Applied Mathematics

September 18th (Tue)   Session Room VI

9:30–12:00

1 Takamichi Sushida (Ryukoku Univ.)[♯] Triangular spiral tilings $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 20
 Akio Hizume (Ryukoku Univ.)
 Yoshikazu Yamagishi (Ryukoku Univ.)

2 Midori Kobayashi (Univ. of Shizuoka)[♯] Dudeney's round table problem and neighbour-balanced Hamilton de-
 Nobuaki Mutoh (Univ. of Shizuoka) compositions $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 10
 Gisaku Nakamura (Univ. of Shizuoka)

3 Tomoki Nakamigawa   [♯] A Ramsey type problem for multiple disjoint copies of induced sub-
  (Shonan Inst. of Technology) graphs $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 10

4 Shuya Chiba (Tokyo Univ. of Sci.)[♯] Tutte cycles and Hamiltonicity of 4-connected claw-free graphs $\cdots\cdots$ 20
 Roman Čada (Univ. of West Bohemian)
 Kenta Ozeki (Nat. Inst. of Information)
 Petr Vrána (Univ. of West Bohemian)
 Kiyoshi Yoshimoto (Nihon Univ.)

5 Norio Konno (Yokohama Nat. Univ.)[♯] The graph isomorphism problem and quantum walk $\cdots\cdots\cdots\cdots\cdots$ 15
 Iwao Sato (Oyama Nat. Coll. of Tech.)

6 Iwao Sato (Oyama Nat. Coll. of Tech.)[♯] Weighted zeta functions for quotients of regular coverings of graphs $\cdots$ 15
 Seiya Negami (Yokohama Nat. Univ.)

7 Hye Jin Jang   (POSTECH)[♯] On fat Hoffman graphs with smallest eigenvalue at least -3 $\cdots\cdots\cdots$ 10
 Jack Koolen   (POSTECH)
 Akihiro Munemasa (Tohoku Univ.)
 Tetsuji Taniguchi
   (Matsue Coll. of Tech.)

8 Chie Nara   (Tokai Univ.)[♯] Refold rigidity of convex polyhedra $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15
 Jin-ichi Itoh (Kumamoto Univ.)
 Erik D. Demaine   (MIT)
 Martin L. Demaine   (MIT)
 Anna Lubiw (Univ. Waterloo)
 Joseph O'Rourke (Smith Coll.)

9 Kazuhiko Ushio (Kinki Univ.)[♯] Balanced (C_7, C_{12})-foil designs and related designs $\cdots\cdots\cdots\cdots\cdots$ 15

14:15–16:40

10 Yutaka Sueyoshi (Nagasaki Univ.)[♯] On a construction of equitable round-robin tournaments with home-
 Ryuichi Harasawa (Nagasaki Univ.) away assignments $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 20
 Aichi Kudo (Nagasaki Univ.)

11 Yasuo Katsumata (Asia Univ.)[*] Analysis of a fuzzy Shapley value and its application $\cdots\cdots\cdots\cdots\cdots$ 10
 Sakae Tsuda (Kokugauin High School)
 Kenichi Nagashima (Waseda Univ.)
 Hajime Yamashita (Waseda Univ.)

12   Hiromasa Nakayama   ♯   Holonomic gradient descent method for the Fisher–Bingham distribu-
         (Kobe Univ. / JST CREST)   tion on the n-dimensional sphere $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15
     Tamio Koyama   (Kobe Univ.)
     Kenta Nishiyama
         (Osaka Univ. / JST CREST)
     Nobuki Takayama (Kobe Univ.)

13   Myoungnyoun Kim   (NIMS)♯   Improving reconstruction image using weighted voxel specific signal-to-
     Tae Young Ha   (NIMS)   noise ratios in MREIT $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15
     Eung Je Woo (Kyung-Hee Univ.)
     Oh In Kwon   (Konkuk Univ.)

14   Hidehiro Shinohara (Tohoku Univ.)♯   Square Lehman matrices which are not cores of minimally non-ideal
                                              clutters $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15

15   Akira Saito   (Nihon Univ.)♯   Star-factors with large components $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15
     Mikio Kano   (Ibaraki Univ.)

