

BYUNG-CHEOL MIN

Associate Professor and University Faculty Scholar
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CONTACT INFORMATION

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BRIEF RESEARCH STATEMENT

I am a roboticist (in other words, a robotics technologist). I conduct basic and applied research in robotics technologies and seek to combine practical and theoretical approaches to solve real-world problems in robotics. My research interests include **multi-robot systems, human-robot interaction, and robot design & control**, with applications in field robotics and assistive technology and robotics. The goal of my current research is to: 1) design algorithms and systems to enable multiple robots to collaborate with each other in a distributed way and to flexibly interact with any humans, in any situation, anywhere, and 2) develop applications that can leverage the advantages of human multi-robot systems.

EDUCATION

Post-Doc, The Robotics Institute Carnegie Mellon University, Pittsburgh, PA, USA	June 2014 – July 2015
Ph.D., Technology (Specialization: Computer and Information Technology) Purdue University, West Lafayette, IN, USA	May 2014
M.S., Electronics and Radio Engineering Kyung Hee University, Yongin, Korea	Aug 2010
B.S., Electronics Engineering Kyung Hee University, Yongin, Korea	Aug 2008

PROFESSIONAL EXPERIENCE

Associate Professor Department of Computer and Information Technology, Purdue Polytechnic Institute, Purdue University, West Lafayette, IN	Aug 2020 – Present
Assistant Professor Department of Computer and Information Technology, Purdue Polytechnic Institute, Purdue University, West Lafayette, IN	Aug 2015 – Aug 2020
Postdoctoral Researcher TechBridgeWorld Research Group, Field Robotics Center, The Robotics Institute, Carnegie Mellon University, Pittsburgh, PA	June 2014 – July 2015
Sergeant Air Operations Command, Republic of Korea Army (ROKA), Icheon, Korea	July 2001 – Sept 2003

HONORS AND AWARDS

– University Faculty Scholar , Purdue University	2021
– Interdisciplinary Research Collaboration Award , Polytechnic Institute, Purdue University	2021

- **Outstanding Faculty Award in Discovery (Research)**, Department of Computer and Information Technology, Purdue University 2021
- **Finalist** in the NASA Space Robotics Challenge Phase 2, NASA 2021
- **Focus Award**, Office of Institutional Equity, Purdue University 2020
- **NSF CAREER Award**, National Science Foundation 2019
- **Outstanding Faculty Award in Discovery (Research)**, Polytechnic Institute, Purdue University 2019
- **Outstanding Graduate Faculty Mentor Award**, Department of Computer and Information Technology, Purdue University 2019
- **Outstanding Faculty Award in Discovery (Research)**, Department of Computer and Information Technology, Purdue University 2019
- **Purdue Seed for Success Award**, Purdue University 2018
- **Purdue Research Foundation (PRF) Summer Faculty Award for Research**, Purdue University 2017
- **Best Paper Award** at the 28th ICROS (Institute of Control, Robotics and Systems) Annual Conference, for the paper: “A Dust Detection Sensor System for Improvement of a Robot Vacuum Cleaner” 2013
- **Research Scholarship** awarded to the student for top research accomplishment by Kyung Hee University 2009, 2010
- **3rd Place Award** at the International Robot Contest 2009 (IRC2009), participated in: FIRA Challenge Cup Robot Soccer Competition 2009
- **Best Paper Award** at the Proceedings of KIIS (Korean Institute of Intelligent System) Spring Conference 2009, for the paper: “Development of Violin Self-Training using Fuzzy Logic” 2009
- **4th Place Award** at the International Robot Contest 2008 (IRC2008), participated in: “FIRA Challenge Cup Robot Soccer Competition” 2008
- **The Gold Lion Prize** awarded for the top volunteer student; 232 total hours of volunteer service during 2006–2008, by Kyung Hee University 2008
- **Best Thesis Award** in Graduation Thesis Competition in the Fall of 2007 at Kyung Hee University, for the thesis: “Humanoid Robot with Webcam” 2008
- **Useful Idea Award** in the Contest for the 3rd Rehabilitation Assistive Devices, by Korean Ministry of Health and Welfare, for the idea: “Design of Electro Oculogram (EOG) Control for a Motorized Wheelchair” 2007
- **Academic Scholarship** awarded to the student for outstanding GPA by Kyung Hee University 2006, 2007

GRANTS

External Research Grants

Awarded

- CAREER: Adaptive Human Multi-robot Systems, Role: PI, Sponsor: National Science Foundation, Amount: **\$500,000** (02/15/2019 – 01/31/2024).
- CPS: Medium: Collaborative Research: Closed Loop Sustainable Precision Animal Agriculture, Role: Co-PI (PI: Richard Voyles), Sponsor: National Institute of Food and Agriculture, Amount: **\$541,448** (09/01/2018 – 08/31/2022).
- PFI-RP: Partnerships for Innovation in Interoperable Building Information Modeling Technology for Applications in Automated Building Code Compliance Checking and Modular Construction Automation, Role: Co-PI (PI: Jiansong Zhang), Sponsor: National Science Foundation, Amount: **\$915,597** (09/15/2018 – 08/31/2022).
- UNSA NEXUS: Robotic Water Quality Monitoring and Distribution Systems: A Pilot Study, Role: PI, Sponsor: Universidad Nacional de San Agustin, Amount: **\$365,439** (01/01/2018 – 12/01/2022).
- Cybersecurity and Safety Challenges in Autonomous Vehicles: Threats Identification and Countermeasures Development, Role: PI, Sponsor: National Institute of Justice, Amount: **\$147,131** (08/01/2017 – 5/31/2021).

- I/UCRC Phase I: Robots and Sensors for the Human Well-being, Role: Senior Personnel (PI: Richard Voyles), Sponsor: National Science Foundation, Amount: **\$637,202** (09/15/2014 – 08/31/2022).
- Workshop to Explore US/Korean Collaboration in Human-Friendly Co-Robotic Technologies, Role: Co-PI (PI: Richard Voyles), Sponsor: National Science Foundation, Amount: **\$14,980** (09/01/2017 – 03/31/2020).
- Sejong-Purdue Program 2016, Role: Co-PI (PI: Eric T. Matson), Sponsor: Sejong University, Korea, Amount: **\$89,998** (05/01/2016 – 12/31/2016).
- KyungPook National-IITP-Purdue Summer Software Program, Role: Co-PI (PI: Eric T. Matson), Sponsor: Kyungpook National University, Korea, Amount: **\$45,426** (05/01/2016 – 12/31/2016).

Pending

- Standard Research: Counterinterventions in Robot Assisted Therapy, Role: Co-PI (PI: Anna M. Williams), Sponsor: National Science Foundation, Amount: **\$401,320** (01/01/2022 – 12/31/2023).
- A Cooperative and Proactive Situational-Awareness and Response System for In-time Adaptive Aviation Safety Management, Role: Co-PI (PI: Jin Kocsis), Sponsor: National Aeronautics and Space Administration, Amount: **\$5,845,124** (02/01/2022 – 01/31/2025).
- RefleXAI: Explainable Reflexive Control, Role: Co-PI (PI: Shaoshuai Mou), Sponsor: Saab North America Inc, Amount: **\$2,100,000** (03/01/2022 – 02/28/2026).

