

AANJHAN RANGANATHAN

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Education

- **ETH Zurich, Switzerland**—September 2010–present
PhD
 - The goal of the research mostly revolves around the physical layer security of wireless systems (e.g., secure localization and ranging, GPS security, (anti-) jamming techniques).
- **École Polytechnique Fédérale de Lausanne, Switzerland**—School of Electronics
Masters in Electronics and Microelectronics
 - CGPA : 5.62/6, graduated in February 2010
- **Anna University**—SSN College of Engineering, Chennai, India
Bachelors in Electronics and Communication
 - Percentage : 82% (Overall), graduated in April 2005

Experience

- **Research Assistant - Processor Architecture Laboratory, EPFL**—
March 2010–July 2010
 - Worked on an extension to the Master thesis on Snoop Filters for Multiprocessor based Embedded Systems. Also assisted in developing a cryptographic hardware platform based on Arduino for performing Differential Power Analysis attacks.
- **Contract Employee, Google Inc. (GSoC)**—
May 2009–August 2009
 - Worked for RTEMS project on Memory Management Unit support. Details can be found in <http://www.rtems.org> and <http://code.google.com/p/rtems-mmu-support/wiki/GSoCFinalReport>
- **Teaching Assistant - Microsystems Laboratory (LSM), EPFL**—Switzerland
October 2009–November 2009
 - Worked as a teaching assistant at the Microsystems laboratory under Prof. Alain Vachoux for Hardware System Modeling and EDA based VLSI design (Semi-Custom part) courses.
- **Robert Bosch India Ltd. (Car Multimedia Group)**—Bangalore, India
Senior Engineer: June 2005–June 2008
 - Worked for Volkswagen and Audi OE Projects in the Premium Telephone team of three members, responsible for interfacing the car multimedia system with bluetooth enabled handsets. Responsible for requirements Analysis, design, implementation, testing and release. Gained experience in end customer interaction.

Research Papers/Publications/Projects

- **Proximity Verification for Contactless Access Control and Authentication Systems**, Aanjhan Ranganathan, Boris Danev, Srdjan Capkun. in *Proceedings of the 28th Annual Computer Security Applications Conference (ACSAC 2015)*
 - **Thermal Covert Channels on Multi-core Platforms**, Ramya Jayaram Masti, Devendra Rai, Aanjhan Ranganathan, Christian MÃijller, Lothar Thiele and Srdjan Capkun. in *Proceedings of Usenix Security Symposium 2015*
 - **W-SPS: Designing a Wide-Area Secure Positioning System**, Der-Yeuan Yu, Aanjhan Ranganathan, Ramya Jayaram Masti, Claudio Soriente and Srdjan Capkun. in *Cryptology ePrint Archive: Report 2015/230*
 - **Detection of GPS Spoofing Attacks in Power Grids (short paper)**, Der-Yeuan Yu, Aanjhan Ranganathan, Thomas Locher, Srdjan Capkun and David Basin. in *Proceedings of the ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec), 2014*
 - **On Limitations of Friendly Jamming for Confidentiality**, Nils Ole Tippenhauer, Luka Malisa, Aanjhan Ranganathan and Srdjan Capkun in *Proceedings of IEEE Symposium on Security and Privacy (S&P), 2013*
 - **Enabling Trusted Scheduling in Embedded Systems**, Ramya Jayaram Masti, Claudio Marforio, Aanjhan Ranganathan, Aurélien Francillon and Srdjan Capkun in *Proceedings of 28th Annual Computer Security Applications Conference (ACSAC), 2012*
 - **Design and Implementation of a Terrorist-Fraud Resilient Distance Bounding System**, Aanjhan Ranganathan, Nils Ole Tippenhauer, Boris Skoric, Dave Singelee and Srdjan Capkun in *17th European Symposium on Research in Computer Security (ESORICS), 2012*
 - **Counting Stream Registers: An Efficient and Effective Snoop Filter Architecture**, Aanjhan Ranganathan, Ali Bayrak, Theo Kluter, Philip Brisk, Edoardo Charbon and Paolo Ienne in *Proceedings of International Conference on Embedded Systems: Architectures, Modeling and Simulation (SAMOS XII), 2012*
 - **Physical-Layer Attacks on Chirp-based Ranging Systems**, Aanjhan Ranganathan, Boris Danev, Aurélien Francillon, Srdjan Capkun in *Proceedings of the ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec), 2012*
 - **Experimental Analysis of Snoop Filters for MPSoC based Embedded Systems**, Master Thesis at Processor Architecture Laboratory, EPFL, Switzerland
 - **Mounting of Version Control Repositories–RepoFS** at *International IEEE High Performance Computing Conference 2006, Bangalore, INDIA*
<http://www.hipc.org/hipc2006/posters/repofs.pdf>
 - **Linux and *BSD feasibility study for Automotive Embedded Software** at *SIAT 2007 International Conference at Pune, INDIA (SAE Paper No. 2007-26-057)*
 - **Hybrid Electric vehicle with Intelligent Drive Switching**, presented at IIT Bombay, SAE Student Conference at PSG Tech Coimbatore
 - **Virtual Vision–Module for the Blind**, presented at IIT Bombay [Techfest 2005]
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Awards

- 'Young Scientist Award 2004' by the INDIAN SCIENCE MONITOR
- 'Distinguished Alumni' award from SSN Institutions, Chennai, India

Skills

- **Operating Systems:** GNU/Linux (Fedora, Debian, Ubuntu), Windows 98/2000/XP
- **Computer Languages:** Proficient in C, \LaTeX , Verilog, VHDL, Beginner in Python
- **Tools:** Version Control Systems, Cadence, Synopsys, Mentor Graphics Toolsets for Digital/Mixed Signal Design, Matlab
- **Others:** Familiar 8051 MicroController, NEC V850, Protocols like CAN, McNet, Usage of Hardware Debuggers, XML Driven GUI/Embedded Systems Behaviour

Professional and Social Activities

- Technical Program Committee member for "Smart Medical Devices - from Lab to Clinical Practice" workshop 2015, 2016
 - Reviewer for IEEE/ACM Transactions on Networking 2015
 - Reviewer for ACM Transactions on Embedded Computing Systems (TECS 2015)
 - Reviewer for IEEE Journal of Selected Topics in Signal Processing 2014
 - Reviewer for Transactions on Emerging Telecommunications Technologies 2014
 - "Free and Open Source VLSI CAD Tools" at Jawaharlal Nehru University, Delhi [<http://freed.in>]
 - "Icarus Verilog and Free/Open Source EDA Tools" at Indian Institute of Technology Madras.
 - "Hybrid Electric Vehicle - with Intelligent Drive Switching" at IIT Bombay [Techfest 2004]
 - Organized and conducted workshops for School/College students on 'Developing Leadership Qualities' as the head of the technical division of 'PEOPLE FIRST', a youth organization.
 - Developer and maintainer of GNUSim8085, a 8085 simulator. [<http://gnusim8085.sourceforge.net>]
 - RTEMS Contributor <http://www.rtems.com>
 - Active Participation in Linux demo Days Conducted by the Chennai Linux users Group in creating Awareness on FLOSS to students in both the semi-urban and urban areas.
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