

Mobile Systems Security

Overview

Mobile devices and mobile communication have become pervasive and are intertwined with every aspect of the lives of ordinary people. Mobile phones are increasingly being used for online shopping, banking and sharing information. These devices are also being used for storing personal information. In such a scenario, mobile systems security assumes significance. These have led to a variety of software and hardware security mechanisms being designed and deployed widely in today's mobile device platforms.

This course will introduce mobile systems security to the participants by acquainting them with various system security aspects. Participants shall be apprised design challenges through specific example systems in software and hardware mobile platform security. Case studies such as Android OS platform security, hardware security mechanisms like TrustZone and Trusted Platform Module shall be part of the course. It will also expose participants to the hard challenges in the domain such as the importance of and difficulties in designing secure systems that are intuitive and easy-to-use.

For more details, please visit GIAN cell at <http://www.mnit.ac.in>.

Dates	Course Duration : Nov 21 – 25, 2016 Last date of Registration : Nov 14, 2016										
Modules	A: Basics of Access Control; Android Platform Security : Nov 21, 2016 B: General Model of Platform Security : Nov 22, 2016 C: Hardware Platform Security : Nov 23, 2016 D: Usability Challenges in Mobile Security : Nov 24, 2016 E: Research Challenges : Nov 25, 2016 Number of participants for the course will be limited to fifty. Selection of participants shall be on “First Come First Served” basis only.										
You Should Attend If you are ...	<ul style="list-style-type: none"> ▪ Executives, engineers and researchers industry and government organizations including R&D laboratories interested in understanding mobile systems security ▪ Faculty from reputed academic institutions and technical institutions. ▪ Students at all levels (Btech (3rd/4th year)/MSc/MTech/PhD) <p>The course will assume that the participant has already taken an undergraduate level course in security and cryptography or the equivalent. Knowledge of basic cryptography and security techniques will be assumed.</p>										
Fees	GIAN Portal registration fee: Rs 500 (mandatory for all participants). <ol style="list-style-type: none"> 1. Create login and password at http://www.gian.iitkgp.ac.in/GREGN/index 2. Login and complete the Registration Form and select Course(s) 3. Confirm application and pay Rs. 500/- (non-refundable) through online payment gateway. 4. Download “pdf file” of the application form and email it to the Course Coordinator. Registration Fee (exclusive of GIAN Portal Registration Fee) <table style="margin-left: 20px;"> <tr> <td>Participants from abroad</td> <td>: US \$100</td> </tr> <tr> <td>Industry/ Research Organizations</td> <td>: Rs 5000</td> </tr> <tr> <td>Faculty from other Academic Institutions</td> <td>: Rs 3500</td> </tr> <tr> <td>Students from other Academic Institutions</td> <td>: Rs 1000</td> </tr> <tr> <td>Faculty /Students from MNIT and IIIT Kota</td> <td>: Rs 1000</td> </tr> </table> <p>The above fee includes all instructional materials, computer use for tutorials and free Internet facility. The participants will be provided with accommodation, if available, on payment basis.</p>	Participants from abroad	: US \$100	Industry/ Research Organizations	: Rs 5000	Faculty from other Academic Institutions	: Rs 3500	Students from other Academic Institutions	: Rs 1000	Faculty /Students from MNIT and IIIT Kota	: Rs 1000
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Registration

1. Fees may be paid via Demand Draft in favour of "REGISTRAR (SPONSORED RESEARCH) MNIT Jaipur" payable at Jaipur. OR
Fees can be paid through National Electronic Funds Transfer (NEFT)
Account No. : 676801700388
In name of "REGISTRAR (SPONSORED RESEARCH) MNIT Jaipur"
Bank : ICICI Bank, Branch MNIT Jaipur
IFSC Code: ICIC0006768.
Preferred mode of registration is Demand Draft.
2. Email filled in "Registration Form", scan copy of "Demand Draft/ NEFT Transaction Receipt" and pdf file (downloaded from GIAN Portal Registration) to vlaxmi@mnit.ac.in. Please mention "GIAN (Mobile System Security) in Subject of the email on or before November 14, 2016.

The Faculty



Prof. N. Asokan is a Professor of Computer Science at Aalto University and the University of Helsinki. Between 1995 and 2012, he worked in industrial research laboratories designing and building secure systems, first at the IBM Zurich Research Laboratory and then at Nokia Research Center. His primary research interest has been in applying cryptographic techniques to design secure protocols for distributed systems. Recently, he has also been investigating the use of Trusted Computing technologies for securing end nodes, and ways to make secure systems usable, especially in the context of mobile devices. He is a coauthor of over 90 research papers in international conferences and journals. He is a coinventor of 44 granted patents. His research group pioneered early academic research involving trusted execution environments (TEEs) in mobile devices with their work on On-board Credentials.

Prof. Asokan serves on the editorial board of IEEE Security & Privacy and the Proceedings of Privacy Enhancing Technologies (PoPETS). He has previously served on the editorial boards of ACM Transactions on Information and Systems Security, Computer Communications, and IEEE Network and on the steering committees of ACM WiSec and ACM SPSM. His research has won best paper and best demo awards in venues such as ACM ASIACCS and IEEE PerCom. In 2013, he was selected for a Google Faculty Research Award for his work on contextual security. He is the founding director of Helsinki Aalto Center for Information Security (URL: <http://haic.aalto.fi/>)

Prof. Asokan received his doctorate in Computer Science from the University of Waterloo, MS in Computer and Information Science from Syracuse University, and BTech (Hons.) in Computer Science and Engineering from the Indian Institute of Technology at Kharagpur. He is an ACM Distinguished Scientist and an IEEE Senior Member. (URL: <http://asokan.org/asokan/>)



Dr Andrew Paverd is a postdoctoral researcher in secure systems at Aalto University. Combining his Engineering and CS expertise, his research focusses primarily on the use of secure hardware to build trustworthy computational and communication systems. His research interests also include privacy enhancing technologies, formal analysis techniques for security, and real world cryptography. He holds a B.Sc. in Electrical Engineering from the University of the Witwatersrand, Johannesburg (for which he was awarded the 2010 Chancellor's Gold Medal as the most distinguished graduand of the university in all natural science disciplines), an M.Sc. in Electrical and Computer Engineering from the University of Cape Town (2012), and a D.Phil. in Computer Science from the University of Oxford (2016). His doctoral research led to a new research project at Oxford, funded by Intel Corporation. He is a member of the ACM and IEEE (for which he served as a Student Branch Chair in 2010).

Course Coordinators

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Prof. M. S. Gaur is a professor at Computer Science and Engineering at Department of Malaviya National Institute of Technology Jaipur. His research interests include information security and NoC (Networks on Chip). He has obtained his B.E. (JNV University , 1988), M.E. (IISc, 1992) and PhD (from University of Southampton, UK, 2004). He has guided 14 PhDs and has 150 publications in Journals and Conferences. He has coordinated national and international projects in the domains of Information Security and Networks on Chip. He is a member of IEEE, ACM, VLSI Society of India.



Dr. Vijay Laxmi is an associate professor at Computer Science and Engineering Department of Malaviya National Institute of Technology Jaipur. She has been teaching in MNIT since 1995. Her research interests include information security. She obtained PhD from University of Southampton, UK under Commonwealth Scholarship and Fellowship Plan. She has guided 12 PhDs and has 125 publications in Journals and Conferences. She has been involved in various R&D projects, some of which are International Collaboration. She is an IEEE and ACM member. She has been a member of TPC of various conferences.