Internal Research Grants

Awarded

- Detecting Humans' Adaptive Behavior Using Deep Learning Application to Provide Active Thermal Comfort Controls in Occupancy Spaces, Role:Co-PI (PI: Kyubung Kang), Sponsor: Purdue Polytechnic Institute, Amount: **\$8,000** (11/04/2021 – 06/30/2022).
- 2021-22 COVID-19 Research Disruption Fund, Role: PI, Sponsor: Purdue University, Amount: **\$25,000** (10/05/2021 – 04/30/2022).
- FY20-21 PRF Research Grants: Human-Delivery Robot Social Interaction for Last-mile Delivery, Role: PI, Sponsor: Purdue University, Amount: **\$31,119** (08/17/2020 – 08/16/2021).
- Reconfigurable Cyber-Physical Simulators for Multi-Robot Systems, Role: PI, Sponsor: Purdue Polytechnic Institute, Amount: **\$8,000** (08/01/2020 – 06/30/2021).
- Wheeled Mobile Parallel Robots with Hybrid Moving and Manipulation Functions, Role:Co-PI (PI: Dongming Gan), Sponsor: Purdue Polytechnic Institute, Amount: **\$8,000** (08/01/2020 – 06/30/2021).
- Polytechnic Post-Doc Support Competition Award, Role: Co-PI (PI: Sunghwan Lee), Sponsor: Purdue University, Amount: **\$50,000** (7/01/2020 – 08/31/2021)
- 18-19 Laboratory & University Core Facility Research Equipment Program: Acquisition of a Modular Robotic Walkway for Development and Testing of Soft Assistive Exoskeletons, Role: Co-PI (PI: Richard Voyles), Sponsor: Purdue University, Amount: **\$169,845** (01/01/2019 – 12/31/2019).
- Distributed Multi-robot Systems for Autonomous Construction, Role: PI, Sponsor: Purdue Polytechnic Institute, Amount: **\$8,000** (11/01/2018 – 06/30/2019).
- Developing Crancobots to Support Automated Construction of Buildings, Role:Co-PI (PI: Jiansong Zhang), Sponsor: Purdue Polytechnic Institute, Amount: **\$8,000** (11/01/2018 – 06/30/2019).
- Purdue Research Foundation (PRF) International Travel Grant, Role: PI, Sponsor: Purdue University, Amount: **\$2,000** (07/01/2018 - 06/30/2019).
- Mobile Crowd Sensing for Sustainability Challenges: A Behavioral Approach to Inducing User Participation, Role: Co-PI (PI: David J. Yu), Sponsor: Purdue Center for the Environment, Amount: **\$15,000** (06/01/2018 – 05/31/2019).
- FY18-19 PRF Research Grants: Towards Autonomous Robotic Systems for Control of Harmful Algae Blooms, Role: PI, Sponsor: Purdue University, Amount: **\$30,144** (05/10/2018 – 09/14/2019).
- Drone-based Visual Inspection for Airplane, Role: PI, Sponsor: Purdue Polytechnic Institute, Amount: **\$8,000** (04/01/2018 – 06/30/2018).

- Collaborative Interdisciplinary Machine Learning Research Infrastructure, Role: Co-PI (PI: Vetrica Byrd) , Sponsor: Purdue Polytechnic Institute, Amount: **\$8,000** (04/01/2018 – 06/30/2018).
- 17-18 Laboratory & University Core Facility Research Equipment Program: Acquisition of Multiple Mobile Robot Platforms, Role: PI, Sponsor: Purdue University, Amount: **\$83,500** (01/01/2018 – 12/31/2018).
- The Realizing the Digital Enterprise (RDE) Research Area Travel Grant, Role: PI, Sponsor: Purdue Polytechnic Institute, Amount: **\$3,000** (03/12/2018 – 06/30/2018).
- Purdue Research Foundation (PRF) Summer Faculty Research Grant, Role: PI, Sponsor: Purdue University, Amount: **\$8,000** (06/01/2017 – 07/31/2017).
- Provost Major Equipment Grant: Bi-Manual Dexterous Manipulation for Intuitive Autonomy, Role: Co-PI (PI: Richard Voyles), Sponsor: Purdue University, Amount: **\$144,732** (07/01/2016 – 06/31/2017).
- Polytechnic Post-Doc Support Competition Award, Role: PI, Sponsor: Purdue University, Amount: **\$100,000** (10/01/2016 – 09/31/2018)

PUBLICATIONS

Journal Publications

- [1] Dongming Gan, Jiaming Fu, Han Lin, Haoguang Yang, Mo Rastgaar, Byung-Cheol Min, Richard Voyles, **‘Actuation-Coordinated Mobile Parallel Robots with Hybrid Mobile and Manipulation Function’**, *Transactions of the ASME, Journal of Mechanisms and Robotics*. (Under Review)
- [2] Oscar Wong Chong, Jiansong Zhang, Richard M. Voyles, and Byung-Cheol Min, **“A BIM-based Approach to Simulate Construction Robotics in the Assembly Process of Wood Frames to Support Offsite Construction Automation”**, *Automation in Construction*. (Under Review)
- [3] Tamzidul Mina, Shyam Sundar Kannan, Wonse Jo, Shaocheng Luo, Galen B. King, and Byung-Cheol Min, **“Distributed Multi-robot Arbitrary Object Transportation with Pushing Surface Identification and Model-based Pushing Effort Regulation”**, *IEEE Transactions on Systems, Man and Cybernetics: Systems*. (Under Review)
- [4] Shaocheng Luo, Jonghoek Kim, and Byung-Cheol Min, **“Asymptotic Boundary Shrink Control with Multi-robot Systems”**, *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, Vol. 52, No. 1, pp. 591-605, Jan. 2022.
- [5] Manoj Penmetcha and Byung-Cheol Min, **“A Deep Reinforcement Learning-based Dynamic Computational Offloading Method for Cloud RoboticsVo”**, *IEEE Access*, Vol. 9, pp. 60265-60279, 2021.
- [6] Jun Han Bae, Wonse Jo, Jee Hwan Park, Richard M. Voyles, Sara K. McMillan, and Byung-Cheol Min, **“Evaluation of Sampling Methods for Robotic Sediment Sampling Systems”**, *IEEE Journal of Oceanic Engineering*, Vol. 46, No. 2, pp. 542-554, April 2021.
- [7] Ahreum Lee, Wonse Jo, Shyam Sundar Kannan, and Byung-Cheol Min, **“Investigating the Effect of Deictic Movements of a Multi-robot”**, *International Journal of Human-Computer Interaction*, Vol 37, No. 3, pp. 197-210, 2021.
- [8] Tamzidul Mina, Shyam Sundar Kannan, Wonse Jo, and Byung-Cheol Min, **“Adaptive Workload Allocation for Multi-human Multi-robot Teams for Independent and Homogeneous Tasks”**, *IEEE Access*, Vol. 8, pp. 152697-152712, 2020.
- [9] Tamzidul Mina, Yogang Singh, and Byung-Cheol Min, **“Maneuvering Ability-Based Weighted Potential Field Framework for Multi-USV Navigation, Guidance and Control”**, *Marine Technology Society Journal*, Vol. 54, No. 4, pp. 40-58, 2020.
- [10] Patchara Kitjacharoenchai, Byung-Cheol Min, and Seokcheon Lee, **“Two Echelon Vehicle Routing Problem with Drones in Last Mile Delivery”**, *International Journal of Production Economics*, Vol. 25, July 2020.
- [11] Ho Young Jeong, David J. Yu, Byung-Cheol Min, and Seokcheon Lee, **“The Humanitarian Flying Warehouse”**, *Transportation Research Part E: Logistics and Transportation Review*, Vol. 136, April 2020.

