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Director: [HeRo Lab - Heterogeneous Robotics Research Lab. https://hero.uga.edu](https://hero.uga.edu)

Personal Statement

- I passionately research and teach Robotics, with expertise in multi-robot control, communication, collaboration, and coordination aspects.
- I'm more of an experimentalist and love to do hands-on real-world implementations, grounded on strong theoretical framework.
- My vision is to capacitate autonomous heterogeneous robotic vehicles with intelligent, resilient and robust coordination mechanisms through devising advanced communication and behavior coordination methods.

Research Interests

- > Networked Multi-Robot Systems
- > Search, Rescue, and Field Robotics
- > Robotic Sensor Networks
- > Human-Robot Interaction/Interfaces
- > Swarm Robotics
- > Assistive Robotic Technologies
- > Robotics in Nuclear Facilities

Education

- 11/2011 – 10/2014 [Ph.D. in Robotics and Automation](#)
UPM - Universidad Politécnica de Madrid (Technical University of Madrid), Madrid, Spain
- 07/2008 – 05/2010 [Masters of Technology \(M.Tech\) in Instrument Technology](#)
IIT-D - Indian Institute of Technology Delhi, New Delhi, India
- 03/2010 – 05/2010 [M.Sc. Exchange Student in Electrical Engineering](#)
EPFL - École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland
- 08/2004 – 05/2008 [Bachelor of Engineering \(B.E\) in Electronics and Instrumentation](#)
TCE - Thiagarajar College of Engineering (Anna University), Madurai, India

Work Experience

- 08/2025 - Present | Associate Professor, School of Computing, **University of Georgia**, Athens, GA, USA
Director of Graduate Studies, Institute for Artificial Intelligence
- 08/2018 - 07/2025 | Assistant Professor, School of Computing, **University of Georgia**, Athens, GA, USA
> Conduct research, teaching, and supervision in the Robotics and allied areas at UGA.
> Director, Heterogeneous Robotics (*HeRo*) Research Lab at UGA.
Multi-Robot Systems | Networked Robots | Rescue Robotics | Human-Robot Interfaces | Swarm Robotics
- 10/2016 - 07/2018 | Postdoctoral Research Associate, **Purdue University**, West Lafayette, USA
> Research and mentoring activities in the SMART lab with Prof. Byung-Cheol Min.
> Contributing to the NSF/RoSeHub project.
> Performed independent research in Networked Robots and Assistive Technologies.
Networked Robots | Multi-Robot Coordination | Consensus/Rendezvous | Unmanned Surface Vehicles
- 10/2014 - 09/2016 | Postdoctoral Researcher and Teacher, **KTH Royal Institute of Technology**, Stockholm, Sweden
> Performed research in robust communications for field robots with Prof. Petter Ögren.
> Teacher and Course Responsible for the course EL2310 - Scientific Programming (Fall 2015, Fall 2015).
> Supervised masters students and mentored Ph.D. students.
> Involved in two European research projects (EU-FP7) TRADR and RECONFIG.
Machine Learning | Urban Search and Rescue Robots (USAR) | Intelligent Teleoperation | Human-Robot Interfaces
- 08/2011 - 07/2014 | Fellow (Researcher), **CERN - European Organization for Nuclear Research**, Geneva, Switzerland
> Conducted research in wireless communications for mobile robots used in autonomous radiation survey at CERN facilities such as the Large Hadron Collider (LHC).
> Involved in an EU doctoral research training network (EU-FP7) PURES SAFE, supervised by Prof. Manuel Ferre.
> Lead a project in developing an energy management system for a robotic train in the LHC and SPS facilities.
Robots in Nuclear/Scientific Facilities | Wireless Communications | Relay Robots | Teleoperation Interface

07/2010 - Associate Applications Engineer, **Oracle Corp.**, Bangalore, India
05/2011 > Applications developer in the Peoplesoft Human Resource Management Systems (HRMS) group.
Peoplesoft Tools Oracle SQL Human Capital Management (HCM)

Funding/Grants Awarded

- PI of a **Research Grant** on the project titled "Bridging Nanoscale Quantum Phenomena and Computational Swarm Intelligence" for a Postdoctoral Fellowship from the Gordon and Betty Moore Foundation (2026-2028). Total Project: \$187.4K.
- Lead PI of a multi-institute **Research Grant** on a collaborative project titled "Collaborative Research: CPS: Medium: AI-driven Cyber-Physical Heterogeneous Systems for Precision Poultry Farming" from the USDA National Institute for Food and Agriculture (NIFA) (2024-2027). Total Project: \$1M.
- PI of a **Research Grant** on the project titled "Cooperative Multi-Agent Systems" from the U.S. Army DCIST-Cooperative Research Agreement (CRA) (2023-2026). Total Project Commitment: \$1.6M.
- Co-PI of a **Research Grant** on the project titled "Test & Evaluation for Soldier-Machine Decision-Making Systems" from the U.S. Army DEVCOM Data Analysis Center (2022-2026). Total Project: \$4.43M.
- PI of an **E-mobility Seed Grant** for the project titled "Smart and Collaborative E-Mobility Testbed" funded by the UGA College of Engineering and the Office of Research (2023-2024). Amount: \$61K.
- Co-PI of an **E-mobility Seed Grant** for the project titled "Data-driven Ultra-fast, Reliable, and Low-latency Wireless Communication for E- Vehicles" funded by the UGA College of Engineering and the Office of Research (2023-2024). Amount: \$61K.
- Co-PI of a **IIPA Seed Grant** for the project titled "EggPicker: A mobile robotic system for identifying, localizing, and collecting floor eggs in cage-free hen housing environments" funded by the UGA Institute of Integrative Precision Agriculture (2023-2024). Amount: \$30K.
- PI of a **Learning Technology Grant** from UGA (2019-2020). Amount: \$25k.
- Received Cloud Platform **Education Grant** from Google (2019).
- PI of UGA-University of Liverpool **Faculty Research Exchange** Visit Grant (2019).
- Postdoctoral **Travel Grant**, Purdue University (2017, 2018).
- Marie-Sklodowska-Curie Actions - **Early Career Research Fellowship Grant** from the European Commission (2011-2014).

Honors, Awards, and Achievements

- Recipient of the **Faculty Research Excellence Award** from School of Computing at UGA (2025).
- Recipient of the **CURO Faculty Mentoring Award** from UGA Honors College (2024).
- Awarded **Open Science Faculty Fellowship** by NSF Open Science Alliance Project (2023).
- Nominated for the **Best Paper Award** at DARS 2022 Conference.
- Awarded **Marie-Sklodowska-Curie** Research Fellowship (2011-2014).
- Awarded **IITD-EPFL Exchange** Fellowship (2010).
- Awarded DST-MHRD India **GATE** Scholarship (2008-2010).
- **National Finalist** in Motorola India Scholar Program (2008) and Cadence India Design Contest (2009).
- Awarded **Gold Medal** for *Best Outgoing Student Excellence* (out of 750+ students) at TCE (2008).
- Awarded IIT-M (Indian Institute of Technology Madras) **Summer Fellowship** (2007).

