

INTERNATIONAL WORKSHOP

on **Large-scale Matrix** Computation and Applications in **Physics** and **Engineering** Science

Dec. 13  9:30-18:05 in Seminar Room A (367), Build. Eng. 6
Hongo Campus, Univ. of Tokyo
東京大学 工学部6号館(本郷) セミナー室A(367号室)

TOPICS

The development of algorithms for large scale matrix calculations and their applications in the fields of physics and engineering.

SPEAKERS and TITLES

- 9:30- 9:35** Opening and announcement
- 9:35-10:30** Z. Bai (Univ. California, Davis)
“**Robust and Efficient Matrix Solvers in SciDAC Applications**”
(Information about SciDAC can be found: <http://www.scidac.gov>)
- 10:30-11:25** Y. Oyanagi (Kogakuin Univ.)
“**Architecture-Algorithm Codesign**”
- 11:25-12:20** S. Takagi*, K.Sugiyama and Y.Matsumoto (Univ. of Tokyo)
“**Multiscale simulations of dispersed multiphase flows**”
- Lunch**
- 14:00-14:40** S. Todo (Univ. of Tokyo)
“**Order-N Monte Carlo algorithm for spin systems with long-range interaction**”
- 14:40-15:35** A. Nakano (Univ.Southern California)
“**Metascalable Reactive Atomistic Simulation of Nano-mechano-chemistry**”
- Coffee break**
- 16:00-16:40** T. Sogabe (Nagoya Univ.)
“**On an application of the QMR method to complex symmetric shifted linear systems**”
- 16:40-17:20** T. Hoshi (Tottori Univ.)
“**Novel algorithms in large-scale quantum-mechanical calculation and their application to nano-material processes**”
- 17:20-18:00** S. Yamamoto (CREST-JST)
“**Excitation spectra of a stripe ordered many-electron system**
- applications of the shifted COCG method to very large matrices -”
- 18:00-18:05** Closing

CREST-JST, T.Fujiwara Group

“Novel methodology of electronic structure calculations by combining several different aspect”