- [12] Ramvijas Parasuraman, Jonghoek Kim, Shaocheng Luo, and Byung-Cheol Min, “**Multipoint Rendezvous in Multirobot Systems**”, *IEEE Transactions on Cybernetics*, Vol. 50, No. 1, pp. 310-323, Jan. 2020.
- [13] Wonse Jo, Yuta Hoashi, Lizbeth Leonor Paredes Aguilar, Mauricio Postigo-Malaga, José Garcia-Bravo, and Byung-Cheol Min, “**A Low-cost and Small USV Platform for Water Quality Monitoring**”, *HardwareX*, Vol. 6, e00076, October 2019.
- [14] Min Ku Kim, Ramvijas Nattanmai Parasuraman, Liu Wang, Yeonsoo Park, Bongjoong Kim, Seung Jun Lee, Nanshu Lu, Byung-Cheol Min, and Chi Hwan Lee, “**Soft-packaged Sensory Glove System for Human-like Natural Interaction and Control of Prosthetic Hands**”, *NPG Asia Materials*, Vol. 11, Article Number 43, August 2019.
- [15] Shaocheng Luo, Jonghoek Kim, Ramvijas Parasuraman, Jun Han Bae, Eric T. Matson, and Byung-Cheol Min, “**Multi-robot Rendezvous Based on Bearing-aided Hierarchical Tracking of Network Topology**”, *Ad Hoc Networks*. Vol. 86, pp. 131-143, April 2019.
- [16] Yazeed Albabtain, Baijian Yang, J. Eric Dietz, Byung-Cheol Min, Dmitri A. Gusev, “**Survey of GPU Vulnerabilities and Forensic Science**”, *Technology Interface International Journal*, Vol. 19, No. 1, Fall/Winter 2018.
- [17] Miae Kim, Inseok Koh, Hyewon Jeon, Jiyoung Choi, Byung-Cheol Min, Eric T. Matson, and John Gallagher, “**A HARMS-based Heterogeneous Human-Robot Team for Gathering and Collecting**”, *Advances in Robotics Research*, Vol. 2, No 3, pp 201-217, September 2018.
- [18] Mythra Vsm Balakuntala, Mustafa Ayad, Richard M. Voyles, Robin White, Robert Nawrocki, Shreyas Sundaram, Shashank Priya, George Chiu, Shawn Donkin, Byung-Cheol Min, and Kristy Daniels, “**Global Sustainability through Closed-Loop Precision Animal Agriculture**”, *Mechanical Engineering Magazine Select Articles*, Vol. 140, No. 06, S19-S23, June 2018.
- [19] Byung-Cheol Min, Ramvijas Parasuraman, Sangjun Lee, Jin-Woo Jung, and Eric T. Matson, “**A Directional Antenna based Leader-Follower Relay System for End-to-End Robot Communications**”, *Robotics and Autonomous Systems*, Vol. 101, pp. 57-73, March 2018.
- [20] Daniel K. Schrader, Byung-Cheol Min, Eric T. Matson, and J. Eric Dietz, “**Real-time averaging of position data from multiple GPS receivers**”, *Measurement*, Vol. 90, pp. 329-337, August 2016.
- [21] Byung-Cheol Min, Eric T. Matson, and Jin-Woo Jung, “**Active Antenna Tracking System with Directional Antennas for Enhancing Wireless Communication Capabilities of a Networked Robotic System**”, *Journal of Field Robotics*, Vol. 33, No. 3, pp. 391-406, May 2016.
- [22] Byung-Cheol Min, Yongho Kim, Sangjun Lee, Jin-Woo Jung, and Eric T. Matson “**Finding the Optimal Location and Allocation of Relay Robots for Building a Rapid End-to-end Wireless Communication**”, *Ad Hoc Networks*, Vol. 39, pp. 23-44, March 2016.
- [23] Byung-Cheol Min, Eric T. Matson, Jinung An, and Donghan Kim, “**Improvement of Violinist Robot using a Passive Damper Device**”, *Journal of Intelligent and Robotic Systems*, Vol. 72, No. 3-4, pp. 343-355, Dec. 2013.
- [24] Byung-Cheol Min, John Lewis, Eric T. Matson, and Anthony H. Smith, “**Heuristic Optimization Techniques for Self-orientation of Antennas in Long-distance Point-to-point Broadband Networks**”, *Ad Hoc Networks*, Vol. 11, No. 8, pp. 2252-2263, Nov. 2013.
- [25] John Lewis, Eric T. Matson, Sherry Wei, and Byung-Cheol Min, “**Implementing HARMS-based Indistinguishability in Ubiquitous Robot Organizations**”, *Robotics and Autonomous Systems*, Vol. 61, No. 11, pp. 1186-1192, Nov. 2013.
- [26] Dong-Hoe Kim, Byung-Cheol Min, and Donghan Kim, “**A Dust Detection Sensor System for Improvement of a Robot Vacuum Cleaner**”, *Journal of Institute of Control, Robotics and Systems*, Oct. 2013.
- [27] Cory Q. Nguyen, Byung-Cheol Min, Eric T. Matson, Anthony H. Smith, J. Eric Dietz, and Donghan Kim, “**Using Mobile Robots to Establish Mobile Wireless Mesh Networks and Increase Network Throughput**”, *International Journal of Distributed Sensor Networks*, Vol. 2012, Article ID 614532, 2012.

- [28] Byung-Cheol Min, Moon-Su Kim, and Donghan Kim, “**Fuzzy Logic Path Planner and Motion Controller by Evolutionary Programming for Mobile Robots**”, *International Journal of Fuzzy Systems*, Vol. 11, No. 3, pp. 154-163, Sep. 2009.
- [29] Byung-Cheol Min, Donghan Kim, Yoon Hyuk Kim, Ki Yeoul Kim, and Chongkug Park, “**Development of Violin Self-Training Algorithm Using Fuzzy Logic**”, *Journal of Korean Institute of Intelligent Systems*, Vol. 19, No. 4, Aug. 2009.