Publications and Presentations

Google Scholar: <https://scholar.google.com/citations?user=gmhcs1QAAAAJ&hl=en>

ORCID: <https://orcid.org/0000-0001-5451-8209>

Journal Articles

- [1] Sai Krishna Ghanta and Ramviyas Parasuraman. "SPACE: 3D Spatial Co-operation and Exploration Framework for Robust Mapping and Coverage with Multi-Robot Systems." In: *IEEE Robotics and Automation Letters* 10 (12 Dec. 2025), pp. 13074–13081. doi: 10.1109/LRA.2025.3627118.
- [2] Sanjay Sarma OV, Ramviyas Parasuraman, and Ramana Pidaparti. "IKT-BT: Indirect Knowledge Transfer Behavior Tree Framework for Multirobot Systems Through Communication Eavesdropping." In: *IEEE Transactions on Cybernetics* 55.6 (2025), pp. 2558–2570. doi: 10.1109/TCYB.2025.3560564.
- [3] Aravind Mandiga, Guoming Li, Tianming Liu, Ramviyas Parasuraman, Ramana M Pidaparti, Venkat UC Bodempudi, and Samuel E Aggrey. "Autonomous Navigation of a Quadruped Robot to Approach Floor Eggs and Path Optimization Analysis for Commercial Feasibility." In: *Applied Engineering in Agriculture* 41.6 (2025), pp. 733–747. doi: 10.13031/aea.16384.
- [4] Nazish Tahir and Ramviyas Parasuraman. "Edge Computing and its Application in Robotics: A Survey." In: *Journal of Sensor and Actuator Networks* 14.4 (2025). doi: 10.3390/jsan14040065.
- [5] He Yang et al. "Real-world Cyber Security Demonstration for Networked Electric Drives." In: *IEEE Journal of Emerging and Selected Topics in Power Electronics* (2025). Early Access, pp. 1–1. doi: 10.1109/JESTPE.2025.3550830.

- [6] Shushan Wu et al. "Online Adaptive Anomaly Detection in Networked Electrical Machines by Adaptive Enveloped Singular Spectrum Transformation." In: *IEEE Internet of Things Journal* 12.6 (2025), pp. 6457–6464. doi: 10.1109/JIOT.2024.3476268.
- [7] Ehsan Latif and Ramviyas Parasuraman. "Communication-Efficient Multi-Robot Exploration Using Coverage-biased Distributed Q-Learning." In: *IEEE Robotics and Automation Letters* 9 (3 Mar. 2024), pp. 2622–2629. doi: 10.1109/LRA.2024.3358095.
- [8] Qin Yang and Ramviyas Parasuraman. "Bayesian Strategy Networks Based Soft Actor-Critic Learning." In: *ACM Trans. Intell. Syst. Technol.* 15.3 (Mar. 2024). doi: 10.1145/3643862.
- [9] Ehsan Latif and Ramviyas Parasuraman. "Instantaneous Wireless Robotic Node Localization Using Collaborative Direction of Arrival." In: *IEEE Internet of Things Journal* 11 (2 Jan. 2024), pp. 2783–2795. doi: 10.1109/JIOT.2023.3296334.
- [10] Aiman Munir and Ramviyas Parasuraman. "Exploration–Exploitation Tradeoff in the Adaptive Information Sampling of Unknown Spatial Fields with Mobile Robots." In: *Sensors* 23.23 (2023), p. 9600. doi: 10.3390/s23239600.
- [11] Sanjay Sarma OV, Ramviyas Parasuraman, and Ramana Pidaparti. "KT-BT: A Framework for Knowledge Transfer Through Behavior Trees in Multi-Robot Systems." In: *IEEE Transactions of Robotics* 39 (5 2023), pp. 4114–4130. doi: 10.1109/TR0.2023.3290449.
- [12] Ehsan Latif and Ramviyas Parasuraman. "On the Intersection of Computational Geometry Algorithms with Mobile Robot Path Planning." In: *Algorithms* 16.11 (2023). **Featured in the Cover of Issue**, p. 498. doi: 10.3390/a16110498.
- [13] Ramviyas Parasuraman, Byung-Cheol Min, and Petter Ögren. "Rapid Prediction of Network Quality in Mobile Robots." In: *Adhoc Networks* 138 (Jan. 2023). doi: 10.1016/j.adhoc.2022.103014.
- [14] Nazish Tahir and Ramviyas Parasuraman. "Analog Twin Framework for Human and AI Supervisory Control and Teleoperation of Robots." In: *IEEE Transactions on Systems, Man, and Cybernetics: Systems* 53.5 (2023), pp. 2616–2628. doi: 10.1109/TSMC.2022.3216206.
- [15] Ramviyas Parasuraman, Jonghoek Kim, Shaocheng Luo, and Byung-Cheol Min. "Multipoint Rendezvous in Multirobot Systems." In: *IEEE Transactions on Cybernetics* 50.1 (2020). doi: 10.1109/TCYB.2018.2868870.
- [16] Min Ku Kim and Ramviyas Parasuraman and Liu Wang and Yeonsoo Park and Bongjoong Kim and Seung Jun Lee and Nanshu Lu and Byung-Cheol Min and Chi Hwan Lee. "Soft-packaged sensory glove system for human-like natural interaction and control of prosthetic hands." In: *NPG Asia Material (Nature)* 11.43 (Aug. 2019). doi: 10.1038/s41427-019-0143-9.
- [17] Michele Colledanchise, Ramviyas Parasuraman, and Petter Ögren. "Learning of Behavior Trees for Autonomous Agents." In: *Transactions on Games* 11.2 (June 2019). doi: 10.1109/TG.2018.2816806.
- [18] Jonghoek Kim, Shaocheng Luo, Ramviyas Parasuraman, Jun Han Bae, Eric T Matson, and Byung-Cheol Min. "Multi-robot Rendezvous Based on Bearing-aided Hierarchical Tracking of Network Topology." In: *Adhoc Networks* 86 (Apr. 2019), pp. 131–143. doi: 10.1016/j.adhoc.2018.11.004.
- [19] Mohamed Haseeb and Ramviyas Parasuraman. "Wisture: Touch-less Hand Gesture Classification in Unmodified Smartphones Using Wi-Fi Signals." In: *IEEE Sensors* 19.1 (Jan. 2019). doi: 10.1109/JSEN.2018.2876448.
- [20] Danilo Tardioli, Ramviyas Parasuraman, and Petter Ögren. "Pound: A multi-master ROS node for Reducing Delay and Jitter in Wireless Multi-Robot Networks." In: *Robotics and Autonomous Systems* 111 (Jan. 2019), pp. 73–87. doi: 10.1016/j.robot.2018.10.009.
- [21] Ramviyas Parasuraman and Byung-Cheol Min. "Special issue on Assistive Robotics (Editorial)." In: *Technologies* 6.4 (Oct. 2018). doi: 10.3390/technologies6040095.
- [22] Byung-Cheol Min, Ramviyas Parasuraman, Sangjun Lee, Jin-Woo Jung, and Eric T Matson. "A Directional Antenna based Leader-Follower Relay System for End-to-End Robot Communications." In: *Robotics and Autonomous Systems* 101 (Mar. 2018), pp. 57–73. doi: 10.1016/j.robot.2017.11.013.
- [23] Ramviyas Parasuraman, Sergio Caccamo, Fredrik Båberg, Petter Ögren, and Mark Neerinx. "A New UGV Teleoperation Interface for Improved Awareness of Network Connectivity and Physical Surroundings." In: *Journal of Human Robot Interaction (Transactions on Human Robot Interaction)* 6.3 (Dec. 2017), pp. 48–70. doi: 10.5898/JHRI.6.3.Parasuraman.
- [24] Ramviyas Parasuraman, Thomas Fabry, Luca Molinari, Keith Kershaw, Mario Di Castro, Alessandro Masi, and Manuel Ferre. "A multi-sensor RSS spatial sensing-based robust stochastic optimization algorithm for enhanced wireless tethering." In: *Sensors* 14.12 (2014), pp. 23970–24003. doi: 10.3390/s141223970.
- [25] Ramviyas Parasuraman, Keith Kershaw, and Manuel Ferre. "Experimental investigation of radio signal propagation in scientific facilities for telerobotic applications." In: *Int. J. of Advanced Robotic Systems* 10.10:364 (2013), pp. 1–11. doi: 10.5772/56847.

