



Renewal of the Major Fields from New Generation Computing Vol. 37 (2019)

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Upon the retirement of an area editor, Hendrik Blockeel, we are happy to introduce two new area editors, Kouzou Ohara and Fujio Toriumi. Ohara succeeds Blockeel and continues to handle the major field *Data Mining*, though the topics of the field slightly change due to the expertise of Ohara. We have decided to set up the new area *Computational Social Science*, whose area editor is Toriumi. The description of these two major fields follows this introduction.

We sincerely hope that these two research areas will make the journal further contribute to new computing paradigms and computational intelligence.

Editor-in-Chief Masayuki Numao

Osaka University

Associate Editor-in-Chief Yutaka Matsuo

The University of Tokyo

Data Mining

Nowadays, with the rapid development of information and communication technology such as smart devices and IoT (Internet of Things), the amount of electronic data available for use in analysis for a certain purpose is dramatically increasing in various domains ranging from business to science, and thereby the demand for a new science field named Data Science is increasing. Data Mining is one of the key areas related to Data Science and aims at extracting useful patterns or knowledge from a large amount of data gathered from homogeneous/heterogeneous data sources. Due to its interdisciplinary nature, Data Mining borrows various kinds of

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techniques from a wide range of fields including statistics, machine learning, database, network science, data visualization, and others.

New Generation Computing welcomes articles that contribute to advanced topics relevant to Data Mining. The typical sub-fields of interest include, but are not limited to:

- Frequent pattern mining
- Stream Data Mining
- Graph and Network mining
- Relational Data Mining
- Text and Web Mining
- Statistical methods for Data Mining
- Machine learning methods for Data Mining
- Visualization methods for Data Mining
- Practical applications of Data Mining

Area Editor Kouzou Ohara
Aoyama Gakuin University

Computational Social Science

Computational Social Science is a cross-disciplinary research field to solve social problems through a computational approach. The computational approaches such as social big data analysis, social simulation and Web-based experiments are used to model, simulate, and analyze social phenomena. The field of computational social science is related to the social sciences (economics, sociology, psychology, social psychology, political science, linguistics, and other disciplines), physics (especially econophysics and social physics), biology, management science, computer science, statistics, and data science.

New Generation Computing is now welcoming papers on all types of computational social science.

Specific topics of interest include, but are not limited to

- Social Media
- Web Services
- Web Mining
- Crowdsourcing
- Social Systems
- Social Simulation
- Virtual Lab

Area Editor Fujio Toriumi
The University of Tokyo

The definitions of the six major fields below are detailed in the announcements [1, 2]:

- Learning
- Cognitive Computing
- Programming and semantics
- Control Theory of Bio- and Nano-systems
- Bio/Nano/Molecular Computing and Engineering
- Skill Science and Philosophy

References

1. Numao, M., Matsuo, Y., et al.: Renewal of the major fields. *New Gener. Comput.* **36**(2), 1–7 (2018)
2. Hagiya, M., Ueda, K., et al.: Renewal of the major fields. *New Gener. Comput.* **35**(2), 1–7 (2017)