Book Chapters (Refereed)

- [1] Soo Hyeok Kang, Yong Ho Kim, Byung-Cheol Min, Soon-Geul Lee, Jinung An, Donghan Kim, “**Smart Floor with Learning Capability for Mobile Robot System**”, *Recent Advances in Robotics and Automation (Series: Studies in Computational Intelligence)*, Vol. 480, pp. 205-215, Springer Berlin Heidelberg, 2013.

Conference Proceedings (Refereed)

- [1] Upinder Kaur, Arunashish Datta, Haozhe Zhou, Xiixin Shen, Shreyas Sen, Byung-Cheol Min, and Richard Voyles, “**Title is not displayed here due to the double blind submission policy**”, *ACM/IEEE 13th International Conference on Cyber-Physical Systems (ICCPs 2022)*, Milan, Italy, May 4-6, 2022. (Under review)
- [2] Upinder Kaur, Haozhe Zhou, Xiixin Shen, Byung-Cheol Min, and Richard M. Voyles, “**RoboMal: Malware Detection for Robot Network Systemsh**”, *2021 IEEE Robotic Computing (IRC)*, Taichung, Taiwan, November 15-17, 2021.
- [3] Shyam Sundar Kannan and Byung-Cheol Min, “**Investigation on Accepted Package Delivery Location: A User Study-based Approach**”, *2021 IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, Virtual, Melbourne, Australia, 17-20 October, 2021.
- [4] Manoj Penmetcha, Shyam Sundar Kannan, and Byung-Cheol Min, “**A Predictive Application Offloading Algorithm using Small Datasets for Cloud Robotics**”, *2021 IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, Virtual, Melbourne, Australia, 17-20 October, 2021.
- [5] Dongming Gan, Jiaming Fu, Mo Rastgaar, Byung-Cheol Min, and Richard Voyles, “**Actuation-Coordinated Mobile Parallel Robots with Hybrid Mobile and Manipulation Function**”, *ASME 2021 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC-CIE 2021)*, Virtual, 17–20 August, 2021.
- [6] Shyam Sundar Kannan, Ahreum Lee, and Byung-Cheol Min, “**External Human-Machine Interface on Delivery Robots: Expression of Navigation Intent of the Robot**”, *2021 30th IEEE International Conference on Robot & Human Interactive Communication (RO-MAN)*, Virtual, Vancouver, Canada, 8-12 August, 2021.
- [7] Shyam Sundar Kannan, Wonse Jo, Ramviyas Parasuraman, and Byung-Cheol Min, “**Material Mapping in Unknown Environments using Tapping Sound**”, *2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Las Vegas, NV, USA, October 25-29, 2020.
- [8] Manoj Penmetcha, Shyam Sundar Kannan, and Byung-Cheol Min, “**Smart Cloud: Scalable Cloud Robotic Architecture for Web-powered Multi-Robot Applications**”, *2020 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, Toronto, Canada, 11-14 October, 2020.
- [9] Wonse Jo, Shyam Sundar Kannan, Go-Eum Cha, Ahreum Lee, and Byung-Cheol Min, “**ROSbag-based Multimodal Affective Dataset for Emotional and Cognitive States**”, *2020 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, Toronto, Canada, 11-14 October, 2020.
- [10] Tamzidul Mina, Yogang Singh, and Byung-Cheol Min, “**A Novel Double Layered Weighted Potential Field Framework for Multi-USV Navigation towards Dynamic Obstacle Avoidance in a Constrained Maritime Environment**”, *2019 MTS/IEEE OCEANS*, Seattle, WA, USA, October 27-31, 2019.
- [11] Wonse Jo, Jee Hwan Park, Yuta Hoashi, and Byung-Cheol Min, “**Development of an Unmanned Surface Vehicle for Harmful Algae Removal**”, *2019 MTS/IEEE OCEANS*, Seattle, WA, USA, October 27-31, 2019.

- [12] Shaocheng Luo, Yogang Singh, Hanyao Yang, Jun Han Bae, J. Eric Dietz, Xiumin Diao, and Byung-Cheol Min, “**Image Processing and Model-Based Spill Coverage Path Planning for Unmanned Surface Vehicles**”, *2019 MTS/IEEE OCEANS*, Seattle, WA, USA, October 27-31, 2019.
- [13] Jun Han Bae, Shaocheng Luo, Shyam Sundar Kannan, Yogang Singh, Bumjoo Lee, Richard M. Voyles, Mauricio Postigo-Malaga, Edgar Gonzales Zenteno, Lizbeth Paredes Aguilar, and Byung-Cheol Min, “**Development of an Unmanned Surface Vehicle for Remote Sediment Sampling with a Van Veen Grab Sampler**”, *2019 MTS/IEEE OCEANS*, Seattle, WA, USA, October 27-31, 2019.
- [14] Jee Hwan Park, Tamzidul Mina, and Byung-Cheol Min, “**Grid-based Cyclic Robot Allocation for Object Carrying**”, *2019 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, Bari, Italy, 6-9 October, 2019.
- [15] Manoj Penmetcha, Shaocheng Luo, Arabinda Samantaray, J. Eric Dietz, Baijian Yang, and Byung-Cheol Min, “**Computer Vision-based Algae Removal Planner for Multi-robot Teams**”, *2019 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, Bari, Italy, 6-9 October, 2019.
- [16] Tamzidul Mina, Maliha Hossain, Jee Hwan Park, and Byung-Cheol Min, “**Efficient Resource Distribution by Adaptive Inter-agent Spacing in Multi-agent Systems**”, *2019 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, Bari, Italy, 6-9 October, 2019.
- [17] Yuting Chen, Jiansong Zhang, and Byung-Cheol Min, “**Applications of BIM and UAV to Construction Safety**”, 7th CSCE International Construction Specialty Conference, Laval, QC, Canada, June 12-15, 2019.
- [18] Wonse Jo, Jee Hwan Park, Sangjun Lee, Ahreum Lee, and Byung-Cheol Min, “**Design of a Human Multi-Robot Interaction Medium of Cognitive Perception**”, *2019 ACM/IEEE International Conference on Human-Robot Interaction - Late-Breaking Reports (LBR)*, Daegu, South Korea, March 11-14, 2019.
- [19] Shaocheng Luo, Jun Han Bae, and Byung-Cheol Min, “**Pivot-based Collective Coverage Control with a Multi-robot Team**”, *2018 IEEE International Conference on Robotics and Biomimetics (IEEE ROBIO 2018)*, Kuala Lumpur, Malaysia, December 12-15, 2018.
- [20] Tamzidul Mina and Byung-Cheol Min, “**Penguin Huddling Inspired Distributed Boundary Movement for Group Survival in Multi-robot Systems using Gaussian Processes**”, *2018 IEEE International Conference on Robotics and Biomimetics (IEEE ROBIO 2018)*, Kuala Lumpur, Malaysia, December 12-15, 2018.
- [21] Ramvijas Parasuraman and Byung-Cheol Min, “**Consensus Control of Distributed Robots Using Direction of Arrival of Wireless Signals**”, *International Symposium on Distributed Autonomous Robotic Systems 2018 (DARS 2018)*, Boulder, CO, USA, Oct 15-17, 2018.
- [22] Sangjun Lee and Byung-Cheol Min, “**Distributed Direction of Arrival Estimation-aided Cyberattack Detection in Networked Multi-Robot Systems**”, *2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2018)*, Madrid, Spain, October 1-5, 2018.
- [23] Ramvijas Parasuraman, Petter Ögren, and Byung-Cheol Min, “**Kalman Filter based Spatial Prediction of Wireless Connectivity for Autonomous Robots and Connected Vehicles**”, *2018 IEEE Connected and Automated Vehicles Symposium (CAVS)*, Chicago, USA, August 27, 2018.
- [24] Tamzidul Mina and Byung-Cheol Min, “**Penguin Huddling-inspired Energy Sharing and Formation Movement in Multi-robot Systems**”, *2018 IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR)*, Philadelphia, PA, USA, August 6-8, 2018.
- [25] Yeonju Oh, Ramvijas Parasuraman, Tim McGraw, and Byung-Cheol Min, “**360 VR Based Robot Teleoperation Interface for Virtual Tour**”, *The 13th Annual ACM/IEEE International Conference on Human Robot Interaction (HRI), Workshop on Virtual, Augmented, and Mixed Reality for Human-Robot Interactions (VAM-HRI)*, Chicago, Illinois, USA, March 5, 2018.
- [26] Sangjun Lee, Yongbum Cho, and Byung-Cheol Min, “**Attack-aware Multi-sensor Integration Algorithm for Autonomous Vehicle Navigation Systems**”, *2017 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, Banff, Canada, 5-8 October, 2017.