Conference Papers (In Proceedings)

- [1] Atharva Sagale, Tohid Tasooji, and Ramviyas Parasuraman. "DCL-Sparse: Distributed Relative Localization in Sparse Graphs." In: *2026 IEEE International Conference on Robotics and Automation (ICRA)*. Accepted. May 2026.
- [2] Aiman Munir, Ayan Dutta, and Ramviyas Parasuraman. "Energy-Aware Informative Path Planning for Heterogeneous Multi-Robot Systems." In: *2026 IEEE International Conference on Robotics and Automation (ICRA)*. Accepted. May 2026.
- [3] Aiman Munir, Ehsan Latif, and Ramviyas Parasuraman. "Multi-Robot Informative Sampling and Coverage in GPS-Denied Environments." In: *2026 IEEE International Conference on Robotics and Automation (ICRA)*. Accepted. May 2026.
- [4] Pranav Pandey, Prashant Doshi, and Ramviyas Parasuraman. "FRESHR-GSI: A Generalized Safety Model and Evaluation Framework for Mobile Robots in Multi-Human Environments." In: *2026 IEEE International Conference on Robotics and Automation (ICRA)*. Accepted. May 2026.
- [5] Shailendra Sekhar Bathula and Ramviyas Parasuraman. "Imitation-BT: Automating Behavior Tree Generation by Echoing Reinforcement Learning Agents." In: *2026 IEEE International Conference on Robotics and Automation (ICRA)*. Accepted. May 2026.
- [6] Sai Krishna Ghanta and Ramviyas Parasuraman. "Policies over Poses: Reinforcement Learning based Distributed Pose-Graph Optimization for Multi-Robot SLAM." In: *2025 IEEE International Symposium on Multi-Robot & Multi-Agent Systems (MRS)*. Dec. 2025. doi: 10.1109/MRS66243.2025.11357260.
- [7] Leszek Gąsieniec, Łukasz Kuszner, Ehsan Latif, Parasuraman, Ramviyas, Paul Spirakis, and Grzegorz Stachowiak. "Anonymous Distributed Localisation via Spatial Population Protocols." In: *36th International Symposium on Algorithms and Computation (ISAAC 2025)*. Vol. 359. Leibniz International Proceedings in Informatics (LIPIcs). Dagstuhl, Germany: Schloss Dagstuhl – Leibniz-Zentrum für Informatik, 2025, 35:1–35:17. doi: 10.4230/LIPIcs.ISAAC.2025.35.

