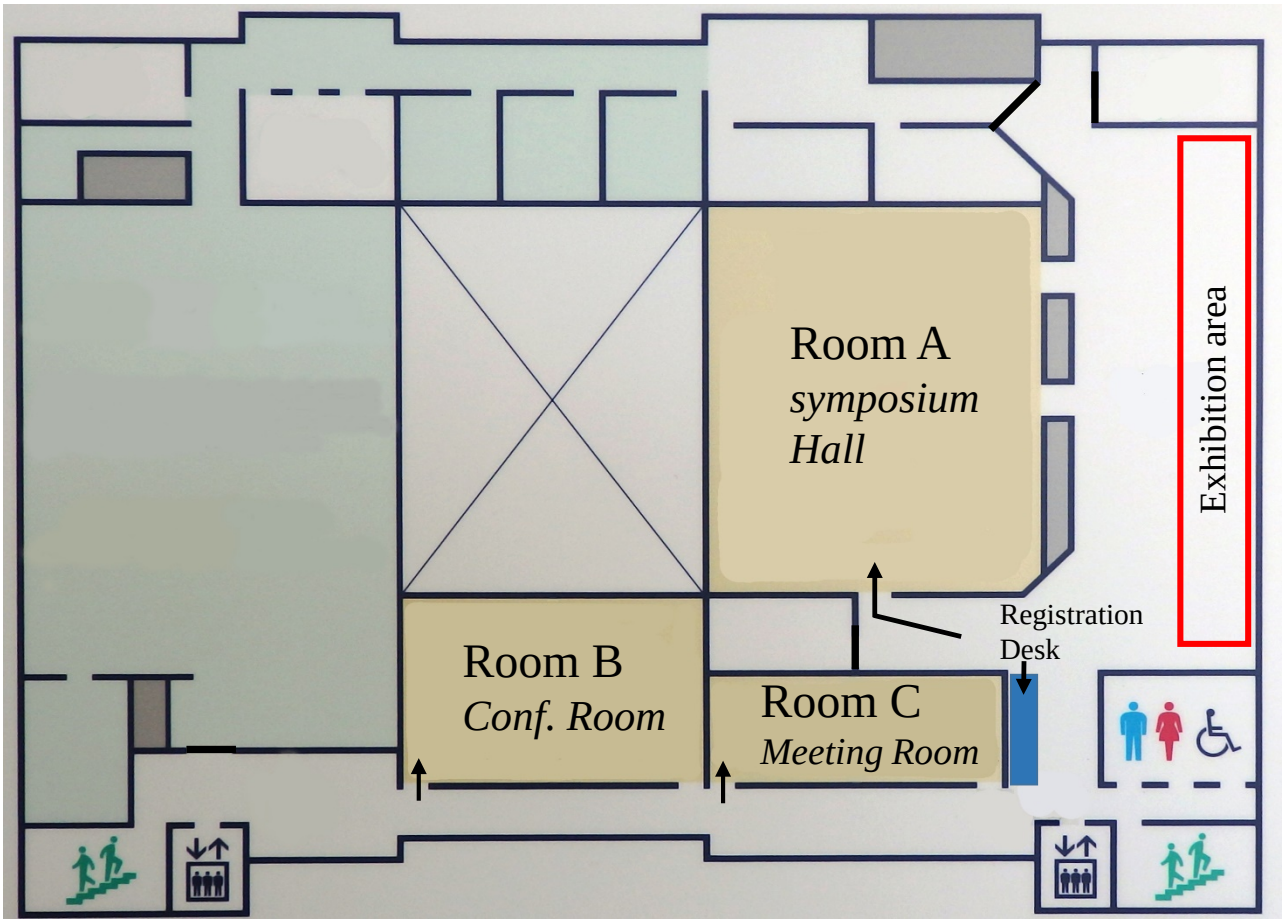

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