COMPUTATIONAL INTELLIGENCE IN MODELING DECISION SUPPORT SYSTEM

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Overview

The three main pillars of computation intelligence (CI) are fuzzy systems, evolutionary and population based algorithms, and artificial neural networks. CI is also related with artificial intelligence (AI) which includes learning, reasoning and self-tuning processes that mimic the human intelligence in specific. From this point of view, AI may be considered as a part of CI. CI addresses the modeling of more complex problems which needs to embed the mathematization of higher level of human cognition and perception. In this perspective this course targets to elaborate the spectrum of CI problems and various algorithms needed to solve them.

The course is designed to explore the mechanism to apply computation intelligence (CI) in modeling, control, decision support, and optimization of complex problems. The topics will expose the participants the basics of computational intelligence, introduce several complex problems and systems, explore the ideas of evolutionary and memetic algorithms for solving complex problems, explain the need of fuzzy logic and approximate reasoning to adopt human cognition and perception in optimization, with a special emphasize to CI. A few applications of CI in management and medical problems will also be discussed.

Course participants will learn these topics through lectures and hands-on experiments. Also case studies and assignments willbe shared to stimulate research motivation of participants.

Lectures	**Computational Intelligence in modeling decision support system** : July 26 –July 31 **Number of participants for the course will be limited to fifty.**
You Should Attend If…	• You are executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories. • You are medical practitioners and biologists from different organizations. • You are student students at all levels (BTech/MSc/MTech/PhD) or faculty from academic institutions and technical institutions.
Fees	The participation fees for taking the course is as follows: **Participants from abroad : US $500** **Industry/ Research Organizations: INR 10000** **Academic Institutions: INR 2500** The above fee includes all instructional materials.

The Faculty

Prof. LÁSZLÓ T. KÓCZY is a Professor of Budapest University of Technology and Economics, Hungary. His research interests include computational intelligence, logistics, control theory, knowledge based systems, cognitive systems, robotics, pattern recognition.

Prof. Debjani Chakraborty is a Professor of Indian Institute of Technology, Kharagpur. Her research interest is multi-criteria decision analysis, optimization in imprecise and uncertain environment, fuzzy logic & approximate reasoning in medical imaging, fuzzy geometry.

Dr. Debashree Guha Adhya is an Assistant Professor of Indian Institute of Technology, Kharagpur. Her research interest is data aggregation, uncertainty modeling, MCDM applications in healthcare, predictive mathematical modeling.

Course Co-ordinator

Prof. Debjani Chakraborty
Principal Coordinator
Phone: 9434610298
E-mail: debjani@maths.iitkgp.ernet.in

Dr. Debashree Guha Adhya
Co-coordinator
Phone: 9475613893
E-mail: debashree_smst@smst.iitkgp.ac.in

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