- [8] Sai Krishna Ghanta and Ramviyas Parasuraman. "MGPR: Distributed Multi-Gaussian Processes for Wi-Fi-based Multi-Robot Relative Localization in Large Indoor Environments." In: *2025 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2025)*. Oct. 2025, pp. 974–981. doi: 10.1109/IROS60139.2025.11247180.
- [9] Tohid Tasooji and Ramviyas Parasuraman. "Distributed Fault-Tolerant Multi-Robot Cooperative Localization in Adversarial Environments." In: *2025 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2025)*. Oct. 2025, pp. 4626–4633. doi: 10.1109/IROS60139.2025.11246042.
- [10] Tyson Jordan, Pranav Pandey, Prashant Doshi, Ramviyas Parasuraman, and Adam Goodie. "Analyzing Human Perceptions of a MEDEVAC Robot in a Simulated Evacuation Scenario." In: *2025 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2025)*. Oct. 2025, pp. 6345–6350. doi: 10.1109/IROS60139.2025.11246558.
- [11] Pranav Kumar Pandey, Ramviyas Parasuraman, and Prashant Doshi. "Integrating Perceptions: A Human-Centered Physical Safety Model for Human-Robot Interaction." In: *34th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)*. Aug. 2025, pp. 1823–1830. doi: 10.1109/RO-MAN63969.2025.11217747.
- [12] Michael Starks and Ramviyas Parasuraman. "GMF: Gravitational Mass-Force Framework for Parametric Multi-Level Coordination in Multi-Robot and Swarm Robotic Systems." In: *2025 IEEE International Conference on Robotics and Automation (ICRA)*. May 2025, pp. 11355–11361. doi: 10.1109/ICRA55743.2025.11128543.
- [13] Leszek Gąsieniec, Łukasz Kuszner, Ehsan Latif, Parasuraman, Ramviyas, Paul Spirakis, and Grzegorz Stachowiak. "Brief Announcement: Anonymous Distributed Localisation via Spatial Population Protocols." In: *4th Symposium on Algorithmic Foundations of Dynamic Networks (SAND 2025)*. 2025, pp. 19–1. doi: 10.4230/LIPIcs.SAND.2025.19.
- [14] Aiman Munir, Ayan Dutta, and Ramviyas Parasuraman. "Energy-Aware Coverage Planning for Heterogeneous Multi-Robot System." In: *The 17th International Symposium on Distributed Autonomous Robotic Systems (DARS 2024)*. Oct. 2024, pp. 210–227. doi: 10.1007/978-3-032-04584-3_15.
- [15] Aiman Munir, Ehsan Latif, and Ramviyas Parasuraman. "Anchor-Oriented Localized Voronoi Partitioning for GPS-denied Multi-Robot Coverage." In: *2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2024)*. Oct. 2024, pp. 3395–3402. doi: 10.1109/IROS58592.2024.10802222.
- [16] Siva Krishna Ravipati, Ehsan Latif, Suchendra Bhandarkar, and Ramviyas Parasuraman. "Object-Oriented Material Classification and 3D Clustering for Improved Semantic Perception and Mapping in Mobile Robots." In: *2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2024)*. Oct. 2024, pp. 9729–9736. doi: 10.1109/IROS58592.2024.10801936.
- [17] Ehsan Latif and Ramviyas Parasuraman. "HGP-RL: Distributed Hierarchical Gaussian Processes for Wi-Fi-based Relative Localization in Multi-Robot Systems." In: *2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2024)*. Oct. 2024, pp. 3387–3394. doi: 10.1109/IROS58592.2024.10802653.
- [18] Aiman Munir, Ramviyas Parasuraman, Jine Ye, and WenZhan Song. "Route Planning for Electric Vehicles with Charging Constraints." In: *2024 IEEE 100th Vehicular Technology Conference (VTC2024-Fall)*. Oct. 2024. doi: 10.1109/VTC2024-Fall163153.2024.10757558.
- [19] Nazish Tahir, Haijian Sun, and Ramviyas Parasuraman. "Communication-Aware Consistent Edge Selection for Mobile Users and Autonomous Vehicles." In: *2024 IEEE 100th Vehicular Technology Conference (VTC2024-Fall)*. Oct. 2024. doi: 10.1109/VTC2024-Fall163153.2024.10757784.
- [20] Ehsan Latif, Ramviyas Parasuraman, and Xiaoming Zhai. "PhysicsAssistant: An LLM-Powered Interactive Learning Robot for Physics Lab Investigations." In: *2024 IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2024)*. Pasadena, CA, USA, Aug. 2024, pp. 864–871. doi: 10.1109/RO-MAN60168.2024.10731312.
- [21] Lihao Zhang, Haijian Sun, Jin Sun, Ramviyas Parasuraman, Yinghui Ye, and Rose Qingyang Hu. "Map2Schedule: An End-to-End Link Scheduling Method for Urban V2V Communications." In: *2024 IEEE International Conference on Communications (ICC)*. Pasadena, CA, USA, June 2024, pp. 1005–1010. doi: 10.1109/ICC51166.2024.10622509.
- [22] Qin Yang and Ramviyas Parasuraman. "Bayesian Soft Actor-Critic: A Directed Acyclic Strategy Graph Based Deep Reinforcement Learning." In: *Proceedings of the 39th ACM/SIGAPP Symposium on Applied Computing*. SAC '24. Avila, Spain, Apr. 2024, pp. 646–648. doi: 10.1145/3605098.3636113.
- [23] Nazish Tahir and Ramviyas Parasuraman. "Utility AI for Dynamic Task Offloading in the Multi-Edge Infrastructure." In: *2023 Seventh IEEE International Conference on Robotic Computing (IRC)*. Dec. 2023, pp. 331–338. doi: 10.1109/IRC59093.2023.00060.
- [24] Nazish Tahir and Ramviyas Parasuraman. "Consensus-based Resource Scheduling for Collaborative Multi-Robot Tasks." In: *2023 Seventh IEEE International Conference on Robotic Computing (IRC)*. Dec. 2023, pp. 323–330. doi: 10.1109/IRC59093.2023.00059.
- [25] Ehsan Latif and Ramviyas Parasuraman. "SEAL: Simultaneous Exploration and Localization in Multi-Robot Systems." In: *2023 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2023)*. Oct. 2023. doi: 10.1109/IROS55552.2023.10342157.
- [26] Ehsan Latif, WenZhan Song, and Ramviyas Parasuraman. "Communication-Efficient Reinforcement Learning in Swarm Robotic Networks for Maze Exploration." In: *IEEE International Conference on Computer Communications (INFOCOM) Workshops 2023*. May 2023. doi: 10.1109/INFOCOMWKSHPS57453.2023.10226167.
- [27] Nazish Tahir and Ramviyas Parasuraman. "Mobile Robot Control and Autonomy Through Collaborative Twin." In: *The 21st International Conference on Pervasive Computing and Communications (PerCom) Workshops 2023*. Mar. 2023. doi: 10.1109/PerComWorkshops56833.2023.10150325.
- [28] Qin Yang and Ramviyas Parasuraman. "A hierarchical game-theoretic decision-making for cooperative multiagent systems under the presence of adversarial agents." In: *The 38th ACM/SIGAPP Symposium On Applied Computing (SAC)*. Mar. 2023. doi: 10.1145/3555776.3577642.
- [29] Qin Yang and Ramviyas Parasuraman. "A Strategy-Oriented Bayesian Soft Actor-Critic Model." In: *Procedia Computer Science*. ANT 2023 Conference. Mar. 2023. doi: 10.1016/j.procs.2023.03.071.
- [30] Sanjay Sarma Oruganti Venkata, Cameron Ardoin, Israr M. Ibrahim, Ramviyas Parasuraman, and Ramana M Pidaparti. "Systems Design Concepts mimicking Bio-inspired Self-assembly." In: *9th International Conference on Research Into Design (ICoRD)*. Springer, Jan. 2023. doi: 10.1007/978-981-99-0428-0_31.
- [31] Michael Starks, Aryan Gupta, Sanjay Sarma, and Ramviyas Parasuraman. "HeRoSwarm: Fully-Capable Miniature Swarm Robot Hardware Design With Open-Source ROS Support." In: *2023 IEEE/SICE International Symposium on System Integrations (SII 2023)*. Jan. 2023. doi: 10.1109/SII55687.2023.10039174.

- [32] Ehsan Latif and Ramviyas Parasuraman. "DGORL: Distributed Graph Optimization based Relative Localization of Multi-Robot Systems." In: *The 16th International Symposium on Distributed Autonomous Robotic Systems (DARS 2022)*. **Finalist for Best Paper Award**. Nov. 2022. doi: 10.1007/978-3-031-51497-5_18.
- [33] Pranav Pandey and Ramviyas Parasuraman. "Empirical Analysis of Bi-directional Wi-Fi Network Performance on Mobile Robots in Indoor Environments." In: *2022 IEEE 95th Vehicular Technology Conference: (VTC 2022)*. June 2022, pp. 1–7. doi: 10.1109/VTC2022-Spring54318.2022.9860438.
- [34] Qin Yang and Ramviyas Parasuraman. "Game-theoretic Utility Tree for Multi-Robot Cooperative Pursuit Strategy." In: *54th International Symposium on Robotics; ISR Europe 2022*. June 2022, pp. 1–7. url: <https://ieeexplore.ieee.org/document/9861828>.
- [35] Ehsan Latif and Ramviyas Parasuraman. "Multi-Robot Synergistic Localization in Dynamic Environments." In: *54th International Symposium on Robotics; ISR Europe 2022*. June 2022, pp. 1–8. url: <https://ieeexplore.ieee.org/document/9861805>.
- [36] Ehsan Latif, Yikang Gui, Aiman Munir, and Ramviyas Parasuraman. "Energy-Aware Multi-Robot Task Allocation in Persistent Tasks." In: *The 5th International Symposium on Swarm Behavior and Bio-Inspired Robotics (SWARM)*. Jan. 2022. url: <https://arxiv.org/pdf/2112.15282.pdf>.
- [37] Yikang Gui, Ehsan Latif, and Ramviyas Parasuraman. "Message Expiration-Based Distributed Multi-Robot Task Management." In: *The 5th International Symposium on Swarm Behavior and Bio-Inspired Robotics (SWARM)*. Jan. 2022. url: <https://arxiv.org/abs/2201.02750>.
- [38] Sanjay Sarma OV, Ramviyas Parasuraman, and Ramana Pidaparti. "A study on the ephemeral nature of knowledge shared between multi-agent and swarm systems through behavior trees." In: *The 5th International Symposium on Swarm Behavior and Bio-Inspired Robotics (SWARM)*. Jan. 2022. url: <https://arxiv.org/pdf/2112.15282>.
- [39] Qin Yang and Ramviyas Parasuraman. "How Can Robots Trust Each Other For Better Cooperation? A Relative Needs Entropy Based Robot-Robot Trust Assessment Models." In: *IEEE SMC 2021 International Conference on Systems, Man, and Cybernetics*. Oct. 2021. doi: 10.1109/SMC52423.2021.9659187.
- [40] Qin Yang and Ramviyas Parasuraman. "Needs-driven Heterogeneous Multi-Robot Cooperation in Rescue Missions." In: *2020 IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR 2020)*. Nov. 2020. doi: 10.1109/SSRR50563.2020.9292570.
- [41] Sanjay Sarma Oruganti Venkata, Ramviyas Parasuraman, and Ramana Pidaparti. "Impact of Heterogeneity in Multi-Robot Systems on Collective Behaviors Studied Using a Search and Rescue Problem." In: *2020 IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR 2020)*. Nov. 2020. doi: 10.1109/SSRR50563.2020.9292588.
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- [43] Shyam Sundar Kannan, Wonse Jo, Ramviyas Parasuraman, and Byung-Cheol Min. "Material Mapping in Unknown Environments using Tapping Sound." In: *2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2020)*. Oct. 2020. doi: 10.1109/IROS45743.2020.9341346.
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Conference/Workshop Short Papers/Presentations (Lightly-Reviewed)