16   Kenta Noguchi   (Keio Univ.)♯   Relations between current graphs, voltage graphs and cycle parities $\cdots$ 15

17   Kenta Ozeki (Nat. Inst. of Information)♯   Hamiltonicity of k-prism, a k-tree, a k-walk and a k-cycle cover of graphs
                                              $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15

16:50–17:50   Invited Talk by Research Section

     Yusuke Suzuki (Niigata Univ.)♯   1-embedded graphs as seen from a viewpoint of re-embedding structures

September 19th (Wed)   Session Room VI

9:30–12:15

18   Shunji Horiguchi   ♯   Convergence comparison in the conditional expressions II of Tsuchikura–
         (Niigata Sangyo Univ.)   Horiguchi's method (Yoshimasu Murase–Newton type's first enhancing
                                              recurrence formula) $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15

19   Shunji Horiguchi   ♯   Nnumerical computations concerning elementary functions of a general
         (Niigata Sangyo Univ.)   convergence comparison in the conditional expression II of Tsuchikura–
                                              Horiguchi's method $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15

20   Yuji Katsuta (Ube Nat. Coll. of Tech.)♯   An analysis of a eight-order nonlinear symmetrical differential equation
     George Miyake   with dihedral group D_4 and odd function $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 20
         (Ube Nat. Coll. of Tech.)

21   Hirotake Yaguchi   (Mie Univ.)*   Construction and security of hash functions based on β-transformations
                                              on [1,2) $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15

22   Shy-Der Lin   *   Particular solutions of associated Cauchy–Euler fractional partial dif-
         (Chung Yuan Christian Univ.)   ferential equation $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15
     Chia-Hung Lu
         (Chung Yuan Christian Univ.)

23   Noppharat Chaifong (Chuo Univ.)♯   A dynamical model of human immune response to two type influenza
                                              virus infections $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15

24   Eunok Jung   (Konkuk Univ.)♯   Mathematical models of circulatory systems $\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15
     Wanho Lee   (Konkuk Univ.)
     Yongsam Kim (Chung-Ang Univ.)

25   Jeongwhan Choi (Korea Univ.)[♯]   Supercritical surface waves generated by a negative or oscillatory forcing
Shu-Ming Sun (Virginia PolyTech)   · 15
Sungim Whang   (Ajou Univ.)

26   Prashant Kumar (POSTECH)[♯]   Mathematical modelling of the ship hydrodynamics in Pohang New Har-
Kim Kwang Ik   (POSTECH)   bor · 15

September 20th (Thu)   Session Room VI

9:30–12:00

27   Kiyohisa Tokunaga   [♯]   The curl theorem of a triangular integral · 15
        (Fukuoka Inst. of Tech.)

28   Yoshihiro Saito   [♯]   Numerical asymptotic stability of the θ-Maruyama simplified scheme
        (Gifu Shotoku Gakuen Univ.)   · 15

29   Shingo Saito   (Kyushu Univ.)*   Relation between the premium principle based on Wang's transform and
        the Hermite polynomials · 10

30   Koya Sakakibara (Meiji Univ.)[♯]   A new method approximating holomorphic functions by linear combi-
        nations of $1/(z-\zeta)$ I —Analysis in an elliptic domain— · · · · · · · · · · · 15

31   Koya Sakakibara (Meiji Univ.)[♯]   A new method approximating holomorphic functions by linear combi-
        nations of $1/(z-\zeta)$ II —Analysis in an annular domain— · · · · · · · · · 15

32   Shingo Iwami   (Kyushu Univ.)[♯]   Modeling acute phase of viral infection · 20

33   Michiel Bertsch   [♯]   Traveling wave solutions arising in a tumour growth model with contact
        (Univ. Rome Tor Vergata)   inhibition · 15
Danielle Hilhorst (Univ. de Paris-Sud)
Hirofumi Izuhara (Meiji Univ.)
Masayasu Mimura (Meiji Univ.)
Tohru Wakasa (Kyushu Inst. of Tech.)

34   Tatsuki Mori (Ryukoku Univ.)[♯]   Numerical study on stationary solutions and the stability of a 2d SKT
Shoji Yotsutani (Ryukoku Univ.)   cross-diffusion equation · 15

14:15–16:40   Special Session   —Medicine and Mathematics—

Yasushi Okada   (RIKEN)[♯]   Understanding the functions of biological molecular motors through
        modeling · 45

Motohisa Osaka   [♯]   Applied mathematics on sudden cardiac death and rhythm · · · · · · · · · 45
(Nippon Verterinary and Life Sci. Univ.)

