

Dr. **Manuel Gomez Rodriguez** is a faculty at Max Planck Institute for Software Systems. He develops machine learning and large-scale data mining methods for the analysis, modelling and control of large real-world networks and processes that take place over them.



He is particularly interested in problems arising in the Web and social media and has received several recognitions for his research, including a Best Paper Award Honorable Mention at WWW'17, an Outstanding Paper Award at NIPS'13 and a Best Research Paper Honorable Mention at KDD'10. He has served as an area chair in the recent NIPS conferences, and program committee member and reviewer for several prestigious conferences and journals in machine learning such as NIPS, ICML, KDD, AAAI, JMLR etc. He regularly publishes his work at these top machine learning and data mining conferences and journals. Dr. Manuel holds a PhD and MS in Electrical Engineering from Stanford University and a BS in Electrical Engineering from Carlos III University in Madrid (Spain). You can find more about him at <http://learning.mpi-sws.org>.

Dr. **Srijith P. K.** is an Assistant Professor at the department of Computer Science and Engineering, IIT Hyderabad. He is interested in developing probabilistic machine learning and Bayesian nonparametric models to solve problems arising in various domains of data science.



He has developed novel machine learning approaches to solve several social network and natural language processing problems and has published papers in top venues such as ACL, EMNLP, ECML etc. He has been a reviewer for premier NLP conferences such as EMNLP, NAACL etc. and has served as a program committee member for CODS'17. Prior to joining IITH, he worked on social network analysis as a post-doctoral researcher at the University of Melbourne and at the University of Sheffield. Dr. Srijith did his Ph.D. at the department of Computer Science and Automation, Indian Institute of Science, Bangalore. He holds a M.Tech degree in Computer Science from IIT Bombay and a B.Tech degree in Computer Science from NIT Calicut. More details are available at <https://sites.google.com/site/pksrijith/home>.

## About IIT Hyderabad

Inventions and innovations are key themes on which the foundation of IITH is based. One of India's eight new IITs – IITH started functioning in August 2008. IIT Hyderabad was ranked within top 10 engineering colleges in India by the National Institutional Ranking Framework in 2017 and 2016, and is recognized as the best among the newer IITs.. Currently it has 2300 students in total and offers undergraduate programs in Nine Engineering disciplines, M.Sc. in Chemistry, Physics and Mathematics, M. Tech. in eight disciplines, M.Phil. in Liberal Arts, M.Des. in Design, and Ph.D. in 13 disciplines. The Computer Science and Engineering department also offers a special programme - Executive M. Tech. in Data Sciences for industry Professionals.

The first faculty at IITH joined in 2009 and as of today IITH has 180 faculty members. In a short span, IITH has developed state-of-the-art infrastructure for advanced research and produced more than 1700 scoped indexed publications and 50 filed patents. IITH has strong industry collaborations and MOUs with at least 50 universities globally. IITH's sanctioned research funding will be to the tune of Rs.350 crs. from nearly 300 plus sponsored projects. IITH has three technology incubators – iTIC, Center for Healthcare Entrepreneurship and Fables Chip Design Incubator.

Research is a culture among the faculty and students of IITH. IITH also has an innovative academic program where the students are offered fractional credits. IITH always strives to offer an innovative environment where one is not afraid to experiment with high-risk ideas.

For details please contact:  
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## GLOBAL INITIATIVE OF ACADEMIC PROGRAMMES (GIAN)

4-Day Course from  
Dec 11-14, 2017 on

### Diffusion in Social and Information Networks: Problems, Models and Machine Learning Methods



Indian Institute of Technology Hyderabad

[www.iith.ac.in](http://www.iith.ac.in)

## ■ Overview

Social and information networks have created a platform for human to share information at an unprecedented scale. It provides access to vast amount of information which is of significant value to government agencies, journalists and business companies. Mining and analysing the flow of information in social networks are of particular importance to these bodies as it provides great insights for decision making. There is a growing interest in developing models and algorithms which can understand and predict the diffusion of information in social networks. These models study the spread of information at a network level by modelling their spread at a node level. This involves considerable computational and algorithmic challenges and leverages advancements made in the various domains such as computational statistics, machine learning and graph theory. The course will cover various problems related to information diffusion arising in social networks and presents models and algorithms useful to model such problems. The significance of these models and algorithms are not limited to social network but also in healthcare, transportation, biological network, and internet of things.

## ■ Objectives

The objective of the course is to present problems arising from social networks and web, study various models, and introduce state-of-the-art algorithms to solve these problems. The course will look at various problems interesting to the academy and industry such as event detection, information propagation, latent network estimation, influence maximisation and control, social activity modelling, and source identification. The course will introduce to the participants models based on point processes, deep learning, Bayesian learning and topic models.

## ■ Course Outline

The following topics will be covered as part of the course. For each topic, the lectures will cover the theoretical foundations of the concept and also practical aspects.

### Applications and Problems

Event detection, Information diffusion, meme tracking, opinion dynamics, Information reliability, Influence maximisation, activity shaping, source identification.

### Models and Algorithms

Cascade process, temporal point process, Bayesian learning, deep learning, and topic models.

## ■ Registration Details

Registration Fee:

- Industry/ Research Organizations: Rs. 10,000
- Faculty from academic institutions: Rs. 5,000
- Undergraduate/graduate students: Rs. 1,000
- Executives enrolled in part time Masters/PhD courses at recognized institutes: Rs.5,000
- Foreign Delegates: USD 250

■ Payments should be made in the form of a DD in favor of Registrar, IIT Hyderabad, Payable to SBI, IIT Kandi Branch, IFS Code: SBIN0014182.

■ The DD, a copy of ID proof issued by the organization mentioned in the registration form, together with registration form should be sent to the course coordinator address mentioned overleaf.

■ The above fee includes the tuition fee and the lecture notes. For lunches and refreshments on all days an additional amount of Rs. 1000/- has to be paid at the registration desk by all participants. The accommodation is to be met by participants. There are number of hotels available nearby IIT Hyderabad. Student participants will be provided with accommodation in IITH hostels for a nominal fee, subject to the availability of hostel rooms.

## ■ Important Dates

Last date for receiving applications: Nov 26, 2017  
Course dates: Dec 11-14, 2017

## Registration Form

### Diffusion in Social and Information Networks: Problems, Models and Machine Learning Methods

Title: Mr. / Ms. / Mrs. / Dr.

Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Designation: \_\_\_\_\_

Organization\*: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Registration Fee Enclosed (Select one):

Rs. 1000 / Rs. 5000 / Rs. 10000 / USD 250

Draft Details.

Accommodation Needed (for student participations only): Yes/No

\* Proof to be submitted