# Conference Schedule

## August 25, 2014 Monday

**Location:** Room 3401, 4th floor of 3rd Bld., **Chair:** S. Aida

| Time | Speaker | Title |
|---|---|---|
| 08:30 - 09:40 | Registration (The registration will take place in front of the ROOM 3401) | |
| 09:40 - 09:50 | Opening remarks by Yutaka Maeda, the vice president of Kansai University | |
| 09:50 - 10:30 | Mu-Fa Chen | Progress on Hardy-type Inequalities |
| 10:30 - 10:50 | Coffee Break | |
| 10:50 - 11:30 | Feng-Yu Wang | Spectral Gap for Markov Operators |
| 11:40 - 12:20 | Hirofumi Osada | Strong solutions of infinite-dimensional stochastic differential equations and tail theorems. |
| 12:20 - 13:40 | LUNCH | |

**Location:** Room 3401[a] and 3402[b], 4th floor of 3rd Bld., **Chair:** W. Hoh[a]/G. Trutnau[b]

| Time | Speaker | Title |
|---|---|---|
| 13:40 - 14:10 | H. Aikawa[a]<br>M. Neklyudov[b] | • Intrinsic ultracontractivity via capacitary width[a]<br>• Dynamics of nanomagnetic particle systems[b] |
| 14:15 - 14:45 | K. Hees[a]<br>K.J. Paczka[b] | • Coupled Continuous Time Random Maxima[a]<br>• On the properties of Poisson random measures and Poisson integrals associated with a G-Lévy process[b] |
| 14:50 - 15:20 | C. Park and G.H. Kim[a]<br>V. Steblovskaya[b] | • Isomorphisms and derivations in proper $CQ^*$-al -gebras[a]<br>• Asymptotic analysis of probabilistic integrals in infinite dimensions[b] |
| 15:20 - 15:40 | Coffee Break | |

**Location:** Room 3401, 4th floor of 3rd Bld., **Chair:** N. Jacob

| Time | Speaker | Title |
|---|---|---|
| 15:40 - 16:20 | Nikolas Bouleau | Some Historical Aspects of Error Calculus by Dirichlet Forms |
| 16:30 - 17:10 | Hiroshi Kaneko | Dirichlet space and Orlicz space on ends of tree associated with nodewise given Dirichlet forms with tier linkage |
| 17:20 - 18:00 | Yves Le Jan | Markov loops and free fields |
| 18:30 - 20:00 | Welcome Party at Cafeteria "Callion"<br>(Cafeteria "Callion" is located at the 2nd floor of "RINPUKAN" which is next to the conference venue) | |

## August 26, 2014 Tuesday

**Location:** Room 3401, 4th floor of 3rd Bld., **Chair:** K. Kuwada/F.-Y. Wang

| **Time** | **Speaker** | **Title** |
|---|---|---|
| 09:00 - 09:40 | Dominique Bakry | Orthogonal polynomials and diffusion processes |
| 09:50 - 10:30 | Shigeki Aida | Asymptotics of the spectral gap on a loop space over a hyperbolic space |
| 10:30 - 10:50 | Coffee Break | |
| 10:50 - 11:30 | Karl-Theodor Sturm | Dirichlet forms, metric measure spaces and curvature -dimension conditions |
| 11:40 - 12:20 | Jun Kigami | Time change of Brownian motion and quasisymmetry |
| 12:20 - 12:30 | PHOTOGRAPHY (In front of “RINPUKAN”) | |
| 12:30 - 13:50 | LUNCH | |

