

Cutting Edge Internet Technologies: Internet of Things (IoT) and Crypto Currency

GIAN (MHRD, Govt. of India) Supported Advanced Level Course @ NITK Surathkal

Overview

The focus of this innovative course is on developments in system of systems(Sⁿ) architecture, disruptive technologies incorporating networks, and cyber defense. Actively exploring new frontiers, you will gain experience with the Internet of Things and crypto-currency. You will practice managerial tasks essential for large corporations and startups alike. Upon completion of this course, you will have “been there and done that”.

Schedule	December 05, 2016 to December 09, 2016
Modules	<p>Module A – Internet of Anything: Students demonstrate ability to integrate Sⁿ, systems, humans, appliances, servo-mechanisms, and sensors into a dynamic networked environment, while maintaining designed-in security within Sⁿ and Nⁿ enclaves.</p> <ol style="list-style-type: none"> 1. Networks of Networks (Nⁿ), System of Systems (Sⁿ) IoT Definitions, IoT Components, IoT Standardization 2. Enabling technologies for a potential Internet of Anything (IoA) 3. IoT Frameworks, IoT Products, IoT Solutions 4. IoT Security and Privacy Issues 5. IoT Security and Privacy 'Hands-On' 6. Primitives and Elements of IoT Trustworthiness 7. Individual / Team Exercises <p>Module B –Crypto Currency: Students demonstrate ability to analyze advent of new forms of monetary exchange and how it is securely network enabled while being simultaneously network transformative.</p> <ol style="list-style-type: none"> 1. Crypto Currencies, NⁿAspects, BitCoin Phenomena, Anonymous Retail Exchange and Investment, Performance and Economic Value 2. Block Chain and Public Ledger, Mining, Miners Rewarded, Transaction security 3. Positive and Negative Impacts of Crypto Currencies 4. Might Block Chain Outlive BitCoin?, Future Use 5. Individual / Team Exercises

Host Institute	NITK Surathkal, Mangalore (http://nitk.ac.in/)
Max. No.of Participants	Limited to 50
You Should Attend if...	<ul style="list-style-type: none"> • Engineers and professionals from industries, service and government organizations including R&D laboratories. • Student students at all levels (BTech/MSc/MTech/PhD) or Faculty from reputed academic institutions and technical institutions.
Course Registration Fee	<ul style="list-style-type: none"> • Participants from abroad: US \$500 • Industry/ Research Organizations: Rs. 10,000/- • Academic Institutions: Rs. 5,000/- <p>The above fee includes all instructional materials, computer use and internet facility. The participants <u>will not be given</u> any TA/DA and boarding / lodging support. Participant can bring their laptop for effective utilization of course delivery.</p>

Teaching Faculty



Irena Bojanova is a computer scientist at the National Institute of Standards and Technology (NIST), USA. Previously she was a professor and program director, Information and Technology Systems, University of Maryland University College, managed academic programs at Johns Hopkins University and Plsoft Ltd., and co-started OBS Ltd. (now CSC Bulgaria). Her research interests include IoT, distributed systems, and formal methods. Bojanova received a PhD in computer science from Bulgarian Academy of Sciences. She is a Senior Member of IEEE and serves as Integrity Chair of IEEE Computer Society Publications Board, Associate EIC of *IEEE IT Professional*, AE of *International Journal of Big Data Intelligence (IJBDI)*, Co-Chair of IEEE Reliability Society IoT Technical Committee, and a founding member of IEEE Technical Sub-Committee on Big Data. Previously she served as the founding chair of IEEE CS Cloud Computing Special Technical Community and Acting EIC of *IEEE Transactions on Cloud Computing*. Contact her at irena.bojanova@computer.org or irena.bojanova@nist.gov.

Teaching Faculty

Professor Irena Bojanova
Computer Scientist
National Institute of Standards
and Technology (NIST), USA
Email: irena.bojanova@nist.gov

Course Co-ordinator

Professor K. Chandrasekaran
Department of CSE
NITK Surathkal
+91-824-2474000 Extn. 3400, 3044
Email: kchnitk@gmail.com