

- Collaborative works are presented by the underlined authors. The talks with * mark are presented through document camera, while b marks denote presentations on whiteboards. The speakers with ★ marks are professors emeriti.

Applied Mathematics

September 25th (Thu) Conference Room VIII

9:30–11:30

- 09-01-0008
1 Hiroshi Nozaki (Aichi Univ. of Edu.) Linear programming bounds for regular graphs 15
- 09-01-0006
2 Toshiaki Adachi (Nagoya Inst. of Tech.) * Kähler graphs 10
Tuerxunmaimaiti Yaermaimaiti
(Nagoya Inst. of Tech.)
- 09-01-0007
3 Toshiaki Adachi (Nagoya Inst. of Tech.) * (1,1)-Laplacians for Kähler graphs 10
Tuerxunmaimaiti Yaermaimaiti
(Nagoya Inst. of Tech.)
- 09-01-0033
4 Iwao Sato (Oyama Nat. Coll. of Tech.) A zeta function with respect to the transition matrix of a discrete-time
Norio Konno (Yokohama Nat. Univ.) quantum walk on a graph 15
Yusuke Higuchi (Showa Univ.)
Etsuo Segawa (Tohoku Univ.)
- 09-01-0024
5 Yuusuke Suzuki (Niigata Univ.) Extension to triangulations with some properties from quadrangulations
Kenta Noguchi (Keio Univ.) 15
- 09-01-0025
6 Giñji Hamano (Tokyo Denki Univ.) Existence of a regular unimodular triangulation of the edge polytopes
Takayuki Hibi (Osaka Univ.) of finite graphs 15
Ohsugi Hidefumi
(Kwansei Gakuin Univ.)
- 09-01-0009
7 Yusuke Suyama (Osaka City Univ.) Numbering of vertices of simplicial 2-spheres 10
- 09-01-0049
8 Kenta Ozeki A decomposition of cubic graphs 15
(Nat. Inst. of Information/JST ERATO)
Dong Ye (Middle Tennessee State Univ.)

14:15–17:00

- 09-01-0001
9 Kazuhiko Ushio (Kinki Univ.) Balanced C_5 -foil designs and related designs 15
- 09-01-0029
10 Jun Fujisawa (Keio Univ.) Matching extension in projective planar graphs 15
Hiroki Seno (Yokohama Nat. Univ.)
- 09-01-0020
11 Kiyoshi Yoshimoto (Nihon Univ.) Locating sets of vertices on Hamiltonian cycles 15
Ralph J. Faudree (Univ. of Memphis)
Hao Li (Univ. de Paris Sud)
- 09-01-0018
12 Akira Saito (Nihon Univ.) Spanning trees homeomorphic to a small tree 15
Kazuki Sano (Nihon Univ.)
- 09-01-0026
13 Kiyoshi Ando A degree sum and forbidden subgraph condition for k -contractible edges
(Nat. Inst. of Information/JST ERATO) 10

- 09-01-0043
14 Atsuhiko Mizusawa (Waseda Univ.) A construction of smooth travel groupoids on finite graphs 15
Diogo Kendy Matsumoto
(Waseda Univ.)
- 09-01-0034
15 Shinya Fujita (Yokohama City Univ.) A note on covering edge colored hypergraphs by monochromatic components 10
Michitaka Furuya (Tokyo Univ. of Sci.)
András Gyárfás
(A. Rényi Inst. of Math.)
Ágnes Tóth (A. Rényi Inst. of Math.)
- 09-01-0047
16 Takahiro Matsushita (Univ. of Tokyo) On the topology of neighborhood complexes and the chromatic numbers of graphs 15
- 09-01-0046
17 Katsuhiko Kuribayashi (Shinshu Univ.) On the strong homotopy for quasi-schemoids 15
- 09-01-0039
18 Sho Suda (Aichi Univ. of Edu.) Gram matrices of reproducing kernel Hilbert spaces over graphs I 10
Michio Seto (Shimane Univ.)
Tetsuji Taniguchi
(Matsue Coll. of Tech.)
- 09-01-0037
19 Michio Seto (Shimane Univ.)* Gram matrices of reproducing kernel Hilbert spaces over graphs II ... 10
Sho Suda (Aichi Univ. of Edu.)
Tetsuji Taniguchi
(Matsue Coll. of Tech.)

