Report on IEEE Distinguished Lecturer Carlos Coello Coello's Talk

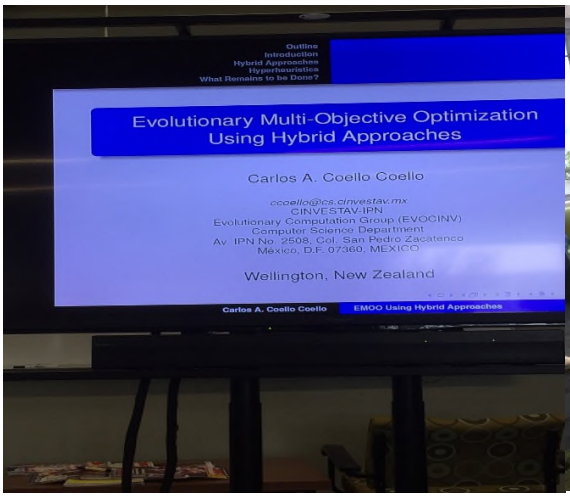
IEEE Computational Intelligence Chapter (NZ Central Section)

Chapter Chair: Mengjie Zhang; Secretary: Bing Xue

On Thursday 15 August 2017 at 2:00-3:30pm in Cotton Building CO 350 at Victoria University of Wellington, the IEEE Computational Intelligence Chapter (IEEE New Zealand Central Section) had IEEE Distinguished Lecturer, Prof Carlos Coello Coello from CINVESTAV-IPN, Mexico, delivered a great talk on "Evolutionary Multi-Objective Optimization using Hybrid Approaches". 34 people of IEEE members, academics, research students, and people from industry attended the seminar. After the seminar, half an hour discussion was held between the attendees and Prof Carlos Coello Coello. Using his over 30 years of experience on evolutionary multi-objective optimisation, Prof Coello Coello discussed how hybrid approaches can be successfully used in EMO as well as open problems in this field.

IEEE NZ Central Section financially supported $500 for this event as part of the local cost. The Chair's School (Victoria University of Wellington) covers the rest of the local cost.

Some pictures in the talk are presented below.



The details of the talk with an abstract is attached below.

Date: 15 August 2017
Time: 2:00-3:30pm
Venue: CO350, Victoria University of Wellington, Kelburn Campus
Title: Evolutionary Multi-Objective Optimization using Hybrid Approaches
Speaker: Carlos Coello Coello, CINVESTAV-IPN (Mexico), IEEE Fellow, IEEE Distinguished Lecturer

Abstract: The use of evolutionary algorithms for solving multi-objective optimization problems has become increasingly popular, mainly within the last 15 years. From among the several research trends that have originated in recent years, one of the most promising is the use of hybrid approaches that allow to improve the performance of multi-objective evolutionary algorithms (MOEAs).

In this talk, some of the most representative research on the use of hybrid approaches in evolutionary multi-objective optimization will be discussed. The topics discussed will include multi-objective memetic algorithms, hybridization of MOEAs with gradient-based methods and with direct search methods, as well as multi-objective hyperheuristics. Some potential paths for future research in this area will also be briefly discussed.

Biography: Professor Carlos Artemio Coello Coello received a PhD in Computer Science from Tulane University (USA) in 1996. He is currently full professor with distinction at CINVESTAV-IPN in Mexico City, Mexico.

He has published over 400 papers in international peer-reviewed journals, book chapters, and conferences. He has also co-authored the book "Evolutionary Algorithms for Solving Multi-Objective Problems", which is now in its Second Edition (Springer, 2007) and has co-edited the book "Applications of Multi-Objective Evolutionary Algorithms" (World Scientific, 2004). His publications currently report over 28,000 citations, according to Google Scholar (his h-index is 67).

He received the "2007 National Research Award" (granted by the Mexican Academy of Science) in the area of "exact sciences" and, since January 2011, he is an "IEEE Fellow" for "contributions to multi-objective optimization and constraint-handling techniques." He is also the recipient of the prestigious "2013 IEEE Kiyo Tomiyasu Award" and of the "2012 National Medal of Science and Arts" in the area of "Physical, Mathematical and Natural Sciences" (this is the highest award that a scientist can receive in Mexico). He also serves as associate editor of the IEEE Transactions on Evolutionary Computation, Computational Optimization and Applications, Pattern Analysis and Applications, Journal of Heuristics, Evolutionary Computation and Applied Soft Computing.

He has served as Vice-Chair and Chair of the IEEE CIS Evolutionary Computation Technical Committee and is currently the Chair of the IEEE CIS Distinguished Lecturers Committee. He was also the General Chair of the 2013 IEEE Congress on Evolutionary Computation, which took place in Cancun, Mexico.