- [1] Pranav Pandey, Ramviyas Parasuraman, and Prashant Doshi. "GSI- A Proxemics-Guided Generalized Safety Metric For Evaluating Safety in Social Navigation Context." In: *IEEE ICRA 2025 Workshop on Advances in Social Navigation: Planning, HRI and Beyond*. **Received Best Poster Award**. May 2025.

- [2] Swaraj Nistane, Tohid Tasooji, and Ramviyas Parasuraman. "H-Cov: Multi-UAV Sensor Coverage with Altitude Optimization for Target Tracking." In: *IEEE ICRA 2025 Workshop on 25 YEARS OF AERIAL ROBOTICS: CHALLENGES AND OPPORTUNITIES*. May 2025.
- [3] Sai Krishna Ghanta and Ramviyas Parasuraman. "SPACE: 3D Spatial Co-operation and Exploration Framework for Robust Mapping and Coverage with Multi-Robot Systems." In: *IEEE ICRA 2025 Workshop on Block by Block Collaborative Strategies for Multi-agent Robotic Construction*. May 2025.
- [4] Aiman Munir, Ehsan Latif, and Ramviyas Parasuraman. "Anchor-oriented Multi-Robot Coverage without Global Localization." In: *IEEE ICRA 2024 Workshop on Sensing and Perception in Extreme Environments (HERMES)*. Spotlight Presentation. May 2024.
- [5] Ehsan Latif, Ramviyas Parasuraman, and Xiaoming Zhai. "PhysicsAssistant: An LLM-Powered Interactive Learning Robot for Physics Lab Investigations." In: *IEEE ICRA 2024 Workshop on Accelerating Discovery in Natural Science Laboratories with AI and Robotics*. **Selected for the Pioneer Award**. May 2024.
- [6] Aiman Munir and Ramviyas Parasuraman. "Energy-Aware Coverage Planning for Heterogeneous Multi-Robot System." In: *IEEE International Symposium on Multi-Robot & Multi-Agent Systems (MRS) 2023*. Poster Paper. Dec. 2023.
- [7] Ehsan Latif and Ramviyas Parasuraman. "CQLite: Coverage-biased Q-Learning for Communication-Efficient Multi-Robot Exploration." In: *ICRA 2023 Workshop on Communication Challenges in Multi-Robot Systems: Perception, Coordination, and Learning*. (London, UK). June 2023.
- [8] Ehsan Latif, Ramviyas Parasuraman, Raman Pidaparti, and Brian Fairchild. "Robot-Centric Broiler Mortality Detection using Deep Learning." In: *USDA NIFA AI in Agriculture Conference*. (Orlando, FL). Apr. 2023.
- [9] Qin Yang and Ramviyas Parasuraman. "A Game-theoretic Utility Network for Multi-Agent Decisions in Adversarial Environments." In: *IROS 2022 Workshop on Decision Making in Multi-Agent Systems*. Oct. 2022.
- [10] Nazish Tahir and Ramviyas Parasuraman. "Collaborative Control of Mobile Robots Using Analog Twin Framework." In: *ICRA 2022 Workshop on Intelligent Control Methods and Machine Learning Algorithms for Human-Robot Interaction and Assistive Robotics*. May 2022.
- [11] Aiman Munir and Ramviyas Parasuraman. "Sharing Autonomy of Exploration and Exploitation via Control Interface." In: *ICRA 2022 Workshop on Shared Autonomy in Physical Human-Robot Interaction: Adaptability and Trust*. May 2022.
- [12] Pranav Pandey, Ramviyas Parasuraman, and Prashant Doshi. "On Physical Compatibility of Robots in Human-Robot Collaboration Settings." In: *ICRA 2022 WORKSHOP ON COLLABORATIVE ROBOTS AND THE WORK OF THE FUTURE*. May 2022.
- [13] Nazish Tahir and Ramviyas Parasuraman. "Robot Controlling Robots - A New Perspective to Bilateral Teleoperation in Mobile Robots." In: *RSS 2020 Workshop on Reacting to Contact: Enabling Transparent Interactions through Intelligent Sensing and Actuation, 2020*. July 2020.
- [14] Wonse Jo, Shyam Sundar Kannan, Ramviyas Parasuraman, and Byung-Cheol Min. "Development of Material Recognition Training System for Visually Impaired People." In: *Health and Disease: Science, Technology, Culture and Policy*. (West Lafayette, IN, USA). Purdue University. Mar. 2018.
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- [17] Ramviyas Parasuraman, Jonghoek Kim, Shaocheng Luo, and Byung-Cheol Min. "Hierarchical Tracking-based Multi-Point Rendezvous in Multi-Robot System." In: *Robots and Sensors for the Human Well-being (ROSE-HUB) Fall Meeting*. (Denver, CO, USA). NSF. Nov. 2017.
- [18] Jun-Han Bae, Ramviyas Parasuraman, Wonse Jo, Arabinda Samantaray, Jee-Hwan Park, Hunjung Lim, and Byung-Cheol Min. "Development of Autonomous Robotic System for Algae Removal." In: *4th Annual Environmental Community Mixer*. (West Lafayette, USA). Purdue Discovery Park. Sept. 2017.
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Ph.D. Thesis Products

- [1] Aiman Munir and Ramviyas Parasuraman (Advisor). "Persistent spatial coverage and informative path planning for multi-robot systems in unknown GPS-denied environments." Ph.D. (Computer Science) Thesis. University of Georgia, Aug. 2025.
- [2] Nazish Tahir and Ramviyas Parasuraman (Advisor). "Towards Collaborative Control and Computing in Multi-Robot Systems." Ph.D. (Computer Science) Thesis. University of Georgia, July 2024.
- [3] Ehsan Latif and Ramviyas Parasuraman (Advisor). "Collaborative Algorithms for Localization and Exploration in Multi-Robot Systems." Ph.D. (Computer Science) Thesis. University of Georgia, July 2023.
- [4] Qin Yang and Ramviyas Parasuraman (Advisor). "Self-Adaptive Swarm System." Ph.D. (Computer Science) Thesis. University of Georgia, May 2022, p. 194.
- [5] Parasuraman, Ramviyas. "Wireless Communication Enhancement Methods for Mobile Robots in Radiation Environments." Ph.D. Thesis. Universidad Politécnica de Madrid (UPM), Spain and CERN, Switzerland, 2014.