September 26th (Fri) Conference Room VIII

9:30–11:30

- 09-01-0012
20 Ryuichi Ohori (Univ. of Tokyo) Walsh figure of merit is efficiently approximable 10
Takehito Yoshiki (Univ. of Tokyo)
- 09-01-0016
21 Kosuke Suzuki (Univ. of Tokyo) On the decay of the Walsh coefficients of smooth functions 15
Takehito Yoshiki (Univ. of Tokyo)
- 09-01-0023
22 Takehito Yoshiki (Univ. of Tokyo) The mean square quasi-Monte Carlo error for digitally shifted point sets 15
Takashi Goda (Univ. of Tokyo)
Ryuichi Ohori (Univ. of Tokyo)
Kosuke Suzuki (Univ. of Tokyo)
- 09-01-0044
23 Shin Harase (Tokyo Tech) Projections of Sobol' sequences 15
- 09-01-0028
24 Toshiaki Murofushi (Tokyo Tech) A computational approach for testing additive decomposability of monotone, supermodular set functions 15
Takafumi Horio (Tokyo Tech)
- 09-01-0048
25 Minoru Fujimoto (Seika Science Lab.) NP Complete problem by quadratic residue problem 15
Kunihiko Uehara (Tezukayama Univ.)
- 09-01-0027
26 Takuya Ikuta (Kobe Gakuin Univ.) Complex Hadamard matrices attached to some association schemes .. 15

13:00–14:00 Talk invited by Applied Mathematics Section

- 09-02-0002
Etsuo Segawa (Tohoku Univ.) Spectral mapping of quantum walks

September 27th (Sat) Conference Room VIII

9:30–11:55 Special Session “Moving boundary problems and its numerical and mathematical analysis”

09-02-0003	Tetsuya Ishiwata (Shibaura Inst. of Tech.)	Motion of polygonal curves by crystalline curvature flow	45
09-02-0006	Masato Kimura (Kanazawa Univ.)	Generalization of crystalline motion	45
09-02-0005	Masahisa Tabata (Waseda Univ.)	Numerical analysis of multiphase flows	45
14:15–16:30			
09-01-0010	27 Shingo Iwami (Kyushu Univ.)	Quantitative analysis of virus infection dynamics with distributed delay differential equations	15
09-01-0011	28 Toshikazu Kuniya (Kobe Univ.)	Analysis of an age-structured SIS epidemic model with spatial diffusion	15
09-01-0019	29 <u>Yasuaki Hiraoka</u> (Kyushu Univ.) Emerson G. Escobar (Kyushu Univ.)	Persistence modules on commutative ladder quivers	15
09-01-0022	30 <u>Emerson Gaw Escobar</u> (Kyushu Univ.) <u>Yasuaki Hiraoka</u> (Kyushu Univ.)	Computing persistence modules on commutative ladders of finite type	15
09-01-0021	31 <u>Genki Kusano</u> (Kyushu Univ.) <u>Yasuaki Hiraoka</u> (Kyushu Univ.)	An application of persistent homology to a coverage problem in sensor networks	15
09-01-0038	32 <u>Satoru Takagi</u> (Kogakuin Univ.) Hiroaki Uesu (Waseda Univ.)	An analysis of students’ needs for undergraduate mathematics lectures applying the Kano model	15
09-01-0014	33 Kazuaki Nakane (Osaka Univ.)	Image analysing method via homology —for cancer area detection—	15
09-01-0015	34 Kazuaki Nakane (Osaka Univ.)	Image analysing method via homology II —for general structures—	15

