Mathematical Modelling for soil contamination
  - Creating an interdisciplinary platform for taking
    aim at mathematical innovation .......................... 1
    J. NAKAGAWA (Nippon Steel Corporation)
Existence of phase transition of percolation on fractal lattices ...................... 12
  M. SHINODA (Nara Women's University)
Macroscopic corrosion front computations of sulfate attack in sewer pipes
  based on a micro-macro reaction-diffusion model ...................................... 22
  V. CHALUPECKÝ (Kyushu University)
Surfactant effect on the multiscale structure of bubbly flows ......................... 32
  S. TAKAGI (University of Tokyo)
Multiscale simulation for polymer material design ........................................ 46
  T. AOYAGI (Asahi Kasei Corporation)
Multiscale simulation of nonlinear phenomena of plasmas ................................ 55
  R. NUMATA (University of Hyogo)

On the Hamilton-Jacobi variational formulation of the Vlasov equation ......... 64
  P. J. MORRISON (University of Texas at Austin)
A new solution method for singular perturbation problems
  in magnetized plasmas .................................................................................. 75
  M. FURUKAWA (University of Tokyo)
Multi-scale modeling in heterogeneous material properties ........................ 84
  M. ASAI (Kyushu University)
Efficient numerical computations on large scale electromagnetic field problems using an iterative domain decomposition method
D. TAGAMI (Kyushu University)

Variational approach to multi-scale dynamical system
- an application to collisionless magnetic reconnection
M. HIROTA (Japan Atomic Energy Agency)

Multiscale characteristics of moist conventions and heavy precipitation in the tropics
S. YODEN (Kyoto University)

Dimension reduction study of microseismic activity in the earth’s crust and mantle in the plate boundary region
M. TORIUMI (JAMESTEC)

December 11, 2011

On the evolution of copulas
N. ISHIMURA (Hitotsubashi University)

Real indeterminacy and conservation law in random matching models with divisible money
K. KAMIYA (University of Tokyo)

On fundamental of Rayleigh-Taylor turbulent mixing: correlations and fluctuations in statistically unsteady turbulent processes
S. I. ABARZHI (University of Chicago)

Self-organization in a foliated phase space
Z. YOSHIDA (University of Tokyo)