MS Thesis Products

- [1] Naveen Kurra, Ramviyas Parasuraman (Advisor), and Ramana Pidaparti (Co-Advisor). "Sensing and Evaluation of Bird Comfort Using Internet of Things and Machine Learning." M.S. (Computer Science) Thesis. University of Georgia, Dec. 2024.
- [2] Shailendra Sekhar Reddy Bathula and Ramviyas Parasuraman (Advisor). "Synthetic Instincts: Echoing Reinforcement Learning Agents for Behavior Tree Generation." M.S. (Artificial Intelligence) Thesis. University of Georgia, July 2024.
- [3] Siva Krishna Ravipati and Ramviyas Parasuraman (Advisor). "Semantic Material Labeling of 3D Point Cloud using RGB-D Data and Visual SLAM." M.S. (Artificial Intelligence) Thesis. University of Georgia, May 2023.
- [4] Caleb Adams and Ramviyas Parasuraman (Advisor). "High-Performance Computation with Small Satellites and Small Satellite Swarms for 3D Reconstruction." M.S. (Computer Science) Thesis. University of Georgia, May 2020, p. 127.
- [5] Mohamed Haseeb, Ramviyas Parasuraman (co-Advisor), and Petter Ogren (co-Advisor). "Passive gesture recognition on unmodified smartphones using Wi-Fi RSSI." M.S. (Machine Learning) Thesis. KTH Royal Institute of Technology, Sweden, Oct. 2017, p. 127.
- [6] Mengchan Li, Ramviyas Parasuraman (co-Advisor), and Petter Ogren (co-Advisor). "Spatial wireless connectivity prediction for mobile robots." M.S. (Systems, Control, and Robotics) Thesis. KTH Royal Institute of Technology, Sweden, Feb. 2016.
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Patents and Invention Disclosures

- [1] Ramviyas Parasuraman and Michael Starks. "Gravitational Mass-Force Framework for Multi-Robot Systems." In: *Provisional Patent Application* (Jan. 2025). US Patent App No. 63/741,484, Filing Date: 2025-01-03.
- [2] Ramviyas Parasuraman and Michael Starks. "System and Method for Parameterized Control of Multiple Mobile Robots." In: (Apr. 2024). Invention Disclosure, UGA.
- [3] Sanjay Sarma OV, Ramviyas Parasuraman, and Ramana Pidaparti. "Methods and Frameworks for Microtubule System Dynamics towards Diseases and Targeted Drug Delivery." In: (Jan. 2024). Invention Disclosure, UGA.
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Internet Code and Dataset Repositories

- [1] Sai Krishna Ghanta and Parasuraman, Ramviyas. "MGPR: Distributed Multi-Gaussian Processes for Wi-Fi-based Multi-Robot Relative Localization in Large Indoor Environments." In: *Github* (2025). <https://github.com/herolab-uga/mgprl>.
- [2] Sanjay Sarma, Parasuraman, Ramviyas, and Ramana Pidaparti. "IKT-BT: Indirect Knowledge Transfer Behavior Tree Framework for Multi-Robot Systems Through Communication Eavesdropping." In: *Github* (2024). <https://github.com/herolab-uga/IKTBT-Release>.
- [3] Aiman Munir, Ehsan Latif, and Parasuraman, Ramviyas. "MR-AOC: Anchor-oriented Multi-Robot Coverage without Global Localization." In: *Github* (2024). <https://github.com/herolab-uga/mr-aoc>.
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- [7] Ehsan Latif and Parasuraman, Ramviyas. "CQLite: Coverage-biased Q-Learning Lite for Efficient Multi-Robot Exploration." In: *Github* (2024). <https://github.com/herolab-uga/cqlite>.
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- [9] Ehsan Latif, WenZhan Song, and Parasuraman, Ramviyas. "MazeComRL: A communication-efficient reinforcement learning algorithm for solving maze exploration problems." In: *Github* (2023). <https://github.com/herolab-uga/MazeCommRL>.
- [10] Sanjay Sarma, Parasuraman, Ramviyas, and Ramana Pidaparti. "KT-BT: A Framework for Knowledge Transfer Through Behavior Trees in Multi-Robot Systems. Multi-Robot Search and Rescue Simulator With Different Knowledge Base." In: *Github* (2023). <https://github.com/herolab-uga/KTBT-Release>.
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- [12] Qin Yang and Parasuraman, Ramviyas. "BSAC: Bayesian Soft Actor Critic (BSAC)." In: *Github* (2022). <https://github.com/herolab-uga/bsac>.
- [13] Ehsan Latif and Parasuraman, Ramviyas. "DGORL: Distributed Graph Optimization based Relative Localization of Multi-Robot Systems." In: *Github* (2022). <https://github.com/herolab-uga/DGORL>.
- [14] Michael Starks, Aryan Gupta, Sanjay Sarma OV, and Parasuraman, Ramviyas. "HeRoSwarm v2: Robots open-source hardware and software design repository." In: *Github* (2022). <https://github.com/herolab-uga/heroswarmv2>.
- [15] Anderson Molter and Parasuraman, Ramviyas. "HeRoCars: Robot RC cars open-source hardware and software design repository." In: *Github* (2021). <https://github.com/herolab-uga/herocars>.
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- [17] Pranav Pandey and Parasuraman, Ramviyas. "ROS-Network-Analysis: Codes and Datasets: Robot Operating Systems (ROS) Network Analysis Package." In: *Github* (2021). <https://github.com/herolab-uga/ros-network-analysis>.