**Location:** Room 3401[a] and 3402[b], 4th floor of 3rd Bld., **Chair:** K. Kuwae[a]/H. Kaneko[b]

| **Time** | **Speaker** | **Title** |
|---|---|---|
| 13:50 - 14:20 | K. Kuwada[a]<br>W. Sun[b] | • Wasserstein controls for heat distributions[a]<br>• Hunt’s hypothesis (H) for Markov processes and Getoor’s conjecture for Lévy processes[b] |
| 14:25 - 14:55 | J. Masamune[a]<br>W. Hoh[b] | • On completenesses of a Schrödinger type operator on a Rie -mannian manifold[a]<br>• Some results on uniqueness of the martingale problem for nonlocal generators[b] |
| 15:00 - 15:30 | N. Kajino[a]<br>M. Grothaus[b] | • Spectral volume and surface measures via the Dixmier trace for local Dirichlet spaces with Weyl type eigenvalue asymptotics[a]<br>• Hypocoercivity for degenerate Kolmogorov equations and applications to the Langevin dynamics[b] |
| 15:30 - 15:50 | Coffee Break | |

**Location:** Room 3101[a], 3401[b] and 3402[c], 1st and 4th floor of 3rd Bld.,

**Chair:** Se. Kusuoka[a]/P. Kim[b]/W. Sun[c]

| Time | Speaker | Title |
|---|---|---|
| 15:50 - 16:20 | A. Olenko[a]<br>A. Behme[b]<br>T. Levajkovic[c] | • Rate of convergence of functionals of homogeneous random fields to Rosenblatt-type distribution[a]<br>• On the mapping associated to exponential functionals of Lévy processes[b]<br>• Chaos expansions of stochastic processes for Malliavin-type equations[c] |
| 16:25 - 16:55 | F. Xu[a]<br>P. Sztonyk[b]<br>T.K. Nilssen[c] | • Density convergence in the Breuer-Major theorem for Gaussian stationary sequences[a]<br>• Estimates of transition densities for jump Lévy processes[b]<br>• The Malliavin differentiability of one-dimensional Reflected SDE's with discontinuous drift[c] |
| 17:00 - 17:30 | L. Debbi[a]<br>M. Wada[b]<br>D. Banos[c] | • Well-posedness of the multidimensional fractional stochastic Navier-Stokes equations on the torus and on bounded domains[a]<br>• Large time asymptotics for Feynman-Kac functionals of symmetric stable processes[b]<br>• Optimal bounds for SDE's with measurable drift coefficients[c] |
| 17:35 - 18:05 | S. Liang[a]<br>K. Kaleta[b]<br>J. Villarroel[c] | • Stochastic Newton equation and absorbing area with single -well[a]<br>• Eigenfunction and semigroup ground state domination for non-local Schrödinger operators[b]<br>• Class of solvable diffusion processes defined by Ito equa -tion[c] |

## August 27, 2014 Wednesday

**Location:** Room 3101, 1st floor of 3rd Bld., **Chair:** K. Burdzy/J. Akahori

| Time | Speaker | Title |
|---|---|---|
| 09:00 - 09:40 | Bernt Øksendal | Malliavin calculus and optimal control of stochastic Volterra equations, with applications to financial markets with memory |
| 09:50 - 10:30 | Weian Zheng | Ergodicity and High-Frequency Trading |
| 10:30 - 10:50 | Coffee Break | |
| 10:50 - 11:30 | Shigeo Kusuoka | Recent progress of Malliavin calculus and its application to computational finance |
| 11:40 - 12:20 | Louis H.Y. Chen | Stein's method, Malliavin calculus, Dirichlet forms and the fourth moment theorem |
| 12:20 - | LUNCH and EXCURSION | |
| 18:30 - 20:30 | Banquet (Senri-Hankyu Hotel) | |

## August 28, 2014 Thursday

**Location:** Room 3401, 4th floor of 3rd Bld., **Chair:** M. Röckner/T. Shirai

| Time | Speaker | Title |
|---|---|---|
| 09:00 - 09:40 | Ludwig Streit | Self-Repelling (Fractional) Brownian Motion - results and open questions |
| 09:50 - 10:30 | Martin Barlow | Scaling limits of the UST |
| 10:30 - 10:50 | Coffee Break | |
| 10:50 - 11:30 | Shinichi Kotani | Study of limiting behaviour of solutions to KdV equation by spectrum of associated Schrödinger operators |
| 11:40 - 12:20 | Gregory F. Lawler | Understanding the Schramm-Loewner evolution (SLE) curve |
| 12:20 - 13:40 | LUNCH | |