- [27] Yeonju Oh, Wei-Liang Kao, and Byung-Cheol Min, “**Indoor Navigation Aid System Using No Positioning Technique for Visually Impaired People**”, *HCI International 2017*, Poster Extended Abstract, Vancouver, Canada, 9-14 July, 2017.
- [28] Manoj Penmetcha, Arabinda Samantaray, and Byung-Cheol Min, “**SmartResponse: Emergency and Non-Emergency Response for Smartphone based Indoor Localization applications**”, *HCI International 2017*, Poster Extended Abstract, Vancouver, Canada, 9-14 July, 2017.
- [29] Hyun Hwang, Jun Han Bae, and Byung-Cheol Min, “**Design Guidelines for Sensor Locations on 3D Printed Prosthetic Hands**”, *IEEE Robotic Computing (IRC) 2017*, Taichung, Taiwan, April 10-12, 2017.
- [30] Sangmi Shin, Byung-Cheol Min, Julia Rayz, and Eric T. Matson, “**Semantic Knowledge-based Language Education Device for Children with Developmental Disabilities**”, *IEEE Robotic Computing (IRC) 2017*, Taichung, Taiwan, April 10-12, 2017.
- [31] Huanhuan Wang, Pai-Ying Hsiao, and Byung-Cheol Min, “**Examine the Potential of Robots to Teach Autistic Children Emotional Concepts: A Preliminary Study**”, *The Eight International Conference on Social Robotics (ICSR)*, Kansas City, USA, Nov. 1-3, 2016.
- [32] Jun Han Bae, Jeehwan Park, Sangjun Lee, and Byung-Cheol Min, “**Tri-SedimentBot: An Underwater Sediment Sampling Robot**”, *Automation Science and Engineering (CASE), 2016 IEEE International Conference on*, Fort Worth, Texas, USA, Aug. 21-24, 2016.
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- [44] Daniel K. Schrader, Byung-Cheol Min, Eric T. Matson, and J. Eric Dietz, “**Combining Multiple, Inexpensive Receivers to Improve Accuracy and Reliability**”, *2012 IEEE Sensors Applications Symposium (SAS)*, University of Brescia, Italy, Feb. 7-9, 2012.
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- [48] Byung-Cheol Min, Ji Hyeon Hong, and Eric T. Matson, “**Adaptive Robust Control (ARC) for an Altitude Control of a Quadrotor Type UAV Carrying an Unknown Payloads**”, *2011 11th International Conference on Control, Automation and Systems (ICCAS)*, KINTEX, Gyeonggi-do, Korea, Oct. 26-29, 2011.
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Preprints

- [1] Ruiqi Wang, Weizheng Wang, and Byung-Cheol Min, “**Feedback-efficient Active Preference Learning for Socially Aware Robot Navigation**”, *arXiv preprint*, arXiv:2201.00469, 2022.
- [2] Shyam Sundar Kannan and Byung-Cheol Min, “**Door Delivery of Packages using Drones**”, *arXiv preprint*, arXiv:2104.05503, 2021.
- [3] Sangjun Lee and Byung-Cheol Min, “**Distributed Control of Multi-Robot Systems in the Presence of Deception and Denial of Service Attacks**”, *arXiv preprint*, arXiv:2102.00098, 2021.

- [4] Wonse Jo, Shyam Sundar Kannan, Go-Eum Cha, Ahreum Lee, and Byung-Cheol Min, “**A ROS-based Framework for Monitoring Human and Robot Conditions in a Human-Multi-robot Team**”, *arXiv preprint*, arXiv:2006.03784, 2020.
- [5] Arabinda Samantaray, Baijian Yang, J Eric Dietz, and Byung-Cheol Min, “**Algae Detection using Computer Vision and Deep Learning**”, *arXiv preprint*, arXiv:1811.10847, 2018.