16:45–17:45 Talk invited by Applied Mathematics Section

09-02-0004	Yoshihito Oshita (Okayama Univ.)	Motion of droplets driven by curvature and potential	
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September 28th (Sun) Conference Room VIII

9:30–11:50

09-01-0002	35 Shunzi Horiguchi (Niigata Sangyo Univ.)	The conditional expressions III which compare convergences of Tsuchikura–Horiguchi method (the first extended recurrence formula of Yoshimasu Murase–Newton’s type)	10
09-01-0003	36 Shunzi Horiguchi (Niigata Sangyo Univ.)	The numerical computations of the conditional expressions III which compare convergences of Tsuchikura–Horiguchi method (the first extended recurrence formula of Yoshimasu Murase–Newton’s type)	10
09-01-0004	37 Issei Oikawa (Waseda Univ.)	A hybridized discontinuous Galerkin method with reduced stabilization	15
09-01-0030	38 <u>Shinya Uchiyumi</u> (Waseda Univ.) Masahisa Tabata (Waseda Univ.)	Analysis of a finite element scheme free from quadrature errors for the Navier–Stokes equations	15
09-01-0032	39 Takahito Kashiwabara (TU Darmstadt) <u>Guanyu Zhou</u> (Univ. of Tokyo) Issei Oikawa (Waseda Univ.)	Penalty method to the Stokes problem with slip boundary condition	15

09-01-0040	40 Tomoya Kemmochi (Univ. of Tokyo) Norikazu Saito (Univ. of Tokyo)	Discrete maximal regularity for abstract Cauchy problems and its application to finite element methods	15
09-01-0041	41 Yoshiki Sugitani (Univ. of Tokyo) Guanyu Zhou (Univ. of Tokyo) Norikazu Saito (Univ. of Tokyo)	Finite element approximation for the Stokes equations under a unilateral boundary condition	15
09-01-0042	42 Yuuki Ueda (Univ. of Tokyo) Norikazu Saito (Univ. of Tokyo)	On a high-accurate successive time-discretization method based on B-spline interpolation functions	15
09-01-0017	43 Khoji Ohtsuka (Hiroshima Kokusai Gakuin Univ.)	Solution of the shape optimization problem with Generalized J-integral by adjoint method	15
14:15–16:15			
09-01-0035	44 Koichi Anada (Waseda Univ. Senior High School) Tetsuya Ishiwata (Shibaura Inst. of Tech.)	Some features for blow-up solutions of a nonlinear parabolic equations	15
09-01-0036	45 Takiko Sasaki (Univ. of Tokyo) Norikazu Saito (Univ. of Tokyo)	Blow-up of finite difference solutions for nonlinear Schrödinger equations	15
09-01-0050	46 Daisuke Tagami (Kyushu Univ.)	An iterative domain decomposition method for eddy current problems with the gauge condition	15
09-01-0045	47 Koya Sakakibara (Univ. of Tokyo) Shigetoshi Yazaki (Meiji Univ.)	Numerical computation of the one phase Hele-Shaw flow based on the charge simulation method	15
09-01-0013	48 Tomoyuki Miyaji (Kyoto Univ.)	Computer-assisted analysis to dynamical systems with four-leaf orbits	15
09-01-0005	49 George Miyake (Ube Nat. Coll. of Tech.) Yuji Katsuta (Ube Nat. Coll. of Tech.)	A method of computing parameter values for shaping a limit cycle into a separatrix loop	15
09-01-0051	50 Ayuki Sekisaka (Tohoku Univ.)	The relationship between the stability of pulse and the absolute spectrum in reaction diffusion system	15
16:30–17:30 Talk invited by Applied Mathematics Section			
09-02-0001	Takeshi Takaishi (Hiroshima Kokusai Gakuin Univ.)	A phase-field model for crack growth and its numerical verification	