

Stochastic Processes for Data Science

Overview

Data science, machine learning and artificial intelligence are now ubiquitous in engineering applications as well as in everyday life. They rely on powerful algorithms which can sometimes be regarded as opaque black boxes fed with input data and producing output for analysis. This course intends to provide solid foundations in random processes towards a thorough understanding of such algorithms.

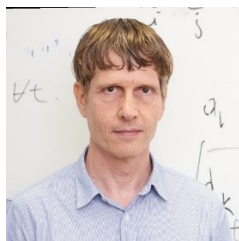
The primary objectives of the course are as follows:

- i) To allow the participants to master fundamental concepts in stochastic processes.
- ii) To provide exposure to various applications in machine learning and data science.
- iii) To gain experience from concrete application examples.
- iv) To practice experiments and simulations based on the computer codes provided.

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| Course Information | Dates - 22nd to 26th May 2023 Stochastic Processes for Data Science | | | | | | | | | | |
| You Should Attend If... | <ul style="list-style-type: none">▪ Executives, engineers in data related industries, researchers, service and government organizations.▪ Student at all levels (BTech/MSc/MTech/PhD) or Faculty from reputed academic institutions and technical institutions.▪ Knowledge of basic mathematical skills (calculus, probability, linear algebra) at the Bachelor level will be expected from all participants. <p>Number of participants for the course will be limited to fifty.</p> | | | | | | | | | | |
| Fees | <p>The participation fees for taking the course is as follows:</p> <table><tr><td>Participants from abroad</td><td>: US \$ 500</td></tr><tr><td>Students</td><td>: INR 1000</td></tr><tr><td>Faculty</td><td>: INR 5000</td></tr><tr><td>Industry / Research Organizations</td><td>: INR 30000</td></tr><tr><td>Government Organizations</td><td>: INR 10000</td></tr></table> <p>The above fee includes all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility.</p> | Participants from abroad | : US \$ 500 | Students | : INR 1000 | Faculty | : INR 5000 | Industry / Research Organizations | : INR 30000 | Government Organizations | : INR 10000 |
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| Government Organizations | : INR 10000 | | | | | | | | | | |

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| | <p>Modes of payment: Online transfer: Click here to pay: https://elearn.nptel.ac.in/gian/</p> |
| <p>Accommodation</p> | <p>The participants may be provided with hostel accommodation, depending on availability, on payment basis. Request for hostel accommodation may be submitted through the link: http://hosteldine.iitm.ac.in/iitmhostel/</p> |
| <p>Registration Procedure</p> | <p>Please follow the following steps for the registration:</p> <ol style="list-style-type: none"> 1. Go to GIAN website (http://www.gian.iitkgp.ac.in/GREGN/index) First time users need to register and pay a one-time fee of INR 500 / 2. Enroll for the course: Metocean Science and Engineering. Once you enroll for the course, an Enrollment/Application number will be generated, and the course coordinators will be notified. |

The Faculty



Prof. Nicolas Privault is a Professor in the Division of Mathematical Sciences-School of Physical and Mathematical Sciences at Nanyang Technological University, Singapore. His research interests include Stochastic analysis, probability, mathematical finance.



Dr. Neelesh S Upadhye is an Associate Professor in the Department Mathematics at the Indian Institute of Technology Madras, India. His research interests include applied probability, data science, statistical learning, time series.

Course Co-ordinator

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