Reports & Abstracts

- [1] Wonse Jo, Robert Wilson, Jaeun Kim, Steve McGuire, and Byung-Cheol Min, “**Toward a Wearable Biosensor Ecosystem on ROS 2 for Real-time Human-Robot Interaction Systems**”, *2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Workshop on HMRS 2021: Cognitive and Social Aspects of Human Multi-Robot Interaction*, Prague, Czech Republic, Sep 27 – Oct 1, 2021.
- [2] Su Sun and Byung-Cheol Min, “**Active Tapping via Gaussian Process for Efficient Unknown Object Surface Reconstruction**”, *2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Workshop on RoboTac 2021: New Advances in Tactile Sensation, Interactive Perception, Control, and Learning. A Soft Robotic Perspective on Grasp, Manipulation, & HRI*, Prague, Czech Republic, Sep 27 – Oct 1, 2021.
- [3] Wonse Jo, Jaeun Kim, and Byung-Cheol Min, “**ROS2 Open-Source Swarm Robot Platform: SMARTm-Bot**”, *2021 International Conference on Robotics and Automation (ICRA), Workshop on Robot Swarms in the Real World: From Design to Deployment - Live Demonstration*, Xi’an, China, May 30 - June 5, 2021.
- [4] Ramviyas Parasuraman, Sergio Caccamo, Luigi Freda, Petter Ögren, and Byung-Cheol Min, “**An Approach to Retrieve from Communication Loss in Field Robots**”, *Robotics: Science and Systems (RSS) 2017, Workshop on Robot Communication in the Wild: Meeting the Challenges of Real-World Systems*, MIT, Massachusetts, USA, July 12-16, 2017.
- [5] Danilo Tardioli, Ramviyas Parasuraman, Petter Ögren, and Byung-Cheol Min, “**Pound: A ROS Node to Improve Communication Latency Performance in Multi-Robot Systems**”, *Robotics: Science and Systems (RSS) 2017, Workshop on Robot Communication in the Wild: Meeting the Challenges of Real-World Systems*, MIT, Massachusetts, USA, July 12-16, 2017.
- [6] M. Bernardine Dias, Ermine Teves, Eric Hochendoner, Praneetha Sistla, Byung-Cheol Min, and Aaron Steinfeld, “**Enhancing the Safety of Visually Impaired Travellers in and around Transit Stations**”, *The U.S. Department of Transportation, University Transportation Centers Program*, 2016.
- [7] Jun Han Bae, Dong Hun Lee, and Byung-Cheol Min, “**Design and Concept of the Sediment Sampling Robot and Dynamic Buoy**”, *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2016)*, Late-Breaking Reports, Daejeon, Korea, Oct. 9-14, 2016.
- [8] Jun Han Bae, Eric T. Matson, and Byung-Cheol Min, “**Towards an Autonomous Water Monitoring System with an Unmanned Aerial and Surface Vehicle Team**”, *2015 IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR)*, West Lafayette, IN, USA, Oct. 18-20, 2015.
- [9] Byung-Cheol Min, Aaron Steinfeld, and M. Bernardine Dias, “**Towards Effective Human-Robot Interaction for Visually Impaired Adults**”, *ICRA 2015, Late-Breaking Reports*, Seattle, May 26-30, 2015.
- [10] Alekhya Jonnalagedda, Lucy Pei, Suryansh Saxena, Ming Wu, Byung-Cheol Min, Ermine A. Teves, Aaron Steinfeld, and M. Bernardine Dias, “**Enhancing the Safety of Visually Impaired Travelers in and around Transit Stations**”, tech. report CMU-RI-TR-14-28, Robotics Institute, Carnegie Mellon University, December, 2014.

Patents

- [1] Byung-Cheol Min et al., “**Method for providing guidance information based on user information**”, Patent No. 1011983850000, October 2012. (Korean Patent)
- [2] Byung-Cheol Min et al., “**Apparatus for Cleaning Exterior Wall of Building**”, Patent No. 1011815400000, September 2012. (Korean Patent)
- [3] Byung-Cheol Min et al., “**Walking guide Robot for blind person**”, Patent No. 1011468550000, May 2012. (Korean Patent)

- [4] Byung-Cheol Min et al., “**LED Lighting Apparatus with Air Levitation System**”, Patent No. 1010905640000, November 2011. (Korean Patent)
- [5] Byung-Cheol Min et al., “**Embedding Device for RFID Tag**”, Patent No. 101056 8640000, August 2011. (Korean Patent)

SEMINARS, INVITED TALKS & PRESENTATIONS

- [1] “**Robotic Sediment Sampling System for Surface Water Sediment Collection**” November, 2021
Fall Nexus Webinars Series, Arequipa Nexus Institute, Purdue University/Universidad Nacional de San Agustín (UNSA), Virtual
- [2] “**Robot Design, Planning, and Control for Environmental Applications**” August, 2021
Invited talk at the 2021 2nd International Conference of the Brain Korea21 FOUR Interdisciplinary Program in IT-Bio Convergence System, Virtual
- [3] “**Robotics as an Example of Sociotechnical/Interdisciplinary Research**” January, 2021
Purdue Polytechnic Research Mentoring Lunch, Purdue University, West Lafayette, IN USA
- [4] “**Towards Adaptive Human Multi-Robot Systems**” November, 2020
Colloquium on Multimedia Computing Systems 2020, Sungkyunkwan University, Seoul, Korea
- [5] “**Multi-Robot Systems and Their Applications**” June, 2019
Chungbuk National University, Cheongju, Korea
- [6] “**Multi-Robot Control Using Wireless Network**” June, 2018
Korea Internet & Security Agency (KISA), Naju, Korea
- [7] “**Multi-Robot Systems and Their Applications**” June, 2018
Korea Research Institute of Ships & Ocean Engineering (KRISO), Daejeon, Korea
- [8] “**Field Robotics and Its Applications**” May, 2018
Hyundai KEFICO, Gunpo, Korea
- [9] “**Assistive Technology and Robotics for People with Disability**” June 2016
Keynote speech at the 2016 International Workshop on ICT in Medicine and Health Care (ICTMHC 2016), Yeongnam Univ., Korea
- [10] “**Assistive Technology and Robotics for People with Disability**” June, 2016
DGIST, Daegu, Korea
- [11] “**Assistive Technology and Robotics for People with Disability**” June, 2016
Chungnam National University (CNU), Daejeon, Korea
- [12] “**Assistive Technology and Robotics for People with Disability**” May, 2016
Dongguk University, Seoul, Korea
- [13] “**Assistive Technology and Robotics for People with Disability**” May, 2016
Kyung Hee University, Yongin, Korea
- [14] “**Assistive Robotics for Search-and-Rescue Operations and People who are Blind**” January, 2016
Indiana University-Purdue University Indianapolis (IUPUI), Indianapolis, IN USA
- [15] “**Advancing Robotics Technology for Search-and-Rescue Operations and Assistive Robotics for People who are blind**” January, 2016
Purdue University, Robotics Seminar Series, West Lafayette, IN USA
- [16] “**Advancing Robotics Technology for Search-and-Rescue Operations and Assistive Robotics for People with Disabilities**” October, 2015
Kyung Hee University, Yongin, Korea
- [17] “**Assistive Robots for Blind Travelers**” April, 2015
Gacheon University, Seongnam, Korea

- [18] “**Assistive Robots for Blind Travelers**” April, 2015
Dongguk University, Seoul, Korea
- [19] “**Advancing Robotics Technology for Search-and-Rescue Operations and Assistive Robotics for People with Disabilities**” April, 2015
Korea Institute of Science and Technology (KIST), Seoul, Korea
- [20] “**Assistive Robots for Blind Travelers**” January, 2015
Transportation Research Board 94th Annual Meeting, Washington D.C., USA

COURSES TAUGHT (COURSE EVALUATION, 5.0 MAX)

