

IEEE Computational Intelligence Society Distinguished Lecturer Program

Speaker: Kalyanmoy Deb, Michigan State University, USA

Inviting Chapter: IEEE Computational Intelligence Society Thailand Chapter

Date: 29 June 2020

Number of Participants: 50 People

Lecture Title: Recent Advances in Evolutionary Multi-Criterion Optimization and Future Studies

Abstract:

Practical optimization problems are hardly comprised of a single objective, as often they must be considered from a multi-disciplinary point of view. Multi-objective optimization problems give rise to a set of trade-off optimal solutions, from which one has to be chosen at the end. However, the knowledge of a diverse trade-off solution provides the user with a plethora of information about the problem that are priceless and otherwise difficult to obtain. In this talk, we present some state-of-the-art methodologies of a fast-growing field of evolutionary multi-objective optimization (EMO) and showcase the advantages of using EMO methodologies for applied engineering problem solving tasks. Some specific issues of handling uncertainties leading to robust and reliability-based optimization, meta-modeling to deal with computationally expensive problems, many (10+) objectives, large-dimensional spaces, and multi-criterion decision making to choose a single preferred solution will be discussed with engineering case studies. Due to the availability of multiple trade-off solutions, EMO allows a practitioner to analyze the solutions to reveal important and innovative problem knowledge that are common to them. Different 'innovization' procedures will be illustrated by means of a number of engineering design and control problems.

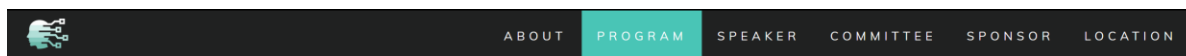
Website: <https://deeplearningandaiwinterschool.github.io/past/dlai3.html#Day1>



APNNS Education Forum Series

Deep Learning and Artificial Intelligence Summer School 2020 (DLAI3)

Virtually online from June 29 to July 3, 2020 BKK time (ICT+7)



PROGRAM

Confirmed Schedule - All times are given in Bangkok time (UTC+7)

- Day 1: Monday, 29 June
- Day 2: Tuesday, 30 June
- Day 3: Wednesday, 1 July
- Day 4: Thursday, 2 July
- Day 5: Friday, 3 July

Day 1: Monday, 29 June 2020 (Bangkok time UTC+7)

| Time | Activity |
|--|---|
| IEEE Computational Intelligence Society Distinguished Lecturer | |
| 07.00 - 08.00 am. | Breakfast chats - main session room opens and breakout rooms are available for networking upon request |
| 08.00 - 09.00 am. | Speaker: <i>Kalyanmoy Deb</i> , Michigan State University, USA Topic: <i>Recent Advances in Evolutionary Multi-Criterion Optimization and Future Studies</i> |
| 09.00 - 09.30 am. | Coffee Break, Group Photo and Networking |
| NVIDIA Deep Learning Institute (DLI) Workshop I (Part I) | |
| 09.30 am. - 12.00 pm. | Speaker: <i>Jonathan H. Chan</i> , King Mongkut's University of Technology Thonburi, Thailand Topic: <i>NVIDIA DLI Workshop on Fundamentals of Deep Learning for Computer Vision</i> |
| 12.00 - 01.00 pm. | Lunch Break, Group Photo and Networking |
| DLAI3 Opening Ceremony | |
| 01.00 - 01.15 pm. | Opening Remarks of DLAI3 – APNNS/IEEE-CIS Thailand Chapter/IEEE-CIS/RAS WA Chapter/IEEE-SMC WA Chapter |
| Academic Talk 1 | |
| 01.15 - 02.15 pm. | Speaker: <i>Seiichi Ozawa</i> , Kobe University, Japan Topic: <i>An Introduction to Privacy-Preserving Machine Learning for Big Data Analysis</i> |
| 02.15 - 02.45 pm. | Coffee Break, Group Photo and Networking |
| NVIDIA Deep Learning Institute (DLI) Workshop I (Part II) | |
| 02.45 - 05.00 pm. | Speaker: <i>Jonathan H. Chan</i> , King Mongkut's University of Technology Thonburi, Thailand Topic: <i>NVIDIA DLI Workshop on Fundamentals of Deep Learning for Computer Vision</i> |
| 05.00 - 06.00 pm. | Networking – breakout rooms with sponsors, organizers, experts, delegates, ... |