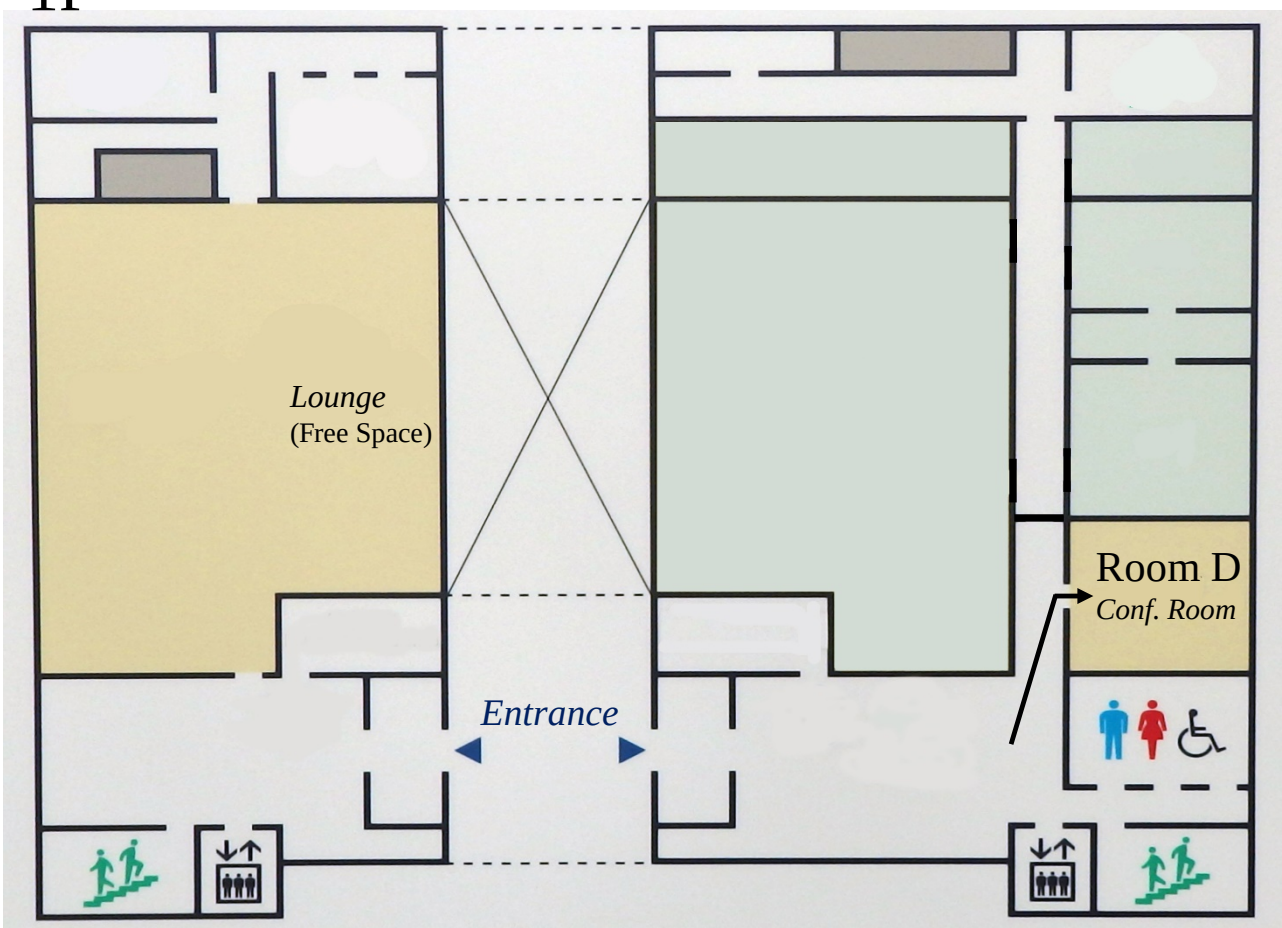

Banquet

18:00 - 20:00, Fri. Oct 28
Yoshida Cafeteria (Yoshida-South Campus)