



2021 RIMS Workshop

New Developments on Mathematical Decision Making Under Uncertainty

Organizer Shinji Inoue (Kansai University)

15 November – 16 November, 2021

Virtual Workshop

Programme (honorifics omitted, *:speaker)

Monday, 15 November

9:25~9:30 Opening

Chair: Toshiharu Fujita (Kyushu Institute of Technology)

9:30~10:00 *Kota Ono (Hirosaki Univ.), Masamiti Kon(Hirosaki Univ.)

Deterministic dynamic programming that rewards are given as elements of a quasi-ordered set

10:00~10:30 *Masamichi Kon (Hirosaki Univ.), Yutaka Kimura (Akita Prefectural Univ.)

On dynamic dualization

10:30~11:00 *Toshiharu Fujita (Kyushu Institute of Technology)

On a decision process model under feedforward loop systems

Chair: Yu Ogasawara (Tokyo Metropolitan University)

11:10~11:40 *Yu Ogasawara (Tokyo Metropolitan Univ.), Kimitoshi Sato (Kanagawa Univ.)

Revenue management model under nested demand structure

11:40~12:10 *Hideaki Takagi (Professor Emeritus Univ. Tsukuba)

Multi-class static revenue management model with buy-up

Lunch

Chair: Yutaka Kimura (Akita Prefectural University)

13:30~14:30 *Jiahao Zhang, Junjun Zheng, Hiroyuki Okamura, Tadashi Dohi (Hiroshima Univ.)

A note on sensitivity analysis for PH approximation

14:00~14:30 Seiichi Iwamoto (Professor Emeritus Kyushu Univ.), *Yutaka Kimura (Akita Prefectural Univ.)

Triplet of Fibonacci duals — with or without constraint —

Chair: Masayuki Horiguchi (Kanagawa University)

14:40~15:10 *Qi Wang (Nagasaki Institute of Applied Science), Jingyao Zhang (Kyoto Univ.),

Buheerdun Yang (Inner MonGolia University of Technology)

An evaluation study of evacuation safety of places based on Markov decision process

15:10~15:40 Masahiko Sakaguchi (Osaka Electro-Communication Univ.), Aiko Kurushima (Sophia Univ.), *Masayuki Horiguchi (Kanagawa Univ.)

Partially observable Markov decision processes and cost-effectiveness in health screening

- Chair: Yasuhiro Saito (Japan Coast Guard Academy)
- 15:50~16:20 Yuya Kikuchi, *Masayuki Horiguchi (Kanagawa Univ.)
On a procedure of assessment for tests of controls and interval Bayesian method
- 16:20~16:50 *Yasuhiro Saito (Japan Coast Guard Academy)
A maritime search planning method based on leeway divergence datums with land area

Tuesday, 16 November

- Chair: Setsuko Sakai (Hiroshima Shudo University)
- 9:00~9:30 *Tsukasa Kubo, Tomomi Matsui (Tokyo Institute of Technology)
Efficient algorithm for assigning agents to a line
- 9:30~10:00 *Toshikazu Watanabe (Tokyo Univ. Information Sciences)
Note on the solvability of the fully fourth order nonlinear boundary value problem
- 10:00~10:30 *Setsuko Sakai (Hiroshima Shudo Univ.), Tetsuyuki Takahama (Hiroshima City Univ.)
A study on β -relaxed relative neighborhood graph for speciation

- Chair: Hitoshi Hohjo (Osaka Prefecture University)
- 10:40~11:10 *Takumi Maeda, Hitoshi Hohjo (Osaka Prefecture Univ.)
Evolution of networks with information cost in local minority game model
- 11:10~11:40 *Yuki Teyanagi, Hitoshi Hohjo (Osaka Prefecture Univ.)
Consideration of community detection by naming game
- 11:40~12:10 *Koji Hamasaki, Hitoshi Hohjo (Osaka Prefecture Univ.)
Optimal deception defense strategy selection method against sophisticated cyber attacks

Lunch

- Chair: Ryusuke Hohzaki (Tsukuba Gakuin University)
- 13:30~14:00 *Satoshi Masuya (Daito Bunka Univ.)
Two axiomatizations of the Shapley value of the lower game for partially defined cooperative games
- 14:00~14:30 *Ryusuke Hohzaki (Tsukuba Gakuin Univ.)
On extension of the reality applicability of the non zero-sum security game

- Chair: Hiroaki Mohri (Waseda University)
- 14:45~15:15 *Hiroaki Mohri (Waseda Univ.), Jun-ichi Takeshita (AIST)
Graph failure distribution of random K-out-of-N system
- 15:15~15:45 *Siqiao Li, Tadashi Dohi, Hiroyuki Okamura (Hiroshima Univ.)
Proportional intensity-based software reliability modeling with covariates

- Chair: Yoshinobu Tamura (Yamaguchi University)
- 15:50~16:20 *Yoshinobu Tamura (Yamaguchi Univ.), Hironobu SONE (IBM Japan), Ryota Ueki (Tokyo City Univ.), Shigeru Yamada (Professor Emeritus Tottori Univ.)
Jump diffusion process model considering the cyclic change of communication environment for edge computing
- 16:20~16:50 *Shinji Inoue (Kansai Univ.), Takaji Fujiwara (SRATECH Lab.), Shigeru Yamada (Professor Emeritus Tottori Univ.)
On safety analysis for safety-related software based on reliability growth models
- 16:50~17:00 Closing