

Dr. Rohan Paul

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Address (India): C-II-19, AIIMS Campus, Ansari Nagar, New Delhi - 110029

Email: rohanp@csail.mit.edu

rohan.cosmos@gmail.com

Date of Birth: 1st Feb 1985

Current Position

Massachusetts Institute of Technology

Postdoctoral Associate

Robust Robotics Group

Computer Science and Artificial Intelligence Laboratory

Advisor: Prof. Nicholas Roy

April 2015 - Present

EDUCATION

University of Oxford

Doctor of Philosophy (D.Phil.)

Mobile Robotics Group

Department of Engineering Science

Supervisor: Prof. Paul Newman

2008 - 2012

Indian Institute of Technology Delhi

Dual Degree, Bachelors of Technology (B. Tech.) & Masters of Technology (M. Tech.)

Department of Computer Science and Engineering

2003 - 2008

EXPERIENCE

Indian Institute of Technology Delhi

Postdoctoral Fellow / Senior Project Associate

Department of Computer Science and Engineering

Advisors: Prof. M. Balakrishnan and Prof. P. V. M. Rao

November 2012 - March 2015

University of Oxford

Collaborator

Department of Engineering Science

Advisors: Prof. Ingmar Posner and Prof. Paul Newman

November 2012 - September 2013

Massachusetts Institute of Technology

Visiting Researcher

Distributed Robotics Lab

Computer Science and Artificial Intelligence Laboratory

Advisors: Prof. Daniela Rus and Dr. Dan Feldman

February - March 2012

Max Planck Institute of Biological Cybernetics

Undergraduate Research Scientist

Department of Empirical Inference

Advisor: Prof. Scholkopf

May - July 2007

RESEARCH AREAS

Robot Learning, Artificial Intelligence, Human-Robot Interaction, Semantic Mapping, Assistive Technologies, Embedded Devices, Design for Affordability.

MAJOR PROJECTS

- **Robotics Collaborative Technology Alliance (RCTA) or the US Army Research Labs (ARL), USA**
Human-Robot Interaction and Intelligence for Human-Robot Teams in army scenarios.
Lead Postdoc representing MIT as an alliance member with several other academic and research institutions across the US.
- **Toyota Research Institute (TRI), USA**
Project titled Reading the Mind with Language and Vision. Application domain autonomous cars and home service robots.
Lead Postdoc representing Robust Robotics Group. Collaborative project with the Center for Brains Minds and Machines at CSAIL, MIT.
- **National Science Foundation (NSF), USA**
Project under National Robotics Initiative contributing towards service robots in small and medium manufacturing units.
Lead Postdoc representing Robust Robotics Group. Collaborative project with the University of Rochester and Cornell.

HONORS

Postdoctoral

Best Conference Paper, Robotics Science and Systems (RSS) Conference, 2017

MIT Technology Review's Global List of 35 Innovators under the age of 35, 2015

Government of India National Award for Best Applied Research aimed at Improving the Life of Persons with Disabilities, 2015 [Leading team member]

Best Conference Paper, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2013

Best Conference Paper, International Conference on Transport and Mobility for the Elderly and Disabled Persons (TRANSED), 2012

Graduate

Awarded Associate Fellowship, Skoll Center for Social Entrepreneurship, Said Business School, University of Oxford, 2011

Graduate Research Prize, Royal Institute of Navigation (RIN) UK 2012

Light Senior Graduate Scholarship Award, St. Catherine's College, University of Oxford, 2011

Bracken Bequest Graduate Student Research Prize, Department of Engineering Science, University of Oxford, 2010

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| Best Vision Paper Finalist, IEEE International Conference on Robotics and Automation (ICRA) | 2010 |
| Best Conference Paper, Intl. Conference on Transport and Mobility for the Elderly and Disabled Persons (TRANSED) 2010 | |
| Bracken Bequest Graduate Research Seminar First Prize, Dept. of Engineering Science, University of Oxford | 2010 |
| Overseas Graduate Scholarship Award, St. Catherine's College, University of Oxford | 2009 |
| The Rhodes Scholarship | 2008 |

Undergraduate

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| National Award for Innovative Student Project, Indian National Academy of Engineering (INAE) | 2008 |
| Best Industry Relevant Thesis, Forum for Innovation and Technology Transfer (FITT), IIT Delhi | 2008 |
| Best Project with Experimental Component (BOSS Award), Indian Institute of Technology Delhi | 2008 |
| Alumni Association Award, Indian Institute of Technology Delhi | 2008 |
| Technology Development and Initiation Award for Students, Indian Institute of Technology Delhi | 2006 |