**Location:** Room 3401[a] and 3402[b], 4th floor of 3rd Bld., **Chair:** T. Uemura[a]/K.J. Paczka[b]

| Time | Speaker | Title |
|---|---|---|
| 13:40 - 14:10 | P. Kim[a]<br>Se. Kusuoka[b] | • Minimal thinness with respect to symmetric Lévy processes[a]<br>• Hölder and Lipschitz continuity of the solutions to parabolic equations of non-divergence type[b] |
| 14:15 - 14:45 | K. Bogdan[a]<br>J. Ying[b] | • Martin kernel for fractional Laplacian in narrow cones[a]<br>• Regular subspaces of Dirichlet forms[b] |
| 14:50 - 15:20 | R. Schilling[a]<br>Y. Nagahata[b] | • On the small-time behaviour of Lévy-type processes[a]<br>• On hydrodynamic limit for simple exclusion process with degenerate rates[b] |
| 15:25 - 15:55 | G. Trutnau[a]<br>D. Kim[b] | • On the stochastic regularity of distorted Brownian motions[a]<br>• Convergence of measures penalized by generalized Feynman -Kac transforms[b] |
| 15:55 - 16:20 | Coffee Break | |

**Location:** Room 3101[a], 3401[b] and 3402[c], 1st and 4th floor of 3rd Bld.,

**Chair:** Y. Nagahata[a]/R. Schilling[b]/K. Yamazaki[c]

| Time | Speaker | Title |
|---|---|---|
| 16:20 - 16:50 | T. Shirai[a]<br>M. Schmidt[b]<br>E.E. Røse[c] | • Persistent homology for certain random simplicial complexes[a]<br>• Does diffusion determine the geometry? [b]<br>• Optimal control of a forward-backward mean-field stochastic delay system in infinite horizon[c] |
| 16:55 - 17:25 | M. Katori[a]<br>U. Freiberg[b]<br>H. Mena[c] | • Determinantal martingales and determinantal proc -esses[a]<br>• Generators of one-dimensional gap diffusions and generalized trigonometric functions[b]<br>• On the stochastic linear quadratic optimal control problem[c] |
| 17:30 - 18:00 | R. Normand[a]<br>J. Zhang[b]<br>T. Arai and R. Suzuki[c] | • Self-organized criticality in a discrete model for Smoluchowski's equation[a]<br>• Probabilistic representations of solutions of elliptic boundary value problem and non-symmetric semi-groups[b]<br>• Explicit representations of locally risk-minimizing hedging strategy for Lévy markets |

## August 29, 2014 Friday

**Location:** Room 3401, 4th floor of 3rd Bld., **Chair:** K.-T. Sturm/M. Takeda

| Time | Speaker | Title |
|---|---|---|
| 09:00 - 09:40 | Wolfhard Hansen | Unavoidable sets for Hunt processes |
| 09:50 - 10:30 | Kazuhiro Kuwae | Gaugeability and conditional gaugeability of generalized Feynman- Kac functionals |
| 10:30 - 10:50 | COFFEE BREAK | |
| 10:50 - 11:30 | Zhi-Ming Ma | Lampability of Continuous States Markov Jump Processes |
| 11:40 - 12:20 | Michael Röckner | Strong uniqueness for SDEs in Hilbert spaces with non-regular drift |
| 12:20 - 13:40 | LUNCH | |

**Location:** Room 3401, 4th floor of 3rd Bld., **Chair:** S. Kusuoka

| Time | Speaker | Title |
|---|---|---|
| 13:40 - 14:20 | Krzysztof Burdzy | On the meteor process |
| 14:30 - 15:10 | Hans Föllmer | Spatial risk measures: local specification and a non-linear extension of backwards martingale convergence |
| 15:10 - 15:20 | CLOSING | |