

<u>IEEE CIS Guest Lecture</u> <u>Prof Hisao Ishibuchi (IEEE Fellow, IEEE Distinguished Lecturer (DLP))</u>

Speaker:	Prof. Hisao Ishibuchi (IEEE Fellow, IEEE Distinguished Lecturer (DLP))
Hosted Chapter:	IEEE Computational Intelligence Society (CIS), Victorian Section, Australia
Coordinator:	Malka N. Halgamuge, Chair VIC CIS (malka_nisha@ieee.org)
Date of Event:	Monday 30th October 2023
Time:	3.00 – 4.00 pm (AEST)
Number of	
Participants:	61 (Online), 21 (Face-to-face)
VIC CIS Chapter	
website:	https://r10.ieee.org/victorian-cis
	Fair Performance Comparison of Evolutionary Multi-Objective
Title:	Optimization Algorithms

Abstract:

Evolutionary multi-objective optimization (EMO) has been a very active research area in recent years. Almost every year, new EMO algorithms are proposed. When a new EMO algorithm is proposed, computational experiments are conducted in order to compare its performance with existing algorithms. Then, experimental results are summarized and reported as a number of tables together with statistical significance test results. Those results usually show higher performance of the new algorithm than existing algorithms. However, fair performance comparison of different EMO algorithms is not easy since the evaluated performance of each algorithm usually strongly depends on experimental settings. In this seminar, we focus on the settings related to the following four issues: (i) termination condition specification, (ii) population size specification, (iii) performance indicator choice, (iv) test problem choice. First, we clearly demonstrate that each of these issues has strong effects on performance comparison results. Then, we discuss how to handle each of these issues for fair performance comparison. These discussions aim to encourage the future development of the EMO research field without focusing too much on the development of overly-specialized new algorithms in a specific setting. Finally, we suggest some promising future research topics related to each issue.

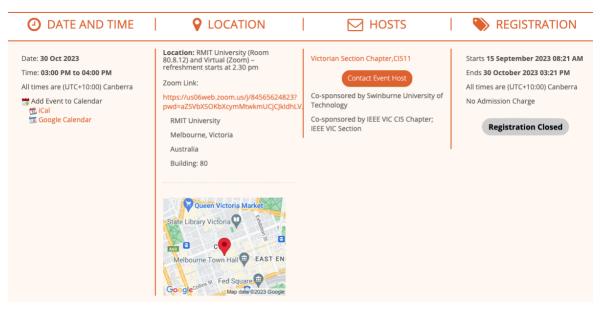
Biography:

Hisao Ishibuchi is a Chair Professor at Southern University of Science and Technology, China. He was the IEEE Computational Intelligence Society (CIS) Vice-President for Technical Activities in 2010-2013 and the Editor-in-Chief of IEEE Computational Intelligence Magazine in 2014-2019. Currently he is an IEEE CIS Administrative Committee Member, an IEEE CIS Distinguished Lecturer, and an Associate Editor of several journals such as IEEE Transactions on Cybernetics and ACM Computing Surveys. He is also General Chair of IEEE WCCI 2014. He received a Fuzzy Systems Pioneer Award from IEEE CIS in



2019, an Outstanding Paper Award from IEEE Transactions on Evolutionary Computation in 2020, and Best Paper Awards from FUZZ-IEEE 2009, 2011, EMO 2019, and GECCO 2004, 2017, 2018, 2020, 2021. He also received a JSPS prize in 2007. He is an IEEE Fellow.





RMIT Classification: Trusted



IEEE CIS Report (Victoria Chapter)

14. Category: Distinguished Lecturer Program (DLP)



Title: Fair Performance Comparison of Evolutionary Multi-Objective Optimization Algorithms

Speaker: Prof Hisao Ishibuchi (IEEE Distinguished Speaker, IEEE Fellow), Southern University of Science and Technology, Shenzhen, China

Location: RMIT University (Building 80, Level 8, Room 05) and Virtual (Zoom) - refreshment starts at 2.30 pm

Time: 3.00 - 4.00 pm (AEST) Monday 30th October 2023

Register: https://events.vtools.ieee.org/m/373967 (please register here)

For further details, contact: Malka N. Halgamuge, Chair VIC CIS (malka_nisha@ieee.org)

VIC CIS Chapter website: https://r10.ieee.org/victorian-cis

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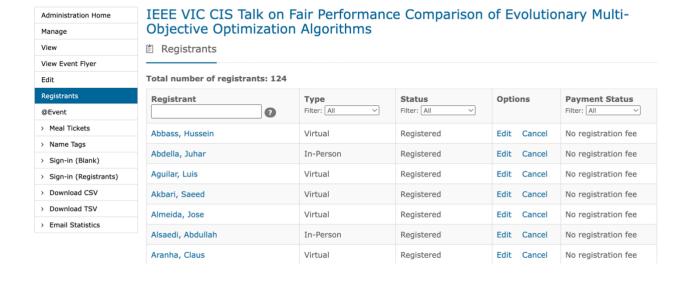
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CONTACT

Welcome, Malka Halgamuge







Reporting

A report has been filed for

CH10305 - Victorian Section Chapter, CIS11

by Malka Halgamuge at 01 Nov 2023 09:49 PM.

> IEEE Attended: 71 Guests Attended: 11

This report can be removed, if necessary for adjustments, until 08 Nov 2023 09:49 PM, in the Attendance area of the event edit page.