- [18] Ehsan Latif and Parasuraman, Ramviyas. "PF-DOA: Codes and Datasets: Device Localization Using Particle Filter over DOA of Wireless Signals." In: *GitHub* (2021). <https://github.com/herolab-uga/pf-doa-localization>.
- [19] Ravi Parashar and Parasuraman, Ramviyas. "Indoor-RSSI-Robot: Dataset: WiFi RSSI Dataset from Mobile Robots in Indoor Environments." In: *GitHub* (2020). <https://github.com/herolab-uga/indoor-rssi-mobile-robot>.
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Technical Reports

- [1] PURES SAFE Consortium (Pierre Bonnal et al.) "The OpenSE Framework - an open, lean and participative approach to systems engineering for projects in scientific facilities." Version 1.0.0.2. In: (Feb. 2016).
- [2] Parasuraman, Ramviyas. "Few common failure cases in mobile robots." In: *arXiv:1508.03000 [cs.RO]* (2015).
- [3] Parasuraman, Ramviyas. "CERN TIM robot pre-series energy management system specifications." In: *CERN EDMS 1318898. EDMS 1296740 v2* (2013).
- [4] Parasuraman, Ramviyas and Alexander Stadler. "Wireless Video transmission tests in CERN ISOLDE Facility." In: *CERN EDMS 1209799* (2012).
- [5] Parasuraman, Ramviyas. "Needs gathered for a mobile platform to be used in remote radiation survey and inspection applications at CERN." In: *CERN EDMS 1326585* (2011).
- [6] Parasuraman, Ramviyas. "Automated generation of VLSI standard cell libraries using Genetic Algorithms." B.E. Capstone Thesis. Thiagarajar College of Engineering, Madurai, India (Anna University), 2008.

Invited Talks, Presentations, Seminars, and Guest Lectures

- [1] *AI-driven Active Sampling and Persistent Monitoring with Multi-Robot Systems*. Invited Talk at SRNL Environmental Remediation Virtual Workshop, Nov. 2025.
- [2] *Relative Localization in Multi-Robot and Wireless Networked Systems*. Invited Talk at IEEE Denver Computer Information Theory and Robotics Society., Sept. 2024.
- [3] *Heterogeneity and Collaboration in Multi-Robot Systems*. Invited Talk at University of North Carolina, Charlotte, Feb. 2024.
- [4] *Collaborative Localization of Mobile Robots Using Wireless Signals*. Invited Talk at Engineering & Maths Research Seminar Series, Sheffield Hallam University, UK, Nov. 2023.
- [5] *Robot Twins for Computing and Autonomy*. Invited Talk, Cyber-Physical Systems Symposium, UGA, Aug. 2023.
- [6] *Multi-Robot Localization Algorithms*. Invited Talk at the University of Liverpool, UK, May 2023.
- [7] *Heterogeneous Robotics Research*. Guest Lecture, FYOS Seminar - Asian Americans' contributions to USA's science and lecture, UGA, Nov. 2022.
- [8] *Heterogeneous Multi-Robot Systems*. Invited Talk, Cyber-Physical Systems Symposium, UGA, Aug. 2022.
- [9] *Heterogeneous Multi-Robot Systems*. Invited Talk, Phenomics and Plant Robotics Center Symposium, UGA, Sept. 2021.
- [10] *Learning Time Series Data: A Case Study on Wi-Fi Signal Classification For On-Air Hand Gesture Detection*. Invited Seminar, Thiagarajar College of Engineering, India, Aug. 2021.
- [11] *Exploiting Connectivity Graph for Multi-Robot Control Mechanisms*. Invited Talk, National Institute of Technology Silchar, India, Sept. 2020.
- [12] *Robotics and Control*. Guest Lecture, Computer Architecture and Organization, UGA, Mar. 2020.
- [13] *Learning On-Air Hand Gestures From Wi-Fi Signals on Smartphones*. Invited Talk, Deep Learning Seminar, UGA, Oct. 2019.
- [14] *Trends in Micro Nano Multi Robot Systems*. Invited Talk, Applied Physics Seminar, UGA, Feb. 2019.
- [15] *Bridging Robotics and Wireless Networking*. Guest Lecture, FYOS 1001, UGA, Nov. 2018.
- [16] *Networked Robotics Research*. Guest Lecture, ATRI 8800, UGA, Oct. 2018.
- [17] *Robot Control, Communication, and Learning Using Wireless Networks*. Invited Talk, UGA, Apr. 2018.
- [18] *Use of Wireless Network Measurements for Mobile Robot Systems*. Invited Talk, IIT Madras, India, Mar. 2018.
- [19] *Gaussian Processes for Regression*. Seminar, SMART lab, Purdue University, USA, Jan. 2018.
- [20] *Resilient Control and Communications for Multi-Robot Systems*. Invited Talk, IIT Palakkad, India, Jan. 2018.
- [21] *Robotic Technologies for Assistive Wheelchairs*. Guest Lecture, Introduction to Assistive Technology and Robotics, Purdue University, USA, Oct. 2017.
- [22] *Tutorial on Robotarium for Multi-Robot Experiments*. Presentation, SMART lab, Purdue University, USA, Aug. 2017.
- [23] *Design Guidelines for Mobile Robotic Systems in Harsh Environments*. Guest Lecture, CNIT 581-008: Software Design and Development for Robotics, Purdue University, USA, Apr. 2017.
- [24] *Resilient Wireless Communications for Field Robots*. Invited Talk, Polytechnic Postdoctoral Seminar, Purdue University, USA, Mar. 2017.
- [25] *Short course on Robot Operating Systems (ROS)*. Guest Lecture, SMART lab, Purdue University, USA, Feb-May, 2017.
- [26] *Assistive Technologies for disabled - Mobility Enhancement*. Guest Lecture, CNIT 581-AST: Introduction to Assistive Technology and Robotics, Purdue University, USA, Oct. 2016.
- [27] *Progress on Work Package 2 of EU-FP7 TRADR Project*. Invited Talk, TRADR Review Meeting Year 2, Dortmund IFR, Germany, Mar. 2016.
- [28] *Wireless Communication Enhancement Methods for Mobile Robots in Scientific Facilities*. Invited Talk, PURES SAFE Final Conference, Geneva, Switzerland, Jan. 2016.
- [29] *Generic mobile platform modules development for remote radiation survey and inspection*. Invited Talk, CERN Engineering Department Technical Meeting (ENTM), Geneva, Switzerland, Dec. 2012.

Instructor: [CSCI \(ATRI\) 4550/6550 Artificial Intelligence](#) Fall 2025 (4 Credits), UGA. The AI course is a split-level (undergraduate and graduate) course covering various introductory topics on artificial intelligence.
[CSCI 8535 Multi-Robot Systems](#) Spring 2019, 2020, 2021, 2022, 2023, 2024, 2025. (4 Credits), UGA. This is a graduate-level course on recent topics in Multi-Robot Systems research.
[CSCI 8530 Advanced Topics in Robotics](#) Fall 2023 (4 Credits), UGA. This is a graduate-level course on recent topics in Robotics research.
[CSCI \(ATRI\) 4530/6530 Introduction to Robotics](#) Fall 2018, 2019, 2020, 2021, 2022, 2023, 2024 (4 Credits), UGA. This Robotics course is a split-level (undergraduate and graduate) course covering various topics on autonomous mobile robotics.
[CSCI 1300-1300L Introduction to Python Programming](#) Fall 2021 (4 Credits), UGA. This is an introductory undergraduate course targeting freshman and sophomore students in covering the basics of programming and Python.
[FYOS 1001 Robotics and Autonomous Vehicles](#) Spring 2022, Spring 2023, Fall 2024, Fall 2025 (1 Credit), UGA. This is a freshman undergraduate seminar course covering the fundamentals of robotics and autonomous vehicles to attract freshmen students towards research and relevant courses in computer science.
[EL2310 Scientific Programming](#) Fall 2015, Fall 2016 (7.5 ECTS credits, 40 hours), KTH Sweden. This is a split-level (undergraduate and graduate) course on the basics of C, C++, and MATLAB programming.