School

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|---|------|
| National Top 1% in Indian National Physics Olympiad | |
| Young Astronomer of the Year, Nehru Planetarium Delhi | 2001 |
| National Winner, Discovery Channel Quiz, India | 1999 |

GRANTS (CO-PI OR CORE LEAD TEAM)

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| Wellcome Trust, UK (Affordable Healthcare in India Initiative) | 2014- present |
| Development of affordable Braille display based on Shape Memory Actuation | |
| Wellcome Trust, UK | 2014- present |
| Development Course for National and International Dissemination of the SmartCane | |
| Center for Internet and Society (CIS), India Enhancement to NVDA Open-source Screen Reader | 2013- present |
| Dept. of Electronics, Govt. of India Center for Excellence in Tactile Graphics | 2014 - present |
| Wellcome Trust, UK (Affordable Healthcare in India Initiative) | 2011- 2014 |
| SmartCane: Development of an affordable knee-above obstacle detection and warning system for the Visually Impaired | |
| Dept. of Science and Technology, Govt. of India (Technology Intervention for Disabled and Elderly Scheme) | 2013 - present |
| Bus Identification System for the Visually Impaired | |
| Dept. of Science and Technology, Govt. of India (Technology Intervention for Disabled and Elderly Scheme) | 2013 - present |
| Refreshable Braille Cells based on SMA-based actuation | |
| Industrial R&D unit, IIT Delhi | 2006 - 2008 |
| Technology Development and Initiation Award for Students (TDP-IAS) Media Labs Asia, Dept. of ICT, Govt. of India | 2006 |
| Embedded Assistive Devices for the Visually Challenged | |

SELECTED PUBLICATIONS

Journal Publications

- **Efficient Grounding Abstract Spatial Concepts for Natural Language Interaction with Robot Platforms.**
Rohan Paul, Jacob Arkin, Derya Aksaray, Nicholas Roy and Thomas Howard.
International Journal of Robotics Research (IJRR), 2017.
- **Introspective Classification for Lifelong Semantic Mapping.**
Hugo Grimmer, Rudolf Triebel, Rohan Paul, and Ingmar Posner.
International Journal of Robotics Research (IJRR), 2015.
- **Seeking Out Perplexing Images for Ever Improving Navigation.**
Rohan Paul and Paul Newman.
International Journal of Robotics Research (IJRR), 2013.
Special Issue on Lifelong Learning for Robotics.
- **The New College Data Set 2.2 km of Vision and Laser Data.**
Mike Smith, Ian Baldwin, Winston Churchill, Rohan Paul and Paul Newman.
International Journal of Robotics Research (IJRR), May. 2009.

Conference Publications

- **Real-Time Human-Robot Communication for Manipulation Tasks in Partially Observed Environments.**
Jacob Arkin, Rohan Paul, Daehyung Park, Subhro Roy, Nicholas Roay and Thomas M. Howard.
To appear in the International Symposium on Experimental Robotics (ISER), 2018.
- **Grounding Robot Plans from Natural Language Instructions with Incomplete World Knowledge.**
Daniel Nyga, Subhro Roy, Rohan Paul, Daehyung Park, Mihai Pomarlan, Michael Beetz and Nicholas Roy.
To appear in the Conference on Robot Learning (CoRL), 2018
- **Grounding Natural Language Instructions with Unknown Object References using Learned Visual Attributes.**
Nicole Glabinski, Rohan Paul and Nicholas Roy.
AAAI Fall Symposium on Natural Communication for Human-Robot Collaboration, 2017.
- **Grounding Abstract Spatial Concepts for Language Interaction with Robots.**
Rohan Paul, Jacob Arkin, Nicholas Roy and Thomas Howard.
International Joint Conference on Artificial Intelligence (IJCAI), 2017.
Invited Contribution for the Sister Conference Best Paper Track
- **Learning Unknown Groundings for Natural Language Interaction with Mobile Robots.**
Mycal Tucker, Derya Aksaray, Rohan Paul, Gregory Stein and Nicholas Roy.
International Symposium on Robotics Research (ISRR), 2017.
- **Temporal Grounding Graphs for Language Understanding with Accrued Visual-Linguistic Context.**
Rohan Paul, Andrei Barbu, Sue Felshin, Boris Katz and Nicholas Roy.
International Joint Conference on Artificial Intelligence (IJCAI), 2017.
- **Efficient Grounding Abstract Spatial Concepts for Natural Language Interaction with Robot Manipulators.**
Rohan Paul, Jacob Arkin, Nicholas Roy and Thomas Howard.
International Conference on Robotics Science and Systems (RSS), 2016
Best Conference Paper Award
- **Visual Precise Generation using Coresets.**
Hugo Grimmer, Rohan Paul, Rudolf Triebel and Ingmar Posner.
IEEE International Conference on Robotics and Automation (ICRA), Hong Kong. 2014.

