

# AKSHAY RAJHANS

Principal Research Scientist, Research Alliance Manager, Innovation Officer

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in linkedin.com/in/rajhans

📍 Natick, MA

## EXPERIENCE

### Principal Research Scientist

#### MathWorks

📅 July 2013–Present

📍 Natick, MA

- Identify and foster research and innovation at the interface between MathWorks and academia, industry, and government research labs.
- 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

- Research software toolbox development in MATLAB.

### Manager, IBU Application Engineering & Operations Management Program Participant

#### Cummins

📅 August 2003 – December 2005

📍 Pune, India

- Research, development, and application engineering for electronic controls software and hardware for diesel engines applications 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 Industrial Business Unit (IBU) Applications in India.

## PUBLICATIONS

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

- Two theses, more than a dozen peer-reviewed publications and abstracts,

💡 **Patents**  
arajhans.github.io/patents.html

## SOFTWARE SKILLS

</> **Languages**  
MATLAB, C++, C, some Java

## 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

## ACHIEVEMENTS

🌟 **Program Committee (PC) Leadership**  
MathWorks Research Summits, SpringSim, ADHS, WinterSim

#### PC Membership

HSCC, ICCPS, ADHS, ICINCO, SummerSim, CoSim-CPS, CITest\_CPS, NSV



#### Invited Speaker

CPS Week, Tufts, MIT, Penn, WPI, CMU, Robotica



#### Invited Panelist

HSCC-ICCPS '18, SpringSim '18, NIST CPS Framework Workshop, SCAV Workshop at CPS Week '17



#### Ph.D. Thesis Committee

Rensselaer 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 Communications of the ACM '13