



Forum Math-for-Industry Information Recovery and Discovery

2012

Venue: Fukuoka International Congress Center
Date: October 22(Mon) - 26(Fri), 2012

Invited Lectures

- Kathy Horadam** School of Mathematical and Geospatial Sciences, RMIT University, Australia
Biometrics, Information Networks and Points Between
- Alejandro Jofré** CMM & DIM, Universidad de Chile
Optimization and Game Theory in Energy Markets
- Robert McKibbin** Centre for Mathematics in Industry, Massey University, New Zealand
Industrial Mathematics Adventures in the South-West Pacific
- Junji Nakano** School of Statistical Thinking and Department of Statistical Modeling, The Institute of Statistical Mathematics, Japan
Some Topics in Computational Statistics and Statistical Training
- Konrad Polthier** Freie Universität Berlin and Matheon Research Center, Germany
Applications of Integrable Discrete Geometric Structures
- Zuwei Shen** Department of Mathematics, National University of Singapore
MRA based Wavelet Frame and Applications
- Moti Yung** Google Inc., / Columbia University, U.S.A.
Cryptography: From Mathematics to Industrial Solutions

Scientific Committee

- Bob Anderssen** Mathematics, Informatics and Statistics, CSIRO, Australia
- Ken Anjyo** OLM Digital, Inc., Japan
- Jonathan Hosking** IBM T. J. Watson Research Center, U.S.A.
- Yoshimasa Kadooka** Fujitsu Limited, Japan
- Junichi Nakagawa** Nippon Steel Corporation, Japan
- Jos Stam** Autodesk Research, Canada
- Kim-Chuan Toh** Department of Mathematics, National University of Singapore
- Evgeny Verbitskiy** Mathematical Institute, Leiden University, Netherlands

Organizing Committee

Yasuhide Fukumoto
Tim Hoffmann
Ryuei Nishii
Osamu Saeki
Tsuyoshi Takagi
Masato Wakayama



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Global COE Program "Education-and-Research Hub for Mathematics-for-Industry", Kyushu University and Kobe University
Institute of Mathematics for Industry, Faculty of Mathematics, Graduate School of Mathematics, Kyushu University

FMI2012 Organizing Office

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Koichiro Akiyama (Toshiba Corporation, Japan)

A Survey on Algebraic Surface Cryptosystems

Noel Barton (Sunoba Pty Ltd., Australia)

Mathematical Simulation Answers Investor Questions on New Concepts for Solar Power

Andreas Binder (MathConsult GmbH, Austria)

Model Uncertainty in Computational Finance

Hayato Chiba (IMI, Kyushu University, Japan)

A Spectral Theory of Linear Operators on Gelfand Triplets and its Applications to Infinite-dim Dynamical Systems

Xavier Dahan (FM, Kyushu University, Japan)

An Application of Height Theory to "Modular Methods" for Exact Computations

Jonathan Hosking (IBM Research Division, T. J. Watson Research Center, U.S.A.)

Short-term Forecasting of Demand for Electricity in the Smart Grid

Naoyuki Kamiyama (IMI, Kyushu University, Japan)

Pareto Stability in a Two-sided Matching Market with Indifferences

Sei Kato (IBM Global Business Services, Japan)

Big Data, Big Simulation, and Deep Learning

Atsushi Kawamoto (TOYOTA CENTRAL R&D LABS., INC., Japan)

Topology Optimization in Multiphysics Problems

Frank Lutz (Technische Universität Berlin, Germany)

Discrete Topology of Grains and Periodic Foams

Osamu Maruyama (IMI, Kyushu University, Japan)

Protein Complex Prediction

Yoshihiro Mizoguchi (IMI, Kyushu University, Japan)

Mathematical Aspects of Interpolation Technique for Computer Graphics

Junichi Nakagawa (Nippon Steel Corporation, Japan)

Mathematical Core Technology for a Traffic Flow System Using the Model Predictive Control of Large and Complex Networks

Yoshiyuki Ninomiya (IMI, Kyushu University, Japan)

Model Selection for Irregular Statistical Models

Wayne Rossman (Kobe University, Japan)

Comparison of Smooth, Discrete and Semi-discrete Surfaces

Taizo Shirai (Sony Corporation, Japan)

Mathematics Used in Recent Cryptographic Technologies

Jos Stam (Autodesk Research, Canada)

Fluid Dynamics for Entertainment

Tamon Suwa (FUJITSU LIMITED, Japan)

A Tsumani Simulator: Combination of the Particle-based Method and the Nonlinear Wave Model

Daisuke Tagami (IMI, Kyushu University, Japan)

Efforts to Establish a Disaster Assessment with the High Performance Computings

Koichiro Takayama (FUJITSU LABORATORIES LTD., Japan)

A Survey of Formal Methods for Hardware Design and Verification, and Expectations for Mathematics

Jun'ichi Takeuchi (Kyushu University, Japan)

Sparse Learning and Some Applications

Paul Urbach (Delft University of Technology, The Netherlands)

Mathematical Optimization for Applied Optical Problems

Hayato Waki (IMI, Kyushu University, Japan)

Degeneracy in Semidefinite Programming

Masahiro Yamamoto (The University of Tokyo, Japan)

Industrial Mathematics by Inverse Problems: expectations for Innovation by Mathematics