- **A Compliant Mechanism Design for Refreshable Braille Display Using Shape Memory Alloy.**
Ankit Kumar, Dhruv Gupta, Pulkit Sapra, Mayank Raj, Akash Anand, Vinit Darda, Rohan Paul, M. Balakrishnan and P.V.M. Rao.
ASME International Conference on Mechatronics and Embedded Systems and Applications (MESA), 2015.
- **Edutactile: A Tool for Rapid Generation of Accurate Guideline-compliant Tactile Graphics for Science and Mathematics.**
Mrinal Mech, Kunal Kwatra, Supriya Das, Piyush Chanana, Rohan Paul and M. Balakrishnan.
International Conference on Computers Helping People with Special Needs (ICCHP), 2014.
- **Design of an Affordable, Multi-modal, Interactive Braille Tutor System.**
M. Balakrishnan, Rohan Paul and P. V. M. Rao.
International Conference on Blindness, Technology and Multi-modal Reading, 2014.
- **Dealing with Shadows: Capturing Intrinsic Scene Appearance for Image-based Outdoor Localisation.**
Peter Corke, Rohan Paul, Winston Churchill and Paul Newman.
International Conference on Intelligent Robots and Systems (IROS), 2013.
Best Conference Paper Award
- **Knowing When We Don't Know: Introspective Classification for Mission-Critical Decision Making.**
Hugo Grimmett, Rohan Paul, Rudolf Triebel and Ingmar Posner.
IEEE International Conference on Robotics and Automation (ICRA), 2013.
- **Driven Learning for Driving: How Introspection Improves Semantic Mapping.**
Rudolf Triebel, Hugo Grimmett, Rohan Paul and Ingmar Posner.
International Symposium on Robotics Research (ISRR), 2013.
- **An Indoor Path-guidance and Navigation System for the Visually Impaired.**
Dhruv Jain, Rohan Paul, M. Balakrishnan.
ACM SIGACCESS Conference on Computers and Accessibility (ASSETS), 2013.
- **Application of Shape Memory Alloy (SMA) Based Actuation for Refreshable Display of Braille**
Anshul Singhal, Pranay Jain, Piyush Chanana, Dhruv Jain, Rohan Paul, M. Balakrishnan and P.V.M. Rao.
ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference IDETC/CIE, 2013.
- **Parsing Outdoor Scenes from Streamed 3D Laser Data Using Online Clustering and Incremental Belief Updates.**
Rudolf Triebel, Rohan Paul, Daniela Rus and Paul Newman.
American Association of Artificial Intelligence (AAAI) Conference, 2012.
- **How was your day? Online Visual Workspace Summaries using Incremental Clustering in Topic Space.**
Rohan Paul, Daniela Rus and Paul Newman.
IEEE International Conference on Robotics and Automation (ICRA), 2012.
- **Semantic Categorization of Outdoor Scenes with Uncertainty Estimates using Multi-Class Gaussian Process Classification.**
Rohan Paul, Rudolf Triebel, Daniela Rus and Paul Newman.
International Conference on Intelligent Robots and Systems (IROS), 2012.
- **Design and User Testing of an Affordable Cellphone based Indoor Navigation System for the Visually Impaired.**
Dhruv Jain, Prabhav Agarwal, Kartik Maheshwari, Aman Mittal, Rohan Paul, Supriya Das, Saurabh Sanyal, Yogesh Taneja, Dipendra Manocha, M. Balakrishnan and P.V.M. Rao.
International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED), 2012.
Best Conference Paper Award

