AKSHAY RAJHANS

Senior Research Scientist

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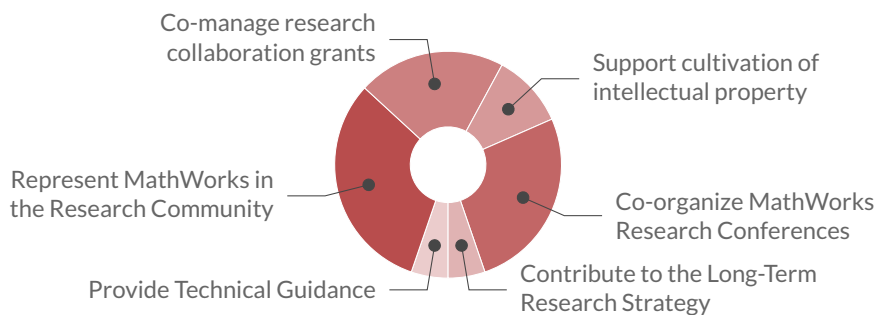
EXPERIENCE

Senior Research Scientist & Senior Software Engineer
MathWorks

July 2013 – Ongoing   Natick, MA

- Advanced research and technology development

- C++ software development based on core semantics of Simulink.

Research Intern
Bosch, Research & Technology Center

August 2009 – December 2009   Pittsburgh, PA

- Developed a new approach to non-intrusive load monitoring using hybrid system state estimation.
- **Co-inventor** on a patent.

Research Staff
University of Pennsylvania, GRASP Lab

January 2008 – June 2008   Philadelphia, PA

- Worked on STRONG, a MATLAB Toolbox originally developed during my masters thesis.

Manager, IBU Application Engineering & Operations Management Program Participant
Cummins

August 2003 – December 2005   Pune, India

- Application engineering for electronic control of diesel engines in mining, marine, defense, rail, compressors, oil rigs, fire pumps, automotive and off-highway construction equipment.
- *One of only two* engineers in charge of Electronic Controls of all of IBU Applications in India.
- Research and development of electronic controls for diesel engines and their applications.

PUBLICATIONS

Theses, Book Chapters, Papers, Manuscripts, Abstracts, Posters
arajhans.github.io/publications.html

Patents
arajhans.github.io/patents.html

ACHIEVEMENTS

Program Committee (PC) Leadership
MathWorks Research Summits, ADHS '18, HSCC '18, WSC '17, HSCC '17

PC Membership
HSCC, ICCPS, ADHS, ICINCO, SummerSim, CoSim-CPS, CITest_CPS

Invited Speaker
Tufts, MIT, Penn, WPI, CMU, Robotica

Invited Panelist
NIST CPS Framework Workshop, SCAV Workshop at CPS Week '17

Ph.D. Thesis Committee
Rennselaer Polytechnic Institute

Judge
CPS V&V Grand Prix, Carnegie Mellon

MathWorks Tech Lead
CAT Vehicle Challenge

Industry Advisory Boards
WPI Autonomous Vehicles IAB, ISCAS '18 IAB, ACM GPAC

Technical Committee
IEEE TC on Homeland Security

Editorial Advisory Board
Upcoming Springer book on Resilience in Cyber-Physical Systems

McCalla Best Paper Award
ICCAD 11

Work featured as Research Highlight
CACM 13

EDUCATION

Ph.D., ECE
Carnegie Mellon University
Jul '08 – May '13   Pittsburgh, PA

M.S., EE
University of Pennsylvania
Jan '06 – Dec '07   Philadelphia, PA

B.E., E&TC
University of Pune
Aug '99 – May '03   Pune, India

SOFTWARE SKILLS

Languages
MATLAB, C++, C, some Java