

# 2013 RIMS Workshop Program

Theme : Theory and Application of Mathematical Decision Making under Uncertainty  
Organizer : Masamichi Kon (Hirosaki University)  
Period : November 11 (Monday), 12 (Tuesday), 13 (Wednesday), 2013  
Venue : Room 420, Research Institute for Mathematical Science, Kyoto University

## November 11 (Monday)

■■■ Opening Address (Time : 09:25 ~ 09:30)

Session 1 (Time : 09:30 ~ 10:00, 10:00 ~ 10:30, 10:30 ~ 11:00)

- [1] “Explicit probability of the run by A.de Moivre and the method of Dynamic Programming”  
Seiichi Iwamoto (Emeritus professor of Kyushu University), Yutaka Kimura (Akita Prefectural University),  
Masami Yasuda\* (Emeritus professor of Chiba University)
- [2] “A dynamic dual through Young’s inequality”  
Iwamoto (Emeritus professor of Kyushu University), Yutaka Kimura\* (Akita Prefectural University), Toshiharu  
Fujita (Kyushu Institute of Technology)
- [3] “On convex polyhedra constructed by paper units — an application of mutually decision processes —”  
Toshiharu Fujita (Kyushu Institute of Technology)

Session 2 (Time : 11:10 ~ 11:40, 11:40 ~ 12:10)

- [4] “Analysis based on self-averaging of optimal solution of mean variance model”  
Takashi Shinzato (Akita Prefectural University)
- [5] “Applying a non-parametric bootstrap method for a preventive maintenance scheduling problem with incomplete  
knowledge”  
Yasuhiro Saito\*, Tadashi Dohi (Hiroshima University)

■■■ Lunch Time (12:10 ~ 13:30)

Session 3 (Time : 13:30 ~ 14:00, 14:00 ~ 14:30, 14:30 ~ 15:00)

- [6] “AIR application for the estimation of optimum maintenance time in open source solution”  
Shouto Adachi\*, Yoshinobu Tamura (Yamaguchi University), Shigeru Yamada (Tottori University)
- [7] “The optimal release policy in the software reliability growth model with the number of non-decreasing failures”  
Kenji Onishi\*, Hitoshi Hohjo (Osaka Prefecture University)
- [8] “On interval estimation of optimal software release time based on a discrete-time reliability model”  
Shinji Inoue\*, Shigeru Yamada (Tottori University)

Session 4 (Time : 15:10 ~ 15:40, 15:40 ~ 16:10, 16:10 ~ 16:40)

- [9] “On degree of non-convexity of fuzzy sets”  
Masamichi Kon (Hirosaki University)
- [10] “Fuzzy mathematical programming problem with flexibility of membership functions”  
Takashi Hasuiké\* (Osaka University), Hideki Katagiri (Hiroshima University), Hiroe Tsubaki (The Institute of  
Statistical Mathematics)
- [11] “Construction of infinite product possibility space”  
Masayuki Kageyama (Nagoya City University), Takeaki Yamauchi, Kakuzo Iwamura\* (Osaka University)

## November 12 (Tuesday)

Session 5 (Time : 09:30 ~ 10:00, 10:00 ~ 10:30, 10:30 ~ 11:00)

- [12] “The resilience effect for the optimal execution problem”  
Seiya Kuno (Osaka University)

- [13] “Valuation of callable and puttable bonds under the generalized Ho-Lee model: a stochastic game approach”  
Natsumi Ochiai\*, Masamitsu Ohnishi (Osaka University)
- [14] “An economics premium principle under the smooth ambiguity aversion”  
Yoichiro Fujii (Osaka Sangyo University), Hideki Iwaki\* (Kyoto Sangyo University), Yusuke Osaki (Osaka Sangyo University)

**Session 6** (Time : 11:10 ~ 11:40, 11:40 ~ 12:10, 12:10 ~ 12:40)

- [15] “On exact option pricing in the multivariate variance gamma model”  
Roman V. Ivanov (Trapeznikov Institute of Control Sciences of RAS), Katsunori Anō\* (Shibaura Institute of Technology)
- [16] “Smooth fit conditions on the double stopping boundaries for American put option”  
Kyohei Tomita\*, Katsunori Ano (Shibaura Institute of Technology)
- [17] “On evaluation and exercise strategy of the swing option”  
Takafumi Katakai\*, Katsunori Ano (Shibaura Institute of Technology)

■■■ **Lunch Time** (12:40 ~ 13:40)

**Session 7** (Time : 13:40 ~ 14:10, 14:10 ~ 14:40, 14:40 ~ 15:10)

- [18] “A note on lower bound for multiplicative odds theorem of optimal stopping”  
Tomomi Matsui (Tokyo Institute of Technology), Katsunori Anō\* (Shibaura Institute of Technology)
- [19] “A study of delay time regarding project risk management”  
Hirokatsu Fukuda\*, Hiroaki Kuwano, Takashi Shima (Kanazawa Gakuin University)
- [20] “A study on a gradient boosting method in unconstrained optimization using rough approximation”  
Setsuko Sakai\* (Hiroshima Shudo University), Tetsuyuki Takahama (Hiroshima City University)

**Session 8** (Time : 15:20 ~ 15:50, 15:50 ~ 16:20, 16:20 ~ 16:50)

- [21] “A note on the validation of C.I. in AHP”  
Hiromitsu Tanaka (Aichi-Gakuin University)
- [22] “A network failure recovery problem with simple structures”  
Jun-ichi Takeshita\* (National Institute of Advanced Industrial Science and Technology), Hiroaki Mohri (Waseda University)
- [23] “Stochastic bounds for multi-state systems”  
Fumio Ohi (Nagoya Institute of Technology)

## November 13 (Wednesday)

**Session 9** (Time : 09:30 ~ 10:00, 10:00 ~ 10:30, 10:30 ~ 11:00)

- [24] “A consideration about the stable laboratory assignment”  
Masaki Hasegawa\*, Masamichi Kon (Hirosaki University)
- [25] “A patrol problem in the facility and an air defense model”  
Ryusuke Hohzaki (National Defense Academy)
- [26] “A search problem on a finite graph with arbitrary searcher starting points”  
Kensaku Kikuta (University of Hyogo)

**Session 10** (Time : 11:10 ~ 11:40, 11:40 ~ 12:10)

- [27] “Selecting a one-point solution for a cooperative game”  
Satoshi Masuya\* (Daito Bunka University), Masahiro Inuiguchi (Osaka University)
- [28] “A normalized Shapley value for cooperative interval games”  
Masayo Tsurumi\*, Megumi Kubota, Masahiro Inuiguchi (Osaka University)

■■■ **Lunch Time** (12:10 ~ 13:30)

**Session 11** (Time : 13:30 ~ 14:00, 14:00 ~ 14:30, 14:30 ~ 15:00)

- [29] “Adaptive method for multivariate Bayesian control chart”

Minoru Sasaki (Nippon Puretech Co. Ltd.), Masayuki Horiguchi\* (Kanagawa University)

[30] “Stochastic convexity and partially observable markov decision process”

Toru Nakai (Chiba University)

[31] “On the optimal stopping problems with monotone thresholds”

Mitsushi Tamaki (Aichi University)

**Session 12** (Time : 15:10 ~ 15:40, 15:40 ~ 16:10)

[32] “A Weber problem divided demand points by the presence of probabilistic rectangular barriers”

Hitoshi Hohjo (Osaka Prefecture University)

[33] “Mercer’s theorem and its analogue”

Yoshio Hayashi (Kinki University)

**Closing Address** (Time : 16:10 ~ 16:15)