- **Self-Help: Seeking Out Perplexing Images for Ever Improving Navigation.**
Rohan Paul and Paul Newman.
IEEE International Conference on Robotics and Automation (ICRA), 2011.
- **FABMAP3D: Topological Mapping with Visual and Spatial Appearance.**
Rohan Paul and Paul Newman.
IEEE International Conference on Robotics and Automation (ICRA), 2010.
Finalist: Best Vision Paper Award (1 of 4)
- **Smart cane for the visually impaired: Design and controlled field testing of an affordable obstacle detection system.**
Vaibhav Singh, Rohan Paul, Dheeraj Mehra, Anuraag Gupta, Vasu Dev Sharma, Saumya Jain, Chinmay Agarwal, Ankush Garg, Sandeep Singh Gujral, M. Balakrishnan, Kolin Paul, Prof. P.V.M. Rao and Dipendra Manocha.
International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED), 2010.
Best Conference Paper Award

THESES

- **Long Term Appearance-based Mapping with Vision and Laser**
Mobile Robotics Group. Department of Engineering Science, University of Oxford, UK.
- **Knee-above Obstacle Detection System and User-triggered Bus Identification System for the Visually Impaired**
Department of Computer Science and Engineering, Indian Institute of Technology Delhi, India

WORKSHOPS AND SYMPOSIA

- **Temporal Grounding Graphs for Language Understanding with Accrued Visual-Linguistic Context.**
Rohan Paul, Andrei Barbu, Sue Felshin, Boris Katz and Nicholas Roy.
1st Workshop on Language Grounding in Robotics, American Computational Linguistics (ACL) Conference, 2017.
- **Grounding Spatial Concepts for Autonomous Mobile Robots.**
Thomas Howard, Rohan Paul, Derya Aksaray, Jacob Arkin, and Nicholas Roy.
8th International Conference on Applied Human Factors and Ergonomics (AHFE), June 2017
- **Knowing When We Don't Know: Introspective Classification for Robust Decision Making in Mission-Critical Scenarios.**
Rohan Paul, Hugo Grimmett, Rudolf Triebel and Ingmar Posner.
Reinforcement Learning and Decision Making (RLDM), 2013.
- **Introspective Active Learning for Scalable Semantic Mapping**
Rudolf Triebel, Hugo Grimmett, Rohan Paul and Ingmar Posner
Workshop on Active Learning in Robotics, Robotics: Science and Systems (RSS), 2013.
- **Parsing Outdoor Scenes from Streamed 3D Laser Data Using Online Clustering and Incremental Belief Updates.**
Rudolf Triebel, Rohan Paul and Paul Newman.
Lifelong Learning for Mobile Robotics, International Conference on Intelligent Robots and Systems (IROS), 2012.
- **Topological Mapping with Vision and Laser.**
Rohan Paul and Paul Newman.
Annual Meeting of the Royal Institute of Navigation (RIN), UK, 2012.
- **Self Help: Seeking Out Perplexing Images for Ever Improving Navigation.**
Rohan Paul and Paul Newman.

Workshop on Lifelong Autonomy and Exploration.
International Conference on Robotics and Automation (ICRA), 2011.

- **Leveraging 3D Information for Topological Mapping with Vision and Laser**
Rohan Paul and Paul Newman
RGB-D Workshop on 3D Perception in Robotics. European Robotics Forum, 2011.
- **FABMAP 3D: Topological Mapping with Vision and Laser**
Rohan Paul and Paul Newman
Mapping with RGB-D Cameras. Robotics: Science and Systems (RSS) Workshop, 2010.

PATENTS

- **Multiple Range Obstacle Detection and Warning System.**
Indian Patent Application: 1354/DEL/2007 [Published]
Rohan Paul, Vaibhav Singh, Ankush Garg, Dheeraj Mehra, Dipendra Manocha, Kolin Paul, M. Balakrishnan.
- **User Triggered Duo Module Destination Identification System.**
Indian Patent Application: 1355/DEL/2007 [Under review]
Rohan Paul, Vaibhav Singh, Ankush Garg, Dheeraj Mehra, Dipendra Manocha, Kolin Paul, M. Balakrishnan.
- **A Split Grip Handle Unit with Tactile Feedback for Directed Ranging.**
WIPO PCT Application: PCT/IN2014/000451 [Under review]
Indian Patent Application: 388/DEL/2014 [Published]
Rohan Paul, Arun K. Venkatesan, Dheeraj Mehra, Piyush Chanana, H. Karthikeyan, K. Bhagavatheesh, V. Sashi Kumar, P. V. M. Rao, M. Balakrishnan.
- **A Compliant Mechanism for Refreshable Braille Display using Shape Memory Alloy.**
Indian Patent Application: 1575/DEL/2014 [Under review]
Ankit Kumar Parsurampurua, Dhruv Gupta, Pulkit Sapra, P. V. M. Rao, Rohan Paul, M. Balakrishnan.
- **A Multi-modal Infotainment Device for Interactive Braille Learning.**
Indian Patent Application: 1729/DEL/2014 [Under review]
Ankit Kumar Parsurampurua, Ambrish Rawat, Richa Gupta, Samarth Bahuguna, Rohan Paul, M. Balakrishnan, P. V. M. Rao, Deepak Gupta.

