

CREST Kotani Team Mini-Workshop

- Topological Phases in Spintronics -

Date : 16th February (Sun.), 2014

Place : Seminar Room (2nd floor) , AIMR, Tohoku University
(2-1-1, Katahira Aoba-ku, Sendai 980-8577, Japan)

"A Mathematical Challenge to a New Phase of Material Sciences"

led by Motoko Kotani (Tohoku University) Organizing

Sponsored by

- Japan Science and Technology Agency (JST) CREST The Mathematics Program
- Research Institute for Mathematical Sciences, Kyoto University

Program

9:00- 9:50 **Hermann Schulz-Baldes** (Friedrich-Alexander-Universität Erlangen-Nürnberg)
"Z₂ indices for odd symmetric Fredholm operators"

10:00-10:50 **Shuichi Murakami** (Tokyo Institute of Technology)
"Topological phases in condensed matter"

11:00-11:50 **Emil V. Prodan** (Stern College for Women of Yeshiva University)
"Invitation to a Computational Non-Commutative Geometry Program"

Lunch

14:00-14:50 **Mikio Furuta** (The University of Tokyo)
"Dirac operators on spin 4-manifolds and mod 2 index."

15:00-15:50 **Hitoshi Moriyoshi** (Nagoya University)
"A generalization of the Atiyah-Singer index theorem in Fractal Geometry"

Tea break

16:30-17:20 **Peter Kuchment** (Texas A&M University)
"Wannier function frames in presence of non-trivial Bloch bundles"