

Call for Papers for the Special Issue on  
Social Simulation as Transdisciplinary Research  
SICE Journal of Control, Measurement, and System Integration

● **Call for Papers**

At the SICE Annual Conference 2011, special sessions were organized jointly by the Transdisciplinary Federation of Science and Technology (TraFST) and the Society of Instrument and Control Engineers (SICE) : Social Simulation as Transdisciplinary Research. Based on the discussions of those sessions, the aim of the special issue is to explore social simulation from the viewpoint of transdisciplinary research and to bring researchers from different fields to publish the related issues.

For this purpose, the editors, in particular, focus on both the ideas from computer science as a new technology to provide insights into social science communities and the ideas coming from social sciences as new metaphors to provide insights into computer science community. This cross-fertilization has undoubtedly been an important source of inspiration for the body of knowledge that has been produced in social simulation research area.

To promote such cross-fertilization, this special issue stresses on (i) employing social theories as an inspiration to new frameworks and developments in computer science (e.g., multi-agent systems) and (ii) exploring an agent-based simulation as a principled way of undertaking scientific research in the social sciences. These transdisciplinary researches contribute to (i) assessing the current state of the art in the modelling and simulation of social simulation, (ii) identifying where existing approaches can be successfully applied, and (iii) exploring future research challenges. We invite extended results of the papers at the SICE sessions. We also encourage the submissions of other new papers. In particular, we would expect a variety of research subjects related to social simulation, whether theoretical, experimental, practical, or technical, including the challenge research without limiting the range of traditional topics addressed in this area.

The topics of social simulation special issue include, but are not limited to:

- I. Tools and methods,
  - o Programming computational frameworks
  - o Simulation experiment software
  - o Role playing games and social simulation
  - o Social simulation and laboratory experiments
  - o Socially inspired software applications
  - o Model replication and validation
  - o Advanced computing technologies and social simulation
  - o Agent architecture
  - o Visualisation and analytic tools
  - o approaches for large-scale simulations
  - o scalability in social simulation
- II. Theory and social aspects:
  - o Social processes of sciences

- o Social norms
- o Social complexity
- o Policy issues
- o Emergence of social structures
- o Trust and norm dynamics, reputation
- o Social conflict and cooperation
- o Social networks and their dynamics
- o Information and opinion dynamics
- o Computational organization theory
- o Group decisions and collective behaviors
- o Emergence and evolution of institutions
- o Innovation diffusion
- o Societal transitions
- o Game theory,

### III. Applications of Agent-based Modeling:

- o Market dynamics and consumer behavior
- o Auction
- o Integrated social/physical modeling for environmental policy
- o Resource management and environmental practices
- o Industry and economy issues
- o Participative-based simulation
- o Social models (*e.g.*, pedestrian and disaster models)
- o Human-agent interaction design

### ● Important Dates

Paper submission deadline: July, 15, 2012:

Paper acceptance notification: December 1, 2012:

Journal Publication: March, 2013:

### ● Editors

- Guest Editor: Keiki Takadama (The University of Electro-Communications, Japan, keiki@inf.uec.ac.jp)
- Special Issue Editor: Takao Terano (Tokyo Institute of Technology, Japan, terano@dis.titech.ac.jp)