

Forum "Math-for-Industry" 2011 TSUNAMI - Mathematical Modelling

Using Mathematics for Natural Disaster Prediction, Recovery and Provision for the Future

Venue: East-West Center, University of Hawai'i

Date: October 24-28, 2011

Keynote Address

Jonathan HOSKING (IBM T.J. Watson Research Center, USA)
Towards Statistical Modeling of Tsunami Occurrence with Regional Frequency Analysis

Marcelo KOBAYASHI (Mechanical Engineering, University of Hawai'i at Manoa, USA)
On the Modeling of Debris Impact on Structures on Tsunami Events

Kristin LAUTER (Microsoft Research, USA)
Cloud Computing: Hedging against Disaster

George PAPANICOLAOU (Mathematics Department, Stanford University, USA)
Stochastic Aspects of Modeling Shallow Water Waves over Random Topographies with Application to Tsunamis

Jos STAM (Autodesk Research, CANADA)
Nucleus: A Unified Dynamics Solver

Organizing Committee

Monique CHYBA (Department of Mathematics, University of Hawai'i at Manoa)

Yasuhide FUKUMOTO (IMI, Kyushu University)

Thomas HANGELBROEK (Department of Mathematics, University of Hawai'i at Manoa)

Kenji KAJIWARA (IMI, Kyushu University)

H. Ronald RIGGS (Civil and Environmental Engineering, University of Hawai'i at Manoa)

Osamu SAEKI (IMI, Kyushu University)

Tsuyoshi TAKAGI (IMI, Kyushu University)

Masato WAKAYAMA (IMI, Kyushu University)



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Kyushu University
University of Hawai'i at Manoa

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Global COE Program "Education-and-Research Hub for Mathematics-for-Industry", Kyushu University
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Contact

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Invited Talks

Bob ANDERSEN (CSIRO, AUSTRALIA)

The Role of Plant Breeding in Avoiding Food Famine

Armin BRUDERLIN (Sony Pictures Imageworks, USA)

Digital Hair and Other Tools for Entertainment

Qi-fu CHEN (Institute of Earthquake Science, CHINA)

Computation Applications in Seismology

Kwok Fai CHEUNG (Department of Ocean and Resources Engineering, University of Hawai'i at Manoa, USA)

The Tohoku-oki Earthquake and Tsunami of March 11, 2011

Yasuaki HIRAOKA (IMI, Kyushu University, JAPAN)

Applications of Sheaf Cohomology and Exact Sequences to Network Coding

Cheng HUA (Department of Mechanics and Engineering Science, Fudan University, CHINA)

2-D Viscoelastic FEM Simulation on the Longmen Shan Fault Zone which Ruptured in the 2008 Wenchuan Earthquake

Alejandro JOFRÉ (Centro de Modelamiento Matemático, Universidad de Chile, CHILE)

Seismic Risk for Underground Mines and the Determination of the Seismic Moment Tensor: Theoretical and Numerical Results

Masato KIMURA (IMI, Kyushu University, JAPAN)

Continuous and Discrete Crack Propagation Models with Energy Gradient Property

Yuji KODAMA (Department of Mathematics, Ohio State University, USA)

Tsunami as KP-Solitons

Jae Ryong KWEON (Department of Mathematics, POSTECH, KOREA)

Compressible Viscous Navier-Stokes Flows over Corners and Some Numerical Examples

Hiroki MASUDA (IMI, Kyushu University, JAPAN)

Very Simple Estimation of a Non-Gaussian Process Model

Goffry MERCER (National Centre for Epidemiology and Population Health, Australian National University, AUSTRALIA)

The three 'R's of Disease Modelling for Disasters: Readiness, Response and Retrospection

Kirill MOROZOV (IMI, Kyushu University, JAPAN)

Improving Dependability Using Secret Sharing

Junichi NAKAGAWA (Nippon Steel Corporation, JAPAN)

Creating an Interdisciplinary Platform for Taking Aim at Technological Innovation Based on Mathematics - A Case of Soil Contamination -

Ryuei NISHII (IMI, Kyushu University, JAPAN)

Statistical Modeling of Hyper-Dimensional Data and Spatio-Temporal Data

Boris PAVLOV (New Zealand Institute for Advanced Study, NEW ZEALAND)

A Solvable Model for Boundary Stress on Tectonic Plates Under Dissipative Boundary Conditions

Jane SEXTON (Geoscience Australia, AUSTRALIA)

Tsunami Modelling: Making Mathematics Relevant to Emergency Managers

Kunio SHIMIZU (Department of Mathematics, Faculty of Science and Technology, Keio University, JAPAN)

Distributions on the Disc and Annulus with Fit to Earthquake Magnitude Data

Atsushi TERO (IMI, Kyushu University, JAPAN)

Transport Network Which is Robust for Disaster but Inexpensive Learned by Organism

Kim Chuan TOH (Department of Mathematics, National University of Singapore, SINGAPORE)

Solving Log-Determinant Optimization Problems by a Newton-CG Primal Proximal Point Algorithm

Masahiro WATANABE (Fujitsu Ltd., JAPAN)

Tsunami Simulation on 3D Geographical Data and Realistic Visualization Techniques

George WILKENS (Department of Mathematics, University of Hawai'i at Manoa, USA)

Geometric Methods in the Control of Mechanical Systems

Sangwoon YUN (School of Computational Sciences, KIAS, KOREA)

Linearized Alternating Minimization Method for a New Multiplicative Denoising Model

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