



IIT PALAKKAD



SHORT COURSE ON

# FAIRNESS IN MACHINE LEARNING

DECEMBER 7 – 18, 2020

## COURSE TOPICS

- Machine Learning and Fairness
- Sources of Unfairness in Machine Learning Techniques
- Philosophical and Legal Underpinnings of Fairness
- Streams of Fairness: Individual and Group Fairness
- Fairness Testing
- Costs of Fairness: The Accuracy vs. Fairness Trade-off
- Fairness in Classification and Fair Algorithms for Classification
- Fairness in Clustering and Representation Learning
- Fairness in NLP; Text Embeddings and Fairness
- Fairness in Similarity Search and Information Retrieval
- Fairness in Outlier and Anomaly Detection
- Research Gaps in ML Fairness

**Organized by**

Department of Computer Science and Engineering

Indian Institute of Technology Palakkad

## YOU SHOULD ATTEND IF YOU ARE

- MS Ph.D. working in Machine Learning or allied disciplines
- Faculty of Machine Learning or allied disciplines
- Post-doc Candidate/ Research Associate working at any University/Institution of India or Abroad in the area of Machine Learning, or allied disciplines.
- Working professional working in the research wing of any Private or Public Organizations.
- BTech in CS or EE interested in Machine Learning

## INSTRUCTED BY

### Dr. Deepak Padmanabhan, Queen's University Belfast, UK



**Dr. Deepak P** is an assistant professor of computer science at Queen's University Belfast, UK. He has 15+ years of research experience in Machine Learning and Data Analytics, which includes 10 years as a Research Scientist at IBM Research. He has published 90+ research publications in various areas of data analytics, authored 3 books, and has 12 patents to his credit. He has won several awards including best paper awards and the INAE Young Engineer Award and is a senior member of the ACM and IEEE, as well as a fellow of the HEA (UK). His research interests are in ML applications and AI ethics.

### Dr. Sahely Bhadra, IIT Palakkad, India



**Dr. Sahely Bhadra** works in the broad area of Machine Learning and Optimization. She is interested in multi-view kernel learning from noisy incomplete data with structural properties. Dr. Sahely has published in top venues in ML and bioinformatics such as ICML, JMLR, MLJ, ICDM, Bioinformatics.

## COURSE FEES AND REGISTRATION

The participation fees for taking the course is as follows:

- **Participants from abroad: US \$200**
- **Industry : Rs. 10,000**
- **Academic Institutions, Govt. Organizations, Public Sector undertakings, etc. : Rs. 5,000**
- **Students, Research Scholars: Rs. 1,500**

The above fee includes all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24-hour free internet facility. The participants can be provided accommodation on a first-come, first-serve basis, on a payment basis, subject to availability.

## CONTACT

Course Coordinator

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