INVITED TALKS

- Invited Talk, Natural Communication for Human-Robot Collaboration, AAAI Fall Symposium, Washington D. C. 2017
- Invited Talk, Robots that Understand Language, Computer Science and AI Lab Industry Affiliate Program, Cambridge 2017
- Speaker as TR35 Awardee at EmTech, MIT 2015
Link: https://www.youtube.com/watch?v=tyUF_dWbQjw
- TEDx talk, Lal Bahadur Shastri Institute of Management, New Delhi
Link: <https://www.youtube.com/watch?v=RpEVxMo5xcs>

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| Invited Talk, National Science Center Speaker Series, New Delhi Seminar, Computer Science and Artificial Intelligence Laboratory (CSAIL), MIT | 2014 |
| Speaker and Panelist, UNDP India Social Good Summit Links: http://bcove.me/xeh5ifr6 and http://bcove.me/mojuvxi7 | 2014 |
| Invited talk, UNESCO International Conference on Role of ICTs for Persons with Disabilities | 2014 |
| Speaker, SmartCane: Release to the People Event, IIT Delhi Link: https://www.youtube.com/watch?v=ltwli5zsTSQ | 2014 |
| Invited talk, DAISY Forum of India General Body Meeting | 2014 |
| Talk, Capacity Building Session at the Christian Federation of the Blind, Bangkok, Thailand | 2014 |
| Workshop speaker, Training Session at the Hong Kong Blind Union, Hong Kong | 2014 |
| Seminar, National Innovation Showcase, Rashtrapati Bhavan (Hon'ble President of India's residential estate) | 2014 |
| Speaker, Alumni Association Event, IIT Chennai | 2014 |
| Speaker, International White Cane Day, Rotary Club of Delhi | 2014 |
| Seminar, Guru Nanak Eye Hospital, New Delhi | 2014 |
| Workshop Speaker, Jamia Milia Islamia University, New Delhi | 2014 |
| Speaker, Launch of Govt. Scheme for Subsidised Devices, Xaviers Resource Center for the Blind | 2014 |
| Speaker, Donation Event at National Association for the Blind | 2014 |
| Speaker, Introduction to Engineering Speaker Series, IIT Delhi | 2014 |
| Speaker and Panelist, International Rhodes 110th Meet, UK - Session: Fighting the World's Fight Link: http://www.rhodeshouse.ox.ac.uk/speaker-videos | 2013 |
| Speaker (Socially relevant technology development), IIT Delhi | 2013 |
| Panelist and Session Speaker, Global Scholars Symposium - University of Oxford | 2013 |
| Speaker and Panelist, Career in Science and Technology, Sardar Patel Vidyalaya | 2013 |
| Speaker, D-Rev Inc., USA | 2012 |
| Accessible Science Workshop, Little Flower School for the Deaf and Blind, Chennai | 2012 |
| Speaker, Students Forum on Scientific Research, Sardar Patel Vidyalaya | 2012 |
| Seminar speaker, e-Research Center, Oxford University | 2012 |
| Invited Talk, Social Impact Group, Rhodes Trust, UK | 2011 |
| Speaker, Knowledge Center, All India Institute of Medical Sciences, New Delhi | 2010 |

