

International & Transdisciplinary Workshop on Advanced Future Studies

Title: Exploring A Unified View Beyond Complexity

Venue: International Conference Hall III (2nd floor) in Clock Tower, Kyoto University

Period: February 15 (Thursday) and 16 (Friday), 2018

Organized by: International Research Unit of Advanced Future Studies (IRU-AFS),  
Kyoto University

Co-organized by: Yukawa Institute for Theoretical Physics (YITP), Kyoto University,  
International Research Unit of Integrated Complex System Science (IRU-CSS), Kyoto  
University, and Center for the Promotion of Interdisciplinary Education and Research  
(C-PIER), Kyoto University, Research Institute for Humanity and Nature (RIHN), Kyoto

Scope: Nature is full of emergent problems. Beyond our understandings, our efforts to solve these problems often cause additional problems. We should need revolutionary paradigm shifts in our practical approach from solving and approaching problems already appeared in the past to predicting and protecting the emergence of problems in the future. For this purpose, we should realize that there must be the same driving forces that generate the emerging problems on the one hand, and that allow us to predict the problems which will appear in the future on the other hand. The same forces would be thus the double-edged sword: wonders and benefits.

The present workshop would, therefore, consider paradoxical way of thinking based on self-similarity and self-difference, often considered incompatible with each other. Using such a paradoxical way of thinking, we would like to explore simple principles beyond complexity. Actually, simple principles of complex dynamics could be deduced from the demand that the underlying principles should be self-consistent, regardless of the space-time scale with which we are concerned.

Organizing Committee

Chair: Masatoshi Murase (Kyoto University, Japan)

Tae-Soo Chon (Pusan National University, Korea)

Noriko Fujii (Research Reactor Institute, Kyoto University)

Remo Job (University of Trento, Italy)

Kazuyoshi Yoshimura (Kyoto University)

## Program

Venue: International Conference Hall III (2nd floor) in Clock Tower, Kyoto University

February 15 (Thursday), 2018

11 : 00~12 : 30

Part I: Social Phenomena and Complex Ecosystems

Chair: Terufumi Ohno (Mie Prefectural Museum)

Masatoshi Murase (Yukawa Institute for Theoretical Physics, Kyoto University)

“Advanced Future Studies and A Unified Theory”

Tae-Soo Chon (Pusan National University, Korea)

“Perspectives of Ecology”

Shinako Inaida (Graduate School of Medicine, Kyoto University)

“Is a pandemic influenza preventable? Factors associated with Pandemic (H1N1) 2009: virus spreading, epidemic dynamics and patterns”

12 : 30~13 : 30    Lunch (60 min.)

13 : 30~15 : 00

Part II: Human Phenomena, Psychology, Life Phenomena and Ecology

Chair: Noboru Hidano (Tokyo Institute of Technology)

Remo Job (University of Trento, Italy)

“Learning, a nonlinear process”

Noriko Fujii (Research Reactor Institute, Kyoto University)

“Right and left in living organisms”

Tae-Soo Chon (Pusan National University, Korea)

15 : 00~15 : 30    Break (30 min.)

15 : 30~16 : 30

Part III: Wonder of Life Phenomena and Universe

Chair: Kazuyoshi Yoshimura (Graduate School of Science, Kyoto University)

Koichi Ishihara (Eastern Medicine)

“Eyes of Oriental Medicine”

Antonio De Fliche (Yukawa Institute for Theoretical Physics, Kyoto University)

“Complexity of galaxies out of simplicity of uniform dust clouds: a short view of the process”

16:30~16:40    Break (10 min.)

16 : 40~17 : 40

Part IV: Complexity of Life Environment Adaptability

Chair: Tae-Soo Chon (Pusan National University, Korea)

Iki Murase (Graduate School of Fisheries and Environmental Sciences, Nagasaki  
University)

“Spatio-temporal variation in life history traits of an amphidromous fish,  
*Plecoglossus altivelis*”

Takahiro Irie (Atmosphere and Ocean Research Institute, The University of Tokyo)

“Complexity of life history adaptation in marine invertebrates”

18 : 00~20 : 00

Reception

Guests: Yuko Mori (Violinist), Mayuko Ishigami (Violinist)

February 16, 2018

10 : 00~11 : 30

Part V: Evolution and Learning

Chair: Remo Job (University of Trento, Italy)

Shinya Maezaki (Kyoto Women's University)

“Study on the process of creativity: a case study of collaboration in Japanese craft-making”

Noboru Hidano (Tokyo Institute of Technology)

“Making an extended self through art creation: beyond the complexity of human behavior”

Tae-Soo Chon (Pusan National University, Korea)

11 : 30~13 : 00      Lunch      (90 min.)

13 : 00~14 : 30

Part VI: Environment and Society

Chair: Kenichi Abe (Research Institute for Humanity and Nature)

Terufumi Ohno (Mie Prefectural Museum)

“Education in ordinary school and evolution of human mind”

Sayaka Sakoda (School of Economy, Doshisha University)

“Current Issues in Health Economics from The Perspectives of Dependent Caretakers- A Case Study on Type 1 Diabetes Mellitus”

Tomoko Murase (Japanese Red Cross Toyota College of Nursin)

“Advanced Future Nursing”

Tae-Soo Chon (Pusan National University, Korea)

14 : 30~15 : 00      Break      (30 min.)

15 : 00~16 : 00

Free Discussion

Chair: Masatoshi Murase (Yukawa Institute for Theoretical Physics, Kyoto University)

Short Presentations

Alisa Shimada (Graduate School of Science, Kyoto University)

16 : 00    Closing