CNIT 355 – Software Development for Mobile Computers, Purdue University

– Students #:	25	Univ. Course:	4.7	Univ. Instructor:	4.8		Fall 2021
– Students #:	18	Univ. Course:	4.5	Univ. Instructor:	4.6		Fall 2020
– Students #:	28	Univ. Course:	4.3	Univ. Instructor:	4.5	Dept. Instructor Averages:	4.7 Fall 2019
– Students #:	36	Univ. Course:	4.5	Univ. Instructor:	4.6	Dept. Instructor Averages:	4.6 Fall 2018
– Students #:	34	Univ. Course:	4.7	Univ. Instructor:	4.7	Dept. Instructor Averages:	4.7 Fall 2017
– Students #:	21	Univ. Course:	4.6	Univ. Instructor:	4.6	Dept. Instructor Averages:	4.7 Fall 2016

CNIT 425 – Software Development for Mobile Devices II, Purdue University

– Students #:	8	Univ. Course:	4.5	Univ. Instructor:	4.5		Spring 2021	
– Students #:	10	<i>(No course evaluation conducted due to COVID-19)</i>						Spring 2020
– Students #:	7	Univ. Course:	4.5	Univ. Instructor:	4.5	Dept. Instructor Averages:	4.5 Spring 2019	
– Students #:	16	Univ. Course:	4.7	Univ. Instructor:	4.8	Dept. Instructor Averages:	4.7 Spring 2018	
– Students #:	11	Univ. Course:	4.9	Univ. Instructor:	4.9	Dept. Instructor Averages:	4.8 Spring 2017	

CNIT 581-ATR – Introduction to Assistive Technology and Robotics, Purdue University

– Students #:	3	Univ. Course:	5.0	Univ. Instructor:	5.0		Fall 2021
– Students #:	6	Univ. Course:	4.5	Univ. Instructor:	4.8		Fall 2020
– Students #:	13	Univ. Course:	4.9	Univ. Instructor:	4.9	Dept. Instructor Averages:	4.9 Fall 2018
– Students #:	6	Univ. Course:	4.3	Univ. Instructor:	4.9	Dept. Instructor Averages:	4.9 Fall 2017
– Students #:	11	Univ. Course:	4.7	Univ. Instructor:	4.8	Dept. Instructor Averages:	4.8 Fall 2016
– Students #:	11	Univ. Course:	4.7	Univ. Instructor:	4.8	Dept. Instructor Averages:	4.6 Fall 2015

CNIT 581-SDR – Software Design and Development for Robotics, Purdue University

– Students #:	8	Univ. Course:	4.8	Univ. Instructor:	4.9		Spring 2021	
– Students #:	10	<i>(No course evaluation conducted due to COVID-19)</i>						Spring 2020
– Students #:	15	Univ. Course:	4.2	Univ. Instructor:	4.8	Dept. Instructor Averages:	4.7 Spring 2019	
– Students #:	12	Univ. Course:	4.8	Univ. Instructor:	4.9	Dept. Instructor Averages:	4.7 Spring 2018	
– Students #:	8	<i>(No course evaluation conducted due to low enrollment)</i>						Spring 2017
– Students #:	11	Univ. Course:	5.0	Univ. Instructor:	5.0	Dept. Instructor Averages:	4.8 Spring 2016	

POSTDOCS & STUDENTS

Advisees

Current Students (7 Ph.D. students; 1 M.S. student; 1 Undergrad students)

Ph.D. Students

– Ruiqi Wang: Ph.D., Technology	2021 –
– Vishnunandan Venkatesh: Ph.D., Technology	2021 –
– Roman Ibrahimov: Ph.D., Technology	2021 –
– Go-Eum Cha: Ph.D., Technology	2021 –
– Su Sun: Ph.D., Technology	2020 –
– Shyam Sundar Kannan: Ph.D., Technology	2019 –
– Wonse Jo: Ph.D., Technology	2017 –

M.S. Students

– Jeremy Pan: M.S., Computer and Information Technology	2019 –
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Undergrad Students

- Pou Hei Chan: B.S., Aeronautical and Astronautical Engineering 2019 –

Alumni (4 Postdocs; 5 Ph.D. students; 5 M.S. students; 9 Undergrad students)

Postdocs

- Dr. Ahreum Lee (co-mentored with Dr. Colin Gray and Dr. Austin Toombs), First Position: University of Eastern Finland as a Postdoc 2020
- Dr. Yogang Singh (co-mentored with Dr. Jose Garcia and Dr. Brittany Newell), First Position: Katholieke Universiteit (KU) Leuven as a Postdoc 2019
- Dr. Yuting Chen (co-mentored with Dr. Jiansong Zhang), First Position: University of North Carolina at Charlotte as an Assistant Professor 2019
- Dr. Ramviyas Parasuraman, First Position: The University of Georgia as Assistant Professor 2018

Ph.D. Students

- Jun Han Bae: Ph.D., Technology (co-advised with Dr. Richard Voyles), First Position: UIUC as a Postdoc 2021
- Sangjun Lee: Ph.D., Technology 2021
- Manoj Penmetcha: Ph.D., Technology, First position: NCC and Multiscale Technologies as a Director 2021
- Tamzidul Mina: Ph.D., Mechanical Engineering (co-advised with Dr. Galen King), First Position: Sandia National Lab as a Postdoc 2020
- Shaocheng Luo: Ph.D., Technology, First Position: University of Alberta as a Postdoc 2020

M.S. Students

- Go-Eum Cha: M.S., Computer and Information Technology, First Position: Purdue for her Ph.D. 2020
- Jee Hwan Park: M.S., Mechanical Engineering (co-advised with Dr. Galen King), First Position: LG Innotek 2020
- Shyam Sundar Kannan: M.S., Computer and Information Technology, First Position: Purdue for his Ph.D. 2019
- Arabinda Samantaray: M.S., Computer and Information Technology, First Position: Cisco 2018
- Yeonju Oh: M.S., Computer and Information Technology, First Position: LG Electronics 2018

Undergrad Students

- Jaeun Kim: B.S., Robotics Engineering Technology 2021
- Yuta Hoashi: B.S., Mechanical Engineering, First Position: Carnegie Mellon University for his M.S. 2020
- Walter Kruger: B.S., Mechatronics & Robotics Engineering Technology, First Position: GE and University of Michigan for his M.S. 2020
- Andrew Sakai: B.S., Mechanical Engineering Technology 2020
- Yu-Hsi (UC) Wang: B.S., Mechanical Engineering, First Position: UC Berkeley for his M.S. 2019
- Robert Osborne: B.S., Computer and Information Technology, First Position: USAA 2018
- Jee Hwan Park: B.S., Mechanical Engineering, First Position: Purdue for his M.S. 2018
- Yongbum Cho: B.S., Mechanical Engineering, First Position: Samsung Electronics 2017
- Dong Hun Lee: B.S., Mechanical Engineering Technology 2017

Committee Member

Current Students (5 Ph.D. students; 1 M.S. student)

