

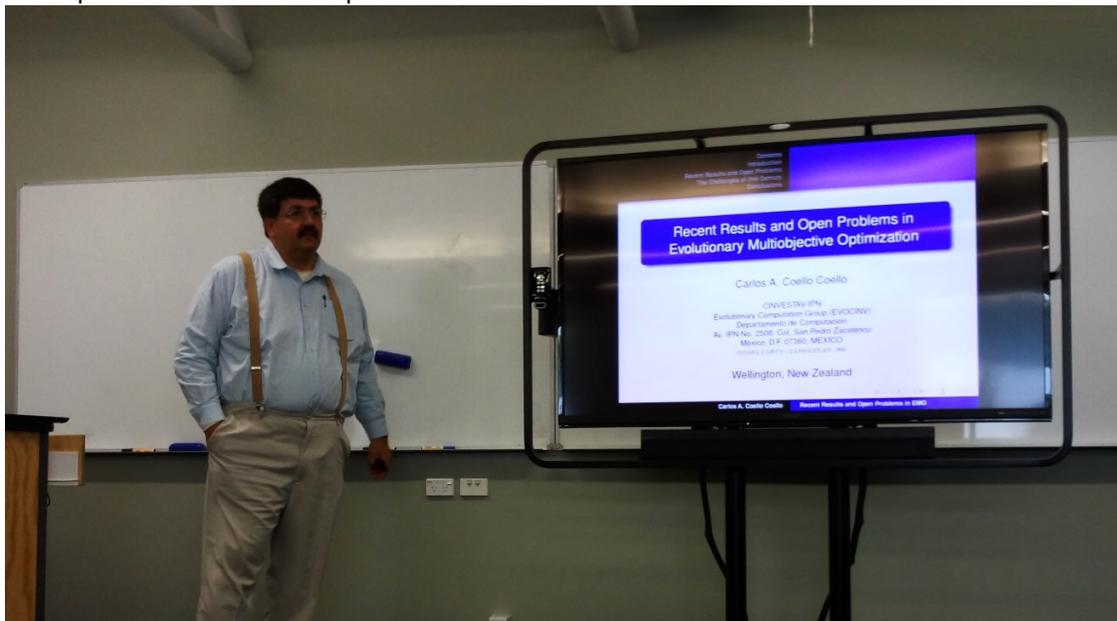
# Report on IEEE Distinguished Lecturer Carlos Coello Coello's Talk IEEE Computational Intelligence Chapter (NZ Central Section)

**Chapter Chair: Mengjie Zhang; Secretary: Bing Xue**

On Thursday 4 September 2015 at 4:10-5:30pm 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 "Recent Results and Open Problems in Evolutionary Multi-objective Optimization". 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 30 years of experience on evolutionary multi-objective optimisation, Prof Coello Coello discussed how EMO history and recent developments as well as open problems in this field.

IEEE NZ Central Section helped our CIS chapter advertise this event in the section, and financially supported \$400 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:** 04 September 2015

**Time:** 4:10-5:30pm

**Venue:** CO350, Victoria University of Wellington, Kelburn Campus

**Title:** Recent Results and Open Problems in Evolutionary Multi-objective Optimization

**Speaker:** Carlos Coello Coello, CINVSTAV-IPN (Mexico), IEEE Fellow, IEEE Distinguished Lecturer

**Abstract:** Evolutionary algorithms (as well as a number of other metaheuristics) have become a popular choice for solving problems having two or more (often conflicting) objectives (the so-called multi-objective optimization problems). This area, known as EMOO (Evolutionary Multi-Objective Optimization) has had an important growth in the last 15 years, and several people (particularly newcomers) get the impression that it is now very difficult to make contributions of sufficient value to justify, for example, a PhD thesis. However, a lot of interesting research is still under way. In this talk, we will review some of the research topics on evolutionary multi-objective optimization that are currently attracting a lot of interest (e.g., handling many objectives, hybridization, indicator-based selection, use of surrogates, etc.) and which represent good opportunities for doing research. Some of the challenges currently faced by this discipline will also be delineated.

**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.