Jun-ichi Okada (Univ. of Tokyo)[♯]   Multiscale multiphysics heart simulator based on finite element method
        · 45

16:50–17:50   Invited Talk by Research Section

Yuji Kodama (Ohio State Univ.)[♯]   KP solitons and Mach reflection in shallow water

September 21st (Fri)   Session Room VI

9:00–12:00

35   Junichi Nakagawa (Nippon Steal Corp.)[♯]   Evolution of local maximums of non-symmetric solutions to some reaction-
Gen Nakamura (Hokkaido Univ.)   diffusion systems · 10
Satoshi Sasayama (Hokkaido Univ.)
Haibing Wang (Hokkaido Univ.)

36   Kazumi Tanuma (Gunma Univ.) *   Perturbation of phase velocity of Rayleigh waves and Stoneley waves in
Chi-Sing Man (Univ. of Kentucky)   anisotropic elastic media with orthorhombic principal part $\cdots\cdots\cdots$ 15
Wenwen Du (Univ. of Kentucky)

37   Nobuyuki Higashimori   ♯   A direct numerical method for solving the initial boundary value prob-
(Hitotsubashi Univ.)   lem of the three dimensional radiative transport equation $\cdots\cdots\cdots$ 15
Hiroshi Fujiwara (Kyoto Univ.)

38   Xiao-Yu Zhang   ♯   Effective condition numbers of finite difference methods for elliptic equa-
(Beijing Forestry Univ./Yamagata Univ.)   tions with singularities $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15
Qing Fang   (Yamagata Univ.)

39   Masashi Katsurada (Meiji Univ.) ♯   Eigenvalue problems of the biharmonic operator in a square region —
Yuki Hirano (Anjo Higashi High School)   Finite difference analysis of chladni figures $\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15

40   Kaname Matsue (Tohoku Univ.) ♯   Rigorous numerical verification of saddle-saddle connections $\cdots\cdots\cdots$ 20
Nobito Yamamoto
(Univ. of Electro-Comm.)

41   Tomohiro Hiwaki   ♯   Numerical verification of a domain included by the basin of a limit cycle
(Univ. of Electro-Comm.) $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 20
Nobito Yamamoto
(Univ. of Electro-Comm.)

42   Akitoshi Takayasu (Waseda Univ.) ♯   Verified computations for elliptic boundary value problems on arbitrary
Xuefeng Liu   (Waseda Univ.)   polygonal domains $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 20
Shin'ichi Oishi
(Waseda Univ./JST CREST)

43   Takehiko Kinoshita (Kyoto Univ.) ♯   A numerical verification method for solutions of IVP for ODEs using a
Takuma Kimura (Waseda Univ.)   linearized inverse operator $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15
Mitsuhiro T. Nakao
(Sasebo Nat. Coll. of Tech.)

14:15–16:30

44   Yoshitaka Watanabe (Kyushu Univ.) ♯   A numerical verification of the invertibility of linear operators with in-
Mitsuhiro T. Nakao   verse norm estimations $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 15
(Sasebo Nat. Coll. of Tech.)

45   Kenta Kobayashi (Hitotsubashi Univ.) ♯   The circumradius condition on triangular elements and its applications
Takuya Tsuchiya (Ehime Univ.) $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 20

46   Fumio Kikuchi   ♯   Strong L^p convergence associated with Rellich-type discrete compact-
(Hitotsubashi Univ./Univ. of Tokyo)   ness for discontinuous Galerkin FEM $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 20
Daisuke Koyama
(Univ. of Electro-Comm.)

47   Daisuke Koyama   ♯   An optimized Schwarz method for acoustic radiation problems $\cdots\cdots$ 20
(Univ. of Electro-Comm.)

48   Hirofumi Notsu (Waseda Univ.) ♯   Error estimates of a pressure-stabilized characteristics finite element
Masahisa Tabata (Waseda Univ.)   scheme for the Oseen equations $\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 20

49   Hiroshi Kanayama (Kyushu Univ.) ♯   Domain decomposition computation of thermal convection problems
based on the characteristic curve method $\cdots\cdots\cdots\cdots\cdots\cdots\cdots$ 20

16:45–17:45   Invited Talk by Research Section

Daisuke Tagami (Kyushu Univ.) ♯   Numerical analysis of flow problems with finite element methods —From
error analysis to parallel computations