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(Going Virtual)

Special Session Call for Papers
SMC 2021 Special Session on

Advanced Technologies for Computational Intelligence and Real-World Applications

(Special Session Code: 2tvcg)

Special Session Co-organizers:

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Important Dates

April 5, 2021: Deadline for submission of full papers to special sessions.

May 26, 2021: Acceptance/Rejection Notification

July 12, 2021: Final camera-ready papers due in electronic form.

Submission

Manuscripts for a Special Session should **NOT** be submitted in duplication to any other regular or special sessions and should be submitted to SMC 2021 main conference online submission system on SMC 2021 conference website.

All special session paper submission will be reviewed in the same way as main conference Regular Papers by a general pool of reviewers. Only papers of SMC Conference quality will be accepted for presentation. The Area Chairs and Co-Chairs of the SMC Technical Program will coordinate the review process.

Organized by

IEEE Hiroshima Section SMC Chapter

Introduction

Computational Intelligence technologies have made significant progress in recent decades. In recent years, many types of techniques related to artificial intelligence have become large in our society. Real-world environments produce big data, which is large-scale, high-dimensional, multi-modal, sequential, and ambiguous data. A lot of real-world problems are not considered well-posed mathematically, and analytic approaches to find solutions met some difficulties. Various techniques are required for dealing with such complex data, such as visualization by clustering of multi-modal and sequential data, automatic feature extraction by representation learning, acquisition of comprehensible knowledge from learning results, and so on. Driven by such motivation, emerging computational intelligence approaches have been proposed in soft computing areas like artificial neural networks, evolutionary computation, and fuzzy theories. As one of the successes, Deep Learning is now becoming popular in the field of computer science. According to the brisk activities, many researchers also have been able to challenge solving industrial problems. In this session, we discuss the computational intelligence technologies for learning complex real-world data, making explicit or implicit knowledge of the real-world issues that prior technologies cannot provide satisfactory solutions. This session is organized by IEEE SMC Hiroshima Chapter.

Indicative Topics/Areas

- *Deep Learning
- *Neural Networks
- *Evolutionary Computation
- *Fuzzy Theory
- *Swarm Intelligence
- *Artificial Immune System
- *Reinforcement Learning
- *Other Softcomputing Methodologies
- *Big Data Technology
- *Image Processing
- *Intelligent Learning of Control System
- *Computer Education and E-learning
- *Medical Informatics
- *Other Industrial Applications