



IEEE CIS Newsletter, Issue 85, February 2020

Welcome from the Vice President for Technical Activities



IEEE is the world's largest technical professional organization for the advancement of technology, having as its motto "Advancing technology for Humanity." The IEEE Computational Intelligence Society contributes to this common goal in what concerns its field of activity: "Computational Intelligence." And a significant part of this contribution relates to technical activities.

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Research Frontier

Ant Colony Optimization Algorithms for Dynamic Optimization: A Case Study of the Dynamic Travelling Salesperson Problem

by: Michalis Mavrovouniotis;
Shengxiang Yang; Mien Van;
Changhe Li; Marios Polycarpou

Ant colony optimization is a swarm intelligence metaheuristic inspired by the foraging behavior of some ant species. Ant colony optimization has been successfully applied to challenging optimization problems. This article investigates existing ant colony optimization algorithms specifically designed for combinatorial optimization problems with a dynamic environment.

IEEE Computational Intelligence Magazine, Feb. 2020



[VIEW FULL ARTICLE](#)

A Multiple Surrogate Assisted Decomposition-Based Evolutionary Algorithm for Expensive Multi/Many-Objective Optimization



by: Chaoyue Wang; Chang Xu;
Xin Yao; Dacheng Tao

In this paper, we present an approach called hybrid surrogate-assisted many-objective evolutionary algorithm to solve computationally expensive MaOPs.

IEEE Transactions on Evolutionary Computation, Dec. 2019

[VIEW FULL ARTICLE](#)

Neuromemristive Circuits for Edge Computing: A

Review

by: Lei Zhang; Shanshan Wang;
Guang-Bin Huang; Wangmeng
Zuo; Jian Yang; David Zhang

This paper provides the review of neuromorphic CMOS-memristive architectures that can be integrated into edge computing devices. We discuss why the neuromorphic architectures are useful for edge devices and show the advantages, drawbacks, and open problems in the field of neuromemristive circuits for edge computing.



*IEEE Transactions on Neural
Networks and Learning
Systems, Jan. 2020*

[VIEW FULL ARTICLE](#)

Educational Activities

Call for Applications: 2020 Graduate Student Research Grants (15 Mar)

The IEEE Computational Intelligence Society (CIS) funds scholarships for undergraduate, graduate and PhD students who need financial support to carry out their research during an academic break period. The primary intent of these scholarships is to cover the expenses related to a visit to another university, institute or research agency for collaboration with an identified researcher in the field of interest of the applicant. Funds can be used to cover travel expenses as well as certain living expenses (such as housing). The field of interest of applicants is open but should be connected with an identifiable component of the CIS (neural networks, fuzzy systems, or

evolutionary computation).

The call for the next round of applications has a deadline for submission of 15 March, 2020. Submissions should be made via [EasyChair](#).

More information on the scheme, including past projects, can be found on the [CIS Graduate Student Research Grants webpage](#).

Publications

Submission Site for IEEE Computational Intelligence Magazine Is Now OPEN!

CIM publishes peer-reviewed articles that present emerging novel discoveries, important insights, or tutorial surveys in all areas of computational intelligence design and applications, in keeping with the field of interest of the IEEE Computational Intelligence Society. Authors are encouraged to submit papers on applications-oriented developments, successful industrial implementations, design tools, technology reviews, computational intelligence education, and applied research.

Chuan-Kang Ting,
Editor-in-Chief of
IEEE Computational Intelligence Magazine



The ScholarOne Manuscripts submission site for the IEEE Computational Intelligence Magazine (CIM) is [now open](#).

CIS Conferences



2020 IEEE Conference on Games (CoG)

Higashiosaka, Japan

24-27 Aug. 2020

(Submission: 23 Mar. 2020)

2020 Joint IEEE 10th International Conference on Development and Learning and Epigenetic Robotics (ICDL-EpiRob)

Valparaíso, Chile

7-10 Sep. 2020

(Submission: 15 Mar. 2020)

2020 IEEE International Conference on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB)

Viña del Mar, Chile

27-29 Oct. 2020

(Submission: 1 May 2020)

2020 IEEE 7th International Conference on Data Science and Advanced Analytics (DSAA 2020)

Sydney, Australia

6-9 Oct. 2020

(Submission: 24 May 2020)

2020 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2020)

Canberra, Australia

1-4 Dec. 2020

(Submission: 7 Aug. 2020 -- strict deadline)

number of conferences across the globe.

[View Full Schedule](#)

Announcements

Call for Papers (Journal)

- [IEEE TFS Special Issue on Type-2 Fuzzy Model Based Control and its Applications \(1 Feb.\)](#)
- [IEEE TFS Special Issue on Applications of Fuzzy Systems in Data Science and Big Data \(1 Mar.\)](#)

Call for Papers (Conference)

- [The International Workshop on Healthcare Intelligent Multi-Agent Systems \(HIMAS 2020\) \(7 Feb\)](#)
- [International Conference on APplied Artificial Intelligence \(ICAPAI 2020\) \(19 Apr\)](#)
- [The 16th International Conference on Predictive Models and Data Analytics in Software Engineering \(PROMISE 2020\) \(30 Jun\)](#)

∨ Editor

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