Government of India
Ministry of Human Resource Development

Towards Safe Cities: A Mobile and Social Networking Approach

Overview

Recent technological advances, in particular mobile devices and online social networks, have paved the way toward a smarter management of resources in today's cities. As population density grows and natural disasters and man-made incidents (e.g., hurricanes, earthquakes, riots) impact increasing number of people, maintaining the safety of citizens, an essential smart city component, becomes a problem of paramount significance and difficulty. We envision a system where users are seamlessly made aware of their safety in a personalized manner, through quotidian experiences such as navigation, mobile authentication, choosing a restaurant or finding a place to live i.e. to enable the vision of smart and safe cities by exploiting mobile and social networking technologies to securely and privately extract, model and embed real-time public safety information into quotidian user experiences. This course provides an over view of approaches to define location- and user-based safety metrics and also introduce iSafe, a privacy-preserving algorithm for computing safety snapshots of co-located mobile devices as well as geosocial network users. The course also presents the implementation details of iSafe as both an Android application and a browser plugin that visualizes safety levels of visited locations and browsed geosocial venues.

This course provides a comprehensive discussion on the mobile technologies and online social networks to provide personalized and context aware safety recommendations for mobile and social network users.

Date	**01 June 2018 - 06 June 2017**
Location	**BMS College of Engineering, Bull Temple Road, Bangalore-560019**
Course Schedule	**Day 1: 01/06/2018:** Advances in Mobile device and on line geosocial network technologies **&** Introducing a framework for defining public safety. **Day 2: 02/06/2018:** Context Aware Safety Recommendations & Personalized Safety Recommendations. **Day 3: 03/06/2018**: Spatiotemporal context with trajectory traces collected from geosocial network users & Statistical χ 2 test to show dependencies **Day 4: 04/06/2018:** Wireless capabilities of mobile devices to compute real-time snapshots, Forecasting Tools **Day 5: 05/06/2018:** iSafe as a web server & iSafe as browser plugin running in the user's browser & mobile application **Day 6: 06/06/2018:** Date of Examination
Who should Attend	• It's an interdisciplinary course designed for students in Communication Engineering/ Computer Science / Information Science Engineering field. • You are a practicing engineer in Communication Engineering/ Computer Engineering field. • You are a post graduate student/research scholar interested in the area of Communication/Computer Networks/ Mobile and Social Networks. • You are involved in design of Smart systems that utilize Mobile and Social Networks.

	• You are interested in teaching a course on Mobile Networks and Ad hoc Networks.
Fees	The participation fees for taking the course is as follows: Participants from abroad : US $500/- Industry/ Research Organizations: Rs.5,000/- Academic Institutions: Rs. 3,000/- Students: Rs. 1,000/- The above fee includes all instructional materials, computer use for tutorials and assignments. The participants will be provided with accommodation on payment basis. For more details please visit www.bmsce.in **Number of Participants limited to 40 Only**
Payment	Payment to be made through NEFT Name of the Account Holder: GIAN -Towards Safe Cities: A Mobile and Social Networking Approach Account Number:50417493999 Bank & Branch: Allahabad Bank, Hanumanthanagar Branch IFSC Code:ALLA021011 MICR Code:560010007 The participants will be provided with accommodation based on availability on payment basis.

Foreign Faculty

Dr. S.S. Iyengar,
Director and Ryder Professor.
Director of the School of Computing and Information Sciences
Florida International University, Miami.

Dr. S.S. Iyengar is currently the **Ryder Professor** of Computer Science and Director of the School of Computing and Information Sciences at Florida International University, Miami. He is also the founding director of the Discovery Lab. His research interests include High-Performance Algorithms, Biomedical Computing, Sensor Fusion, and Intelligent Systems for the last four decades. Dr. Iyengar is a Member of the European Academy of Sciences, a **Fellow of the Institute of Electrical and Electronics Engineers (IEEE)**, a **Fellow of the Association of Computing Machinery (ACM)**, a **Fellow of the American Association for the Advancement of Science (AAAS)**, and **Fellow of the Society for Design and Process Science (SDPS)**, a **Fellow of National Academy of Inventors (NAI)**. Dr. Iyengar has been the Chair for many IEEE conferences in the area of Sensor Networks, Computational Biology, Image processing, etc. He was awarded **Satish Dhawan Chaired Professorship** at IISc, then **Roy Paul Daniel Professorship** at LSU. He has received the Distinguished Alumnus Award of the Indian Institute of Science. In 1998, he was awarded the **IEEE Computer Society's Technical Achievement award** and is an IEEE Golden Core Member.

Local Institutional Coordinator:

Dr.Ravishankar Deekshit,
Dean, Student Affairs,
BMS College of Engineering.

Host Faculty

Dr. G Poornima is Professor and Head of the Electronics and Communication Engineering, she holds a PhD in the Energy Efficient Wireless Sensor Networks from University Visvesvaraya College of Engineering, Bangalore University, Bengaluru, Karnataka, India. Her research interest includes Energy Efficient Computer Networks, Fault Tolerant Signal Processing, Energy Harvesting in Wireless Sensor Networks.

Dr.R.Jayagowri holds Ph.D in the domain of VLSI-Design for Testability from Jawaharlal Nehru Technological University, Hyderabad. She has authored a text book named "Analog and Mixed Mode VLSI design". Her areas of interest are Low Power VLSI and Mixed Signal Design.

Course Coordinator

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Course Registration:
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