

The First International Symposium on Swarm Behavior and Bio-Inspired Robotics 2015



京都大学
KYOTO UNIVERSITY

SWARM 2015

Kyoto, JAPAN October 28-30, 2015

<http://www.ohk.hiroshima-u.ac.jp/SWARM2015/>

Scope: Living things that survive natural selection have beautiful skills and intelligent behavior. A swarm can perform many functions that its component individuals cannot possibly accomplish alone. In addition to the ability to adapt to the environment, but also to construct a suitable environment for its own advantage. The constructive understanding of intelligence of living things is a very interesting approach from the point of view of biology and engineering. The aim of this first symposium SWARM2015 is the construction of a bridge between biologists and engineers who are interested in the intelligence of living things and the creation of a new academic field by integrating biology and engineering. This symposium will focus on the biological and engineering approaches to understanding swarm behavior and biologically-inspired robotics. All aspects of swarm behavior and bio-inspired robotics are welcome, including, but not limited to, the following topics:

Related Topics

• Biology

Social Insects, Evolutionary Cooperation, Ethology, Social Physiology, Adaptation, Self-Organization, Sociometry, Phase Polyphenism, Quorum Sensing

• Engineering

Swarm Intelligence, Swarm Robotics, Biomimetics, Bio-Inspired Robotics, Multi-Agent Systems, Walking Robots, Modular Robotics, Decentralized Control, Distributed Systems

Site: Kyoto, JAPAN

Kyoto University

Clock Tower Centennial Hall



Keynote Speech



Diversity of Collective Decision-Making Patterns Resulting from Social Behaviour

Prof. Jean-Louis Deneubourg, Université Libre de Bruxelles



Control and Coordination of Multi-Robot Systems

Prof. Magnus Egerstedt, Georgia Institute of Technology



Distributed Information Processing by Insect Societies

Prof. Stephen Pratt, Arizona State University

Tutorials



Swarm Robotics Research at IRIDIA

Prof. Marco Dorigo, Université Libre de Bruxelles



Social Conflicts and the Underlying Autonomous Decentralized Control in Ants

Prof. Kazuki Tsuji, University of Ryukyus



Top-Down Control of Reproduction and Self-Organization of Labor in Termites

Prof. Kenji Matsuura, Kyoto University

For further information, please contact us.

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- There are three options for submission: *full paper*, *short paper* or *abstract*. Full papers and short papers have an 8-page or a 4-page maximum length. Surveys are also welcome as full papers. Abstracts are limited to 2 pages.
- Selected papers will be invited for further revision and extension for possible publication in a special issue of *Artificial Life and Robotics*, Springer.

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