Supervisor: [Current Postdocs](#) - Tohid Tasooji (CS)
[Current Graduate/Thesis students](#) - Sai Krishna Ghanta (PhD-AI), Swaraj Nistane (PhD-CS), Atharva Sagale (PhD-CS), Jonathan Porter Squires (PhD-CS), Amit Kumar Rai (PhD-CS), Pranav Pandey (PhD-CS, co-supervised with Dr. Prashant Doshi), Moneshk Bajaj (MS-CS)
[Current MS Project students](#) - Khoa Le (MS-CS), Chenhao Zhang (MS-ECE), Kavya Mothukuri (MS-CS)
[Current Undergraduate Students](#) - Tanish Reddy (CS), Nikhita Raghavan (CSE), Arnav Thakur (CS), Rishab Seshadri (CS), Paarth Rathors (CS), Yuval Deshe (CS), Bonnie Houston (DS), Eshwar Thammineni (CSE), Mahir Gangone (CS)

[Former Graduate/Thesis Advisees](#)

- › Dr. Aiman Munir (PhD-CS, UGA). Now a Faculty at Penn State Behrand
- › Dr. Nazish Tahir (PhD-CS, UGA). Now a Faculty at UGA
- › Dr. Ehsan Latif (PhD-CS, UGA). Now a Postdoc at UGA
- › Dr. Qin Yang (PhD-CS, UGA). Now an Asst. Prof. at Bradley University
- › Dr. Sanjay Sarma Oruganti Venkata (PhD-ENGR). Now a Postdoc at RPI
- › Shailendra Bathula (MS-AI, UGA). Now a PhD student at IIIT Hyderabad
- › Naveen Kurra (MS-CS, UGA. Co-supervised with Dr. Ramana Pidaparti). Now a Software Developer II at Oracle.
- › Siva Ravipati (MS-AI, UGA). Now an AI/ML Engineer at L&T Technology Services
- › Caleb Adams (MS-CS, UGA). Now a Program Manager and Principal Investigator at NASA.
- › Mohamed Haseeb (MS-ML, KTH). Now a Lead ML Engineer at Myrspoven
- › Mengchan Li (MS-Robotics, KTH). Now a Senior Product Manager at ECARX

[Former MS Project Students](#) - Harshith Kasthuri (MS-CS), Jeyanth Dondeti (MS-CS), Manish Ravikanti (MS-CS), Sanket Veer (MS-CS), Sai Sree Meka (MS-CS), Kaushik Vadlapudi (MS-CS), Dhaval Bhandari (MS-CS), Ravi Parashar (MS-CS).

[Former Undergraduate Students](#) - Ethan Nash Carroll (CS), Daniel Lajj (CS), Marcelo Lannaman (ME), Samuel Lemus (CS), Neil Patel (CSE), Rocco Arching (CS), Kartikey Sankhdhar (CS), Arnav Arora (CS), Micahel Starks (CSE), Caroline Lessiter (CSE), Ashurst Walker (CS), Diego Almeida (CS), Nachiket Hinge (CS), Hakan Grunerli (CS), Ravi Parashar (CS), Anderson Molter (CS), Ervin Enriquez (CSE), Anushka Bagad (CS), Jacob Gil (CS), Mohammed Mohammed (ELE), Madhurya Gajula (CSE), Sharanya Pillalamarri (CSE), Luke Lashley (CS), Parisha Reddy (CS), Karthik Paladugula (CS), Davielle Matos (CS), Linsey Brialey (CS), Mahdi Ghafouri (CSE).

Mentor: [Capstone Projects](#) Bird Removal System (2025-2026), Multi-Robot Maze Testbed (2023-2024), Power-Sharing Swarm Robot Design (2022-2023), Poultry Patrol Robot (2021-2022)

- Chair/Organizing Committee:** Chair of Workshop Organizing Committee: ICRA 2023 Full-day Workshop on Communication Challenges in Multi-Robot Systems: Perception, Coordination, and Learning (June 2023).
- Editorial activities:** Associate Editor for the IEEE International Conference on Robotics and Automation (*ICRA 2026*).
Associate Editor for the IEEE/RSJ International Conference on Intelligent Robots and Systems (*IROS 2025*).
Area Editor for the IEEE International Symposium on Multi-Robot and Multi-Agent Systems (*MRS 2023*).
Associate Editor for the IEEE International Conference on Robotics and Automation (*ICRA 2020*).
Guest editor in the *Frontier in Robotics and AI Journal* (2022-Current).
Guest editor for a special issue on “Heterogeneity in Intelligent Mobile Robots and Systems” in the *Machines Journal* of the MDPI Publishers (2022-Current).
Guest editor for a special issue on “Assistive Robotics” in the *Technologies Journal* of the MDPI Publishers (2017-2018).
- Journal Reviewer:** IEEE Trans. Robotics, Intl. J. Robotics Research, Journal of Field Robotics, ACM Trans. Human-Robot Interaction, IEEE Trans. Cybernetics, IEEE Trans. SMC Systems, IEEE Systems Journal, Autonomous Agents and Multiagent Systems, IEEE Robotics and Automation Letters, IEEE Trans. Mechatronics, Autonomous Robots, IEEE Trans. Human-Machine Systems, Journal of Intelligent Robot Systems, IEEE Sensors, PLOS One, Mobile Networks and Applications.
- Conference PC/Reviewer:** Intelligent Robots and Systems (IROS), Robotics and Automation (ICRA), Human-Robot Interaction (HRI), Joint Conference on Artif. Intel. (IJCAI), Search and Rescue Robotics (SSRR), Multi Robot Systems (MRS), Distributed Autonomous Robots Systems (DARS), Vehicular Technology Conference (VTC), Sensors, Decision and Control (CDC), American Control (ACC), Telecommunications (WTS), etc.
- Grant Reviewer:** NSF Review Panel Member (2018,2021), Army Research Office (2021).
- Professional memberships:** IEEE Member (current), ACM Member (current), IEEE Robotics and Automation Society (RAS) (current), IEEE Vehicular Technology Society (VTS) (current), IEEE Communications Society (ComSoc) (2011-2013), IEEE Signal Processing Society (SPS) (2014-present), IFAC Associate (2012-present), Institution of Engineers India (2005-2008), IEEE RAS TC on Telerobotics (2015 - present), IEEE RAS TC on Robotics and Automation in Nuclear Facilities (2012-present), IEEE RAS TC on Multi-Robot Systems (2017-current).
- Media appearance/Outreach:** My role and collaboration in a Nature’s Asia Materials paper was mentioned in the [news story](#) from Purdue.
Our paper on Learning Behavior Trees was highlighted in [Nordeous Engineering Blog](#) at this news story
I appeared in the [PURESAFE Promo/Outreach video](#) by CERN (Aug 2012).
I demonstrated cool robots during the [CERN Open Days](#) (Sep 2013), a public event which had more than 50,000 visitors.