Ph.D. Students

- Upinder Kaur: Ph.D., Technology, Committee Chair: Dr. Richard Voyles 2021 –
- Zelei Cheng: Ph.D., Technology, Committee Chair: Dr. Wenhai Sun 2021 –
- Cansu Agrali: Ph.D., Industrial Engineering, Committee Chair: Dr. Seokcheon Lee 2019 –
- Oscar Wong Chong: Ph.D., Technology, Committee Chair: Dr. Jiansong Zhang 2019 –
- Ho-Young Jeong: Ph.D., Industrial Engineering, Committee Chair: Dr. Seokcheon Lee 2018 –

M.S. Students

- Hyemin Kim: M.S, Computer and Information Technology, Committee Chair: Dr. Eric Matson 2020 –

Former Students (5 Ph.D. students; 17 M.S. students)

Ph.D. Students

- Patchara Kitjacharoenchai: Ph.D., Industrial Engineering, Committee Chair: Dr. Seokcheon Lee 2020
- Daniel Schrader: Ph.D., Technology, Committee Chair: Dr. Eric Matson 2018
- Mauricio Gomez: Ph.D., Technology, Committee Chair: Dr. Eric Matson 2018
- Yazeed Mohammad Al Babtain: Ph.D., Technology, Committee Chair: Dr. Justin Yang 2018
- Amy Wagoner: Ph.D., Technology, Committee Chair: Dr. Eric Matson 2017

M.S. Students

- Hyewon Jeon: M.S, Computer and Information Technology, Committee Chair: Dr. John Springer 2020
- Nanxin Jin: M.S, Computer and Information Technology, Committee Chair: Dr. Baijian Yang 2020
- Li Shen: M.S, Computer and Information Technology, Committee Chair: Dr. Baijian Yang 2020
- Huyunting Huang: M.S, Computer and Information Technology, Committee Chair: Dr. Baijian Yang 2019
- Justin Montgomery: M.S., Engineering Technology, Committee Chair: Dr. Richard Voyles 2019
- Ziyang Tang, M.S, Computer and Information Technology, Committee Chair: Dr. Baijian Yang 2019
- Gagandeep Singh Khanuja, M.S, Computer and Information Technology, Committee Chair: Dr. Baijian Yang 2019
- Hyun Hwang: M.S, Computer and Information Technology, Committee Chair: Dr. Eric Matson 2018
- Ho-Young Jeong: M.S., Industrial Engineering, Committee Chair: Dr. Seokcheon Lee 2018
- Zhenzhi Xu: M.S., Computer and Information Technology, Committee Chair: Dr. Justin Yang 2018
- Jin Hu: M.S., Mechanical Engineering Technology, Committee Chair: Dr. Xiumin Diao 2018
- Austin Riegsecker: M.S., Computer and Information Technology, Committee Chair: Dr. Eric Matson and Prof. Tony Smith 2017
- Sheifali Khare: M.S., Computer and Information Technology, Committee Chair: Prof. Alka Harriger 2017
- Wang Tian: M.S., Computer and Information Technology, Committee Chair: Dr. Justin Yang 2017
- Miae Kim: M.S., Computer and Information Technology, Committee Chair: Dr. Eric Matson 2017
- Ji Yoon Lee: M.S., Computer and Information Technology, Committee Chair: Dr. Eric Matson 2017
- Sang Mi Shin: M.S., Computer and Information Technology, Committee Chair: Dr. Eric Matson 2016

PROFESSIONAL ACTIVITIES

Leadership Roles

- Co-chair: Workshop/Tutorial of International Conference on Ubiquitous Robots (UR 2022) 2021 –
- Co-chair: The IROS 2020 session “Sensor Fusion for Localization and Mapping” 2020
- Co-organizer: The 1st U.S.-Korea PI Meeting to Explore US/Korea Joint Collaboration in Robotics and Related Areas (NSF workshop to Explore US/Korean Collaboration in Human-Friendly Co-Robotic Technologies) 2017
- Co-organizer: 2015 International Workshop on Communication for Humans, Agents, Robots, Machines and Sensors (CHARMS 2015) 2015
- Associate Technical Program Chair: the 6th International Conference on Automation, Robotics, and Applications (ICARA 2015) 2015

Editorial Boards

- Guest Associate Editor: Frontiers in Control Engineering, Research Topic on “Coverage Control of Networked Robots” 2021 –
- Associate Editor: International Journal of Fuzzy Logic and Intelligent Systems 2020 –
- Guest Editor: Applied Sciences (MDPI), Special Issue on “Advances in Robot Path Planning” 2020 –
- Associate Editor: IEEE International Conference on Robotics and Automation (ICRA) 2019 –
- Guest Editor: International Journal of Advanced Robotic Systems, Special Issue on “Special Collection on Multi-robot System Assisted by Information Networks” 2018
- Guest Editor: Technologies (MDPI) Special Issue on “Assistive Robotics” 2017 – 2018
- Guest Editor: Sensors (MDPI) Special Issue on “Integration of Sensors in Complex, Intelligent Systems” 2015 – 2016

Program Committee

- Program Committee: 2021 North American Fuzzy Information Processing Society Annual Conference (NAFIPS 2021) 2020
- Program Committee: 18th International Conference on Practical Applications of Agents and Multi-Agent Systems (PAAMS 2020) 2020
- Program Committee: IEEE International Conference on Robotic Computing (IEEE IRC 2020) 2020
- Program Committee: IEEE International Conference on Robotic Computing (IEEE IRC 2019) 2019
- Program Committee: The 1st International Workshop on Virtual, Augmented and Mixed Reality for Human-Robot Interaction (VAM-HRI) 2018
- Program Committee: The 18th IEEE International Conference on Bioinformatics and Bioengineering (IEEE BIBE 2018) 2018
- Program Committee: IEEE International Conference on Robotic Computing (IEEE IRC 2018) 2018
- Program Committee: 2018 International Workshop on Communication for Humans, Agents, Robots, Ma-

- chines and Sensors (CHARMS 2018) 2018
- Program Committee: 2017 International Workshop on Communication for Humans, Agents, Robots, Machines and Sensors (CHARMS 2017) 2017
- International Program Committee: 14th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI 2017) 2017
- International Program Committee: 8th International Conference on Social Robotics (ICSR) 2016
- International Program Committee: 13th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI 2016) 2016
- Technical Program Committee: 2015 IEEE Sensors Applications Symposium (SAS 2015) 2015
- Technical Program Committee: International Workshop on Security and Privacy in Machine-to-Machine Communications (M2MSec'14) 2014
- Technical Program Committee: 2014 IEEE Sensors Applications Symposium (SAS 2014) 2014
- Program Committee: the 4th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN 2013) 2013

Grant Reviewer

- Research Grants Council (RGC) of Hong Kong 2021
- NSF Review Panel 2017, 2019

Journal Reviewer

- IEEE Transactions on Human-Machine Systems 2021
- IEEE Robotics and Automation Letters 2018, 2021
- IEEE Transactions on Systems, Man and Cybernetics: Systems 2020
- IEEE Transactions on Cybernetics 2018 – 2019
- IEEE Transactions on Industrial Informatics 2018
- Autonomous Robots 2015, 2018
- Robotics and Autonomous Systems 2018
- International Journal of