Report on IEEE CIS Distinguished Lecturer

Carlos A. Coello Coello (IEEE Fellow, Professor, CINVESTAV-IPN, Mexico)

March 18-20, 2018, Institute of Automation, Beijing, China

By Dongbin Zhao, CIS Beijing Chapter Chair

We were very pleased to host the IEEE CIS (Computational Intelligence Society) Distinguished Lecturer Carlos A. Coello Coello (IEEE Fellow, Professor, CINVESTAV-IPN, Mexico) to pay a visit on 18-20 March, 2018 to IEEE CIS Beijing Chapter. Prof. Carlos delivered the talk on 19 March, 2018. The talk information was announced about two weeks before the talk. The members and student members of IEEE CIS Beijing Chapter, and students attended. The audiences were delighted and engaged to the topic.

The talk information is as follows and the poster is also as attached.

Title: Multi-Objective Particle Swarm Optimizers: Past, Present and Future

Dr. Carlos A. Coello Coello, Professor, CINVESTAV-IPN, Mexico.

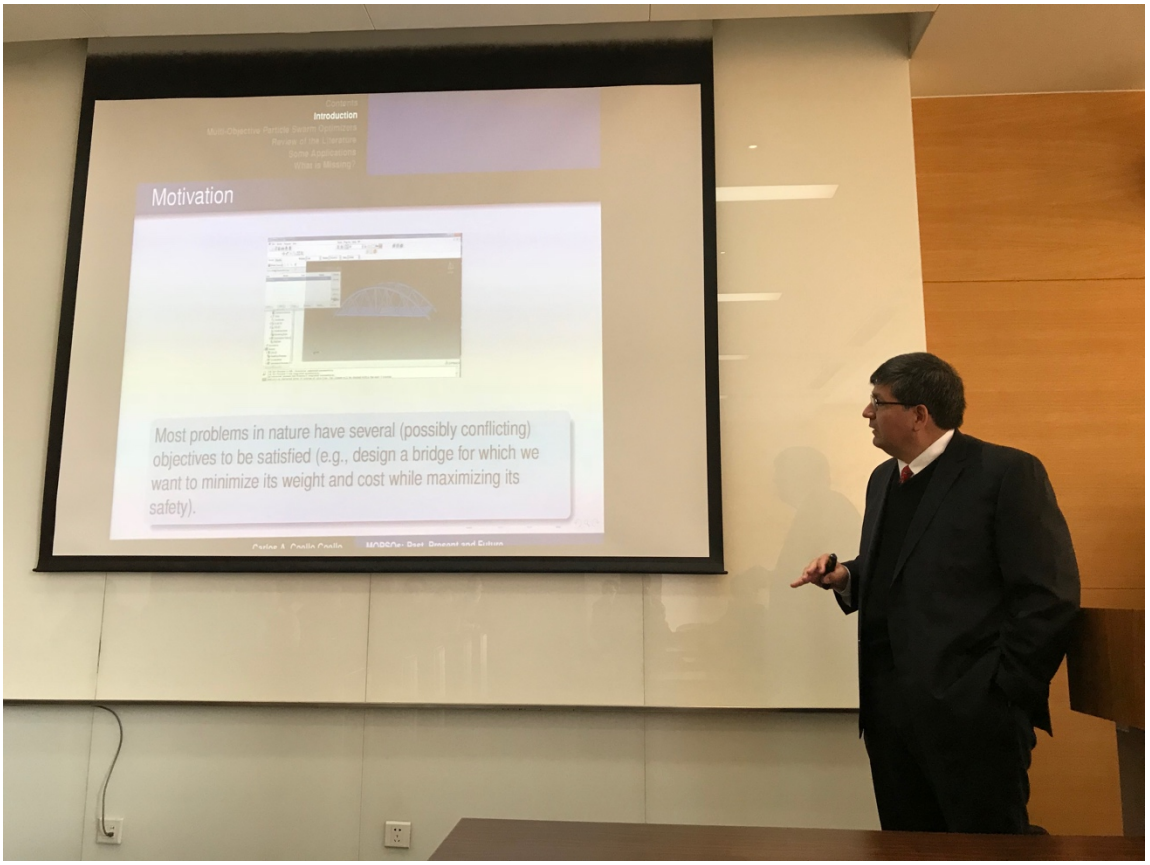
Time: 10:00am-11:00am, March 19, 2018, Monday

Place: 3rd Room, Floor 3, Intelligent Building, Institute of Automation, Chinese Academy of Sciences, Beijing.

Abstract: This talk will provide a review of the research that has been conducted on the use of particle swarm optimization for solving multi-objective problems. The talk will emphasize the main algorithmic developments that have been reported in the specialized literature, and will include a brief analysis of some of the most representative multi-objective particle swarm optimizers (MOPSOs) that have been proposed so far. The talk will also include some of the real-world applications of these MOPSOs and will conclude with some of the potential paths for future research in this area.

Besides, Prof. Carlos visited the Institute of Automation, Chinese Academy of Sciences. We have discussed related topics in detail and hope to cooperate together in the near future.

We appreciated IEEE CIS DLP committee very much to give us the opportunity to organize a DLP talk. The activity is partly supported by the IEEE CIS Beijing Chapter, and the State Key Laboratory of Management and Control for Complex Systems, Institute of Automation, Chinese Academy of Sciences, Beijing, China.


Introduction
Motivation
Most problems in nature have several (possibly conflicting) objectives to be satisfied (e.g., design a bridge for which we want to minimize its weight and cost while maximizing its safety).

复杂系统与智能科学系列讲座

Lecture Series in Complex Systems and Intelligence Science

Multi-Objective Particle Swarm Optimizers: Past, Present and Future

讲座人/ Speaker

Prof. Carlos Coello Coello

CINVESTAV-IPN, Mexico

主持人/ Chair

赵冬斌 研究员

Prof. Dongbin Zhao

时　间/ Time

2018年3月19日星期一 10:00 - 11:00

10:00 - 11:00 am, Monday, March 19, 2018

地　点/ Venue

智能化大厦三层第三会议室

No. 3 Conference Room (3rd Floor), Intelligent Building, Institute of Automation, Chinese Academy of Science

报告摘要 Abstract

This talk will provide a review of the research that has been conducted on the use of particle swarm optimization for solving multi-objective problems. The talk will emphasize the main algorithmic developments that have been reported in the specialized literature, and will include a brief analysis of some of the most representative multi-objective particle swarm optimizers (MOPSOs) that have been proposed so far. The talk will also include some of the real-world applications of these MOPSOs and will conclude with some of the potential paths for future research in this area.

报告人简介 Biography

Carlos Coello Coello received a PhD in Computer Science from Tulane University (USA) in 1996. He is a pioneer in an area that is now known as "evolutionary multi-objective optimization". His research has mainly focused on the design of new multi-objective optimization algorithms based on bio-inspired metaheuristics. He currently has over 450 publications which, according to Google Scholar, report over 39,000 citations (with an h-index of 78). He is currently Full Professor with distinction at the Computer Science Department at CINVESTAV-IPN in Mexico City, Mexico.

Dr. Coello is associate editor of several journals, including the two most important in his area (IEEE Transactions on Evolutionary Computation and Evolutionary Computation). He is also an IEEE Fellow for his "contributions to multi-objective optimization and constraint-handling techniques". He has received several awards, including the National Research Award (in 2007) from the Mexican Academy of Science (in the area of exact sciences), the 2009 Medal to the Scientific Merit from Mexico City's congress, the Ciudad Capital: Heberto Castillo 2011 Award for scientists under the age of 45, in Basic Science, the 2012 Scopus Award (Mexico's edition) for being the most highly cited scientist in engineering in the last 5 years and the 2012 National Medal of Science in Physics, Mathematics and Natural Sciences from Mexico's presidency (this is the most important award that a scientist can receive in Mexico). He is also the recipient of the prestigious 2013 IEEE Kiyo Tomiyasu Award, "for pioneering contributions to single- and multiobjective optimization techniques using bioinspired metaheuristics" and of the 2016 The World Academy of Sciences (TWAS) Award in Engineering Sciences for "pioneering contributions to the development of new algorithms based on bio-inspired metaheuristics for solving single- and multi-objective optimization problems".

His current research interests are: evolutionary multi-objective optimization and constraint-handling techniques for evolutionary algorithms.

Lecture No. 01-20180319-124

SPONSOR: Chinese Association of Automation

ORGANIZER:The State Key Laboratory of Management and Control for Complex Systems