RIMS Workshop

Mathematics for Uncertainty and Fuzziness

January 8-10, 2014

Research Institute for Mathematical Sciences, Kyoto University
Room 111

Program

January 8 (Wed)

<u>Chair   Kichi-Suke Saito</u>

13:00－13:30   Yasuo Narukawa   (Tohogakuen, Tokyo Institute of Technology)
Integrals with respect to non additive measures

13:30－14:00   Toshiharu Kawasaki   (Nihon University)
Existence and mean approximation of fixed points of generalized hybrid non-self mappings in Hilbert spaces and some examples

14:00－14:30   Sachiko Atsushiba   (University of Yamanashi)
Attractive points and weak and strong convergence theorems for nonlinear mappings

14:30－14:50   Break

<u>Chair   Wataru Takahashi</u>

14:50－15:20   Yasunari Kimura   (Toho University)
Approximation of a fixed point in a complete geodesic space and its applications

15:20－15:50   Kichi-Suke Saito* (Niigata University), Ken-Ichi Mitani (Okayama Prefectural University), Ryotaro Tanaka (Niigata University)
Recent development on James constant of 2 dimensional Lorentz sequence spaces

15:50－16:00   Break

16:00－16:40　Wataru Takahashi　(Keio University)

Inverse problems and nonlinear analysis

January 9 (Thu)

Chair　　Toshiaki Murofushi

9:00－9:30　　Kenjiro Yanagi　(Yamaguchi University)

Non-hermitian extensions of uncertainty relation

9:30－10:00　Xia Wang*, Li Guan　(Beijing University of Technology)

An upper bound estimation about the sample average of interval-valued random sets

10:00－10:30　Li Guan　(Beijing University of Technology)

A strong law of large numbers for set-valued negatively orthant dependent random variables

10:30－10:40　Break

Chair　　Hiroyuki Ozaki

10:40－11:10　Jinping Zhang (North China Electric Power University), Itaru Mitoma* (Saga University), Yoshiaki Okazaki (Kyushu Institute of Technology)

Set-valued stochastic integrals and differential equations with Poisson jump in a Banach space

11:10－11:50　Michal Kisielewicz　(University of Zielona Góra)

Stochastic differential equations with set-valued solutions

11:50－12:30　Michio Sugeno　(European Centre for Softcomputing, Tokyo Institute of Technology)

An introduction to Choquet calculus

12:30－13:30　Lunch

Chair　　Michal Kisielewicz

13:30－14:00　Masayuki Takahashi*, Toshiaki Murofushi, Shin Asahina　(Tokyo Institute of Technology)

A new necessary and sufficient condition for the Egoroff theorem in non-additive measure theory

14:00－14:30　Alexander Shibakov　(Tennessee Tech University)

Complexity of simple computations

14:30－15:00　Junfei Zhang*, Shoumei Li　(Beijing University of Technology)

Quanto European options pricing with ambiguous return rates and volatilities

15:00－15:10　Break

<u>Chair　Motoya Machida</u>

15:10－15:50　Hiroyuki Ozaki　(Keio University)

Non-additive measure in economics

15:50－16:20　Yuta Kishi* (Tokyo University of Science), Nozomu Ochiumi (Shonan Institute of Technology), Masahiro Yanagida (Tokyo University of Science)

Inequalities for sums of joint entropy based on the strong subadditivity

16:20－16:50　Masahiro Yanagida　(Tokyo University of Science)

A strong form of the data processing inequality for non-binary channels

January 10 (Fri)

<u>Chair　Jun Kawabe</u>

9:00－9:30　　Ryotaro Tanaka　(Niigata University)

An approach to two-dimensional Tingley's problem via geometric constants in Banach spaces

9:30－10:00　Hiroyasu Mizuguchi　(Niigata University)

On some geometric constants and the extreme points of unit ball

10:00－10:40　Eder Kikianty (University of the Witwatersrand), Coenraad Labuschagne* (University of Johannesburg)

Copulas, quasi-copulas and Markov operators

10:40－10:50　Break

<u>Chair　Coenraad Labuschagne</u>

10:50－11:30　Vicenc Torra* (IIIA CSIC Spain), Yasuo Narukawa (Tohogakuen, Tokyo Institute of Technology), Michio Sugeno (European Centre for Softcomputing, Tokyo Institute of Technology), Michael Carlson (University of Stockholm)

Distances for non-additive measures

11:30－12:10　Izumi Ojima　(Research Institute for Mathematical Sciences)

"Dynamical Relativity" vs. Indeterminacy in Dynamics

12:10－13:10　Lunch

<u>Chair　　Shoumei Li</u>

13:10－13:40　Motoya Machida　(Tennessee Tech University, Tokyo Institute of Technology)

Valuations on a distributive lattice and their application in point process theory

13:40－14:10　Marie Choda　(Osaka Kyoiku University)

Operator algebraic Shannon's interpretation for entropy-preserving stochastic averages

14:10－14:40　Tomoaki Sakurai*, Murofushi Toshiaki　(Tokyo Institute of Technology)

A study on the linear complementary representation of piecewise linear functions

14:40－15:10　Hiromichi Ohno　(Shinshu University)

Necessary condition for existence of conditional SIC-POVM

The upper right * in name denotes a speaker

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