

**Progress in Variational Problems**  
**- Variational Problems Interacting with**  
**Probability Theories -**

RIMS conference

Organizers: Futoshi Takahashi (Osaka City Univ.),  
Michinori Ishiwata (Fukushima Univ.)

**June 11 (Mon.) - June 13 (Wed.), 2012**

**Research Institute for Mathematical Sciences (RIMS),**  
**4F Lecture Room 420, Kyoto University,**

June 11 (Mon.)

14:00~14:50 Takashi Suzuki ( Osaka University )

Trudinger-Moser inequality for a point vortex mean field limit with multi-intensities

15:00~15:50 Takuya Machida ( Meiji University )

Relationship between quantum walks and differential equations

16:00~16:50 Jongmin Han ( Kyung Hee University )

Structure of radial solutions of nonlinear equations arising from Chern-Simons  $O(3)$   
sigma-model

**Session -Variational Problems Interacting with Probability Theories -**

( Session organizer: F. Takahashi )

June 12 (Tue.)

10:00~10:50 Shin-ichi Ohta ( Kyoto University )

Curvature-dimension condition and heat flow on metric measure spaces

11:00~11:50 Adrien Blanchet ( Université de Toulouse )

The Keller-Segel system via optimal transport

13:10~14:00 Toshio Mikami (Hiroshima University)

Stochastic optimal transportation and related topics

14:10~15:00 Kazuhiro Kuwae (Kumamoto University)

On non-linear spectral gap for symmetric Markov chains with coarse Ricci curvature

15:10~16:00 Naoyuki Ichihara (Hiroshima University)

Long time asymptotic problems for stochastic optimal control and related variational problems

16:10~17:00 Shigeki Aida (Tohoku University)

Tunneling for  $P(\phi)_2$ -Hamiltonians

18:30~ Banquet

June 13 (Wed.)

9:30~10:20 Didier Smets ( Université Pierre & Marie Curie )

On the stability of filament flows and Schrodinger maps

10:30~11:20 Norisuke Ioku (Ehime University)

Hardy type inequalities with scale invariance in limiting cases

11:30~12:20 Ryuji Kajikiya (Saga University)

Semilinear elliptic equations in symmetric domains

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