MEDIA

- MIT News – *Robot learns to follow orders like Alexa* 2017
<http://news.mit.edu/2017/robot-learns-to-follow-orders-like-alexa-0830>
- Engadget – *Robots learn to understand the context of what you say* 2017
<https://www.engadget.com/2017/08/30/robots-learn-contextual-commands/>
- Hindustan Times – *Meet 4 Indians on MIT's 23 Innovators Under 35 list* 2017
<http://www.hindustantimes.com/tech/meet-4-indians-on-mit-s-35-innovators-under-35-list/story-acldalelMhZ5KHJnzXl3tO.html>
- The Rhodes Scholar Magazine – *The Cane Do Attitude*
- The New Indian Express – *An Ultrasound Cane and Able Story* 2015
<http://www.newindianexpress.com/cities/chennai/An-Ultrasound-Cane-and-Able-Story/2015/03/23/article2725291.ece> 2015
- The Hindu – *The Visually Impaired get a Smart Guide*
<http://www.thehindu.com/news/cities/chennai/visually-impaired-get-a-smart-guide/article7019756.ece>
- BBC World Service Radio – *The Science Hour: SmartCane for People with Visual Impairment* 2014
<http://www.bbc.co.uk/programmes/p025684s>
- Better India – *Brilliant Invention from IIT Delhi May Just Change The Way Blind People Move Around* 2014
<http://www.thebetterindia.com/11954/invention-blind-smartcane-mobility-visually-impaired-innovation/>
- IndiaTimes – *8 Indian Innovations for the Common Man* 2014
<http://www.indiatimes.com/lifestyle/technology/8-indian-innovations-for-the-common-man-228196.html> The Free
- Press Journal – *Techies put their mind to social activism* 2014
<http://www.freepressjournal.in/techies-put-their-mind-to-social-activism/>
- IndiaTimes, *7 IITians Who are Changing the Country for the Better* 2014
<http://www.indiatimes.com/news/india/7-iitians-who-are-changing-the-country-for-the-better-227865.html>
- inSight: Retina India – *Celebrating Entrepreneurs - Interview with Trailblazers* 2013
<http://www.retinaindia.org/insight-2/insight-jun-2013-2/>
- Fortune India, *Innovation Sides with the Blind* 2014
<http://assistech.iitd.ernet.in/doc/media-coverage/Fortune%20India.pdf>
- Civil Society – *SmartCane Goes Places* 2014
<http://assistech.iitd.ernet.in/article%20on%20SmartCane.pdf>
- Mid Day – *IIT Delhi Creates Affordable SmartCane for the Blind* 2014
<http://www.mid-day.com/articles/iit-delhi-creates-affordable-smart-cane-for-the-blind/15506173>
- Indian Express (Mumbai) – *SmartCanes made by IIT Delhi team to help 60 Blind in the City* 2014
<http://epaper.indianexpress.com/c/3275184>
- International Business Times – *A Smart Walking Stick That Uses Sonar To Guide Blind People* 2014
<http://www.ibtimes.co.uk/smartcane-smart-walking-stick-that-uses-sonar-guide-blind-people-1453556>
- The New Indian Express – *Tech Guru: Rohan Paul* 2014
<http://www.newindianexpress.com/lifestyle/tech/2014/11/29/Tech-Guru/article2546671.ece>

PROFESSIONAL SERVICE

Co-Organizer

Workshop: Acting and Interacting in the Real World: Challenged Robot Learning
Neural Information Processing Systems (NIPS) 2017

Program Committee Member

International Conference on Robotics Science and Systems (RSS) 2018
International Conference on Robot Learning (CoRL) 2017
American Association for Artificial Intelligence (AAAI) Fall Symposium 2017
International Conference on Robotics Science and Systems (RSS) 2017
International Joint Conference on Artificial Intelligence (IJCAI) 2013

Reviewer

Conferences: ICRA, IROS, RSS, IJCAI, CoRL, ISRR, ISER, MESA 2008 - Present
Journals: IJRR, JFR, TRO, Autonomous Robots, Transactions on HRI

Student Volunteer

International Symposium on Experimental Robotics (ISER) 2011

Invited Member/ Founding Member

International Rhodes Scholarship Committee, Rhodes Trust, Oxford, UK 2011 - 2014
Indian Rhodes Scholarship Selection Committee, India 2013
Committee on Assistive Technology, Min. of Social Justice and Empowerment, Govt. of India 2011
Executive Committee on Technology Solutions for Persons with Blindness, Saksham Trust, India 2013
Assistive Technologies Group, IIT Delhi 2004 - Present
Center for Excellence in Tactile Graphics, IIT Delhi 2014 - Present
Rhodes Social Impact Group (RSIG), Rhodes Trust, UK 2011 - 2012
Board of Advisors, Atal Bihari Vajpayee Govt. Institute of Engineering and Technology, HP 2017 - Present

EXTRACURRICULAR ACTIVITIES

Training in Indian Classical Music from Gwalior Gharana.

Coordinator of Indian Music Section of Delhi based professional music group *Artistes Unlimited*. Recorded a music collection *Dharohar* (2002) and an album titled *En Route* (2007).

Trained in Taekwon-do martial art. Attained Black Belt.

Member, Amateur Astronomers Association, Nehru Planetarium, New Delhi. Table

Tennis Zonal Champion

Quizzing