

ROHAN CHABUKSWAR

United Technologies Research Center, Penrose Business Centre, Penrose Wharf, Cork, Ireland

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PROFESSIONAL EXPERIENCE

United Technologies Research Center, Ireland

Staff Research Scientist *March 2018 – Present*

Senior Research Scientist *July 2014 – March 2018*



Pacific Gas and Electric, San Francisco

Information Security Intelligence Intern *May – August 2011*



Acoustic Research Laboratory, NUS

Research Engineering Intern *May – July 2007*



EDUCATION

CARNEGIE MELLON UNIVERSITY

Doctor of Philosophy, Electrical and Computer Engineering, May 2014



CARNEGIE MELLON UNIVERSITY

Master of Science, Electrical and Computer Engineering, May 2009



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

Bachelor of Technology, Engineering Physics, August 2008



LANGUAGES

English, German, French, Hindi, Marathi

TECHNICAL SKILLS

- **Programming Languages:** Java, Python, C++, Visual Studio, PHP, JS, CSS
- **Operating Systems:** Linux, Windows, Mac OS, Solaris, Unix
- **Software:** MATLAB & Simulink, Mathematica, Eclipse

SELECTED PUBLICATIONS

A Framework for Attack-Resilient Industrial Control Systems: Attack Detection and Controller Reconfiguration, K Paridari, N O'Mahony, A E Mady, R Chabukswar, M Boubekour, H Sandberg, Proc. IEEE, vol. 106, pp. 113 – 128, Jan. 2018



Cyber-Physical-Security Framework for Building Energy Management System, K Paridari, A Mady, S La Porta, R Chabukswar, J Blanco, A Teixeira, H Sandberg, M Boubekour, ICCPS, CPSWeek 2016, Vienna, Austria



Implementation Experiences from Smart Grid Security, R Chabukswar, S Basagiannis, Y Yang, K McLaughlin, M Boubekour, Book Chapter, Smart Grid Security



Secure Detection Using Correlated Binary Sensors, R Chabukswar, B Sinopoli, ACC 2015, Chicago, United States



Secure Detection in Cyberphysical Control Systems, PhD Thesis



Detecting Integrity Attacks on SCADA Systems, Y Mo, R Chabukswar, B Sinopoli, IEEE Transactions on Control Systems Technology, vol. 22, no. 4, pp. 1396 – 1407, July 2014



Secure Detection Using Binary Sensors, R Chabukswar, Y Mo, B Sinopoli, IFAC NecSys 2013, Koblenz, Germany



Detecting Integrity Attacks on SCADA Systems, R Chabukswar, Y Mo, B Sinopoli, IFAC World Congress 2011, Milan, Italy



AWARDS

Outstanding Achievement Award, March 2017 *Automated Building HVAC Commissioning and Controls Tuning*, United Technologies Research Center



Great Job Award, December 2016 *Supporting the Component PHM Project*, United Technologies Research Center



Extra Effort Award, October 2016 *Exceptional Support to Automated Commissioning Tool Development*, United Technologies Research Center



Great Job Award, April 2015 *Successful completion of SPARKS FP7 Demonstration*, United Technologies Research Center



Dean's Tuition Fellowship, 2009, Carnegie Institute of Technology



Gold Medal, 8th International Astronomy Olympiad, Stockholm, 2003



CERTIFICATIONS

QQI Level 5 Occupational First Aid, *Quality & Qualifications Ireland*



Enriched Air Diver, *Professional Association of Diving Instructors*



Advanced Open Water Diver, *Professional Association of Diving Instructors*



Idaho National Laboratory SCADA Security



LEADERSHIP

- Ambassador for Cork Community, InterNations.
- System Administrator for Undergraduate Computer Laboratory, Physics Department, IIT Bombay — *Revamped the entire computing facility, centralized accounts to institute central accounts, supervised the development of front- and back-end of the department website.*
- Involved in training Indian Teams to International Astronomy Olympiad and International Olympiad in Astronomy and Astrophysics.
- Core Group Member of Physics Olympiad team of Department of Physics, IIT Bombay, handling Academic, Technical and Marketing aspects — *Completely upgraded the technical backbone of the stage component and was responsible for influencing the primary sponsor.*
- Core Group Member, webmaster and account manager of Technical General Championship, IIT Bombay — *automatized all institute quizzes and online registration processes for all events.*

RELEVANT COURSES

- Graduate: Methods of Optimization; Linear Systems; Pattern Recognition; Machine Learning; Computer Security; Estimation; Detection & Identification; Security & Privacy; Advanced Digital Signal Processing; Biomedical Image Informatics
- Undergraduate: Wavelets; Adaptive Signal Processing; Image Processing; Embedded Systems Design; Cryptography & Network Security; Linguistics & Natural Language Processing; Analog Circuits; Microprocessors; Digital Circuits