
Editorial

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Biographical notes: Jun Tanimoto received his DrEng degree from Waseda University, Japan, in 1993. From 2005, he has been a Full Professor at IGSES, Kyushu University. During 1998 to 1999, and in 2010, he was active as a Visiting Professor at the National Renewable Energy Laboratory, USA and University of New South Wales @ADFA, Australia, respectively. His research interests focus on human-environmental-social system backed by complex science as well as urban climatology based on fluid dynamics and building physics. He has been particularly concerned on evolutionary game theory and traffic flow dynamics based on statistical physics.

Intelligent and adaptive systems using evolutionary computation techniques have attracted increasing attentions in recent years. They are more robust than traditional systems based on formal logics for many real world problems. Currently, many studies have dealt with those themes concerned on both 'evolutionary games' and 'complex networks' based on 'agent simulations'. Those have contributed to reconsider essential concepts in various biological, social, and artificial systems such as emergence and evolution of individuality, development, cognition, communication, language, cooperation, biological/social relationships and so on. One such application is to solve a mysterious puzzle of why sustainable cooperation in dilemma situations can be observed in various species, not only in human society. The question can be paraphrased by a statement of how you can effectively reduce 'anonymity' in the social context. The network reciprocity is one of the most important and plausible ideas. That is why we can see so voracious research activities in the inter-circle of network, evolutionary game and agent-based simulation technique.

From this background, we organised three special sessions in 2009 as shown below for bringing together researchers from computer science, mathematics, physics, biologist and evolutionary computation.

- IEEE Congress on Evolutionary Computation 2009 (CEC2009), Trondheim, Norway, 18th–21st May 2009, Special session 'Evolutionary games on complex

networks', Co-chaired by Professor Jun Tanimoto and Professor Akira Namatame.

- 9th Asia-Pacific Complex Systems Conference (COMPLEX'09), Tokyo, Japan, 4th–7th November, Co-organised by Professor Yuji Aruka and Professor Akira Namatame, Session 'Artificial life', Co-chaired by Dr. Reiji Suzuki and Profeddor Jun Tanimoto.
- 13th Asia Pacific Symposium on Intelligent and Evolutionary Systems (IES09), Fukuoka, Japan, 4th–5th December 2009, Co-organised by Professor Jun Tanimoto and Professor Akira Namatame.

Respective conferences and sessions were great success, which could draw many interesting papers together. And following that, Professor Namatame, Dr Suzuki and I who were involved with those three conferences have continued to discuss about an effective post-publication. To the end, *International Journal of Bio-inspired Computation* gave us an opportunity for this special issue. We have selected six excellent papers among many potential contributions, which cover the entire theme we mentioned above.

As the closing remark, we would like to express our heartfelt gratitude for the kind suggestions provided by Professor Zhihua Cui, the Editor-in-chief of *IJBIC*.