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Special Session Call for Papers
SMC 2020 Special Session on

Advanced Computational Intelligence and Knowledge Extraction

(Special Session Code: a7f59)

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Important Dates
April 15, 2020: Deadline for submission of full papers to special sessions.
May 24, 2020: Acceptance/Rejection Notification
July 22, 2020: 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 2020 main conference online submission system on SMC 2020 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 great progress in recent decades. Real-world environments produce big data, which is large-scale, high-dimensional, multi-modal, sequential and ambiguous data. Since many real-world problems are not considered to be well-posed mathematically, attempts of analytic approaches to find solutions met some difficulties. For dealing with such complex data, various techniques are required 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 the 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. We discuss in this session the computational intelligence technologies for learning real world complex data, which will make an explicit or implicit knowledge to the real-world problems 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