

# Electronics & ICT Academy

IIT Roorkee



presents

Online short course/FDP

on

Cognition and Computation

[November 06 - November 10, 2020]

At par with QIP for  
recognitions/credits

Experts from Academia

Dr. Marieke van Vugt (Assistant professor, University of Groningen, Netherlands), Dr. Varun Dutt (Associate Professor, Indian Institute of Technology, Mandi), Dr. Andrea Stocco (Associate Professor, University of Washington, Seattle, USA), Dr. Partha Pratim Roy (Associate Professor, Indian Institute of Technology, Roorkee)

Supported by

Ministry of Electronics & Information Technology  
Government of India

Certificates to participants by  
E&ICT Academy IIT Roorkee



Classes will be delivered through  
online platform

## Why Cognition and Computation?

Artificial Intelligence (AI) builds smart machines that imitate the human behavior. However, most AI methods do not take into account the principles of human intelligence. In this course, participants will become acquainted with two state-of-the-art modeling frameworks describing human cognition: drift diffusion models of decision making, and the ACT-R cognitive architecture that can describe all aspects of cognition. In addition, participants will become acquainted with more data-driven AI methods. Together, these methods provide an increasingly powerful toolbox for cognition and computation. This course will help the participants to understand AI from a holistic point of view and also help them to develop insights for use-cases such as healthcare.

### Course Objectives

- To become acquainted with the main principles underlying pattern recognition in EEG data.
- To become familiar with the main principles underlying ACT-R.
- To become familiar with the main principles underlying diffusion models of decision making.

### Course Features

- Daily lectures (16:00–17:30; 17:45–19:15; 20:30–22:00 IST).
- Possibility to ask questions in synchronous live and asynchronous sessions.
- Daily office hour with the various lecturers and other students (13:00–14:00; 14:00–15:00; 15:00–16:00).
- You can follow one, two or three streams at once.

Registration Link

<http://tiny.cc/o10zsz>

Last date of registration – 04 Nov, 2020

## Focus Areas

- Introduction to Machine Learning, Deep Learning on EEG data and its application to HealthCare
- Drift Diffusion Modelling of Decision Making processes
- Cognitive Modelling of attention, memory and visual perception with ACT-R

## How to make payment ?

<https://eict.iitr.ac.in/Paymentdetails.html>

Conference Code: EICTIITR-Online-30

## Course Fees

Faculty- Rs. 250/-  
Research Scholars- Rs. 350/-  
Others- Rs. 500/-

## Who Can Attend ?

Course is open to faculty members/ PhD research scholars and students from academic and research institutions.

## Principal Investigator

Prof. Sanjeev Manhas  
CSE Deptt., IIT Roorkee

## Course Coordinator

Prof. Partha Pratim Roy  
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## Contact Details

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