

# INVITATION TO IEEE DISTINGUISHED LECTURE

IEEE Distinguished Lecture hosted by the School of Science, Computer Science and Information Technology, RMIT University and the IEEE Victorian Section Computational Intelligence Chapter: **Niches of Population-based Optimization Algorithms in Practice** presented by Kalyanmoy Deb, Koenig Endowed Chair Professor, Department of Electrical and Computer Engineering, Michigan State University, East Lansing, Michigan, USA.

**Date:** Tuesday 22 November 2016

**Time:** 18:00-19:30 (refreshments start from 17:30)

**Venue:** RMIT City Campus, Building 80, Level 7, Room 1

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## About the presentation

Optimization problems are omnipresent in practice and researchers and practitioners have always been interested in developing computationally fast and reliable algorithms. Traditionally, optimization algorithms were developed based on the improvement of a single solution through the search space. However, in the past three decades, population-based optimization algorithms have dominated the field due to a number of niches that they provide.

In this IEEE DLP talk, we shall present a generic framework of a population-based optimization algorithm and explain their advantages in handling various practicalities over their point-based counterparts. As a case study, we shall present a recent study in which a real-world resource allocation problem involving a staggering billion variables has been solved.

## About the presenter

Kalyanmoy Deb is Koenig Endowed Chair Professor at Department of Electrical and Computer Engineering in Michigan State University, USA. Prof. Deb's research interests are in evolutionary optimization and their application in optimization, modeling, and machine learning.

He was awarded Infosys Prize, TWAS Prize in Engineering Sciences, CajAstur Mamdani Prize, Distinguished Alumni Award from IIT Kharagpur, Edgeworth-Pareto award, Bhatnagar Prize in Engineering Sciences, and Bessel Research award from Germany.

He is fellow of IEEE, ASME, and three Indian science and engineering academies. He has published over 435 research papers with Google Scholar citation over 90,000 with h-index 99. He is in the editorial board on 20 major international journals. More information about his research contribution can be found from <http://www.egr.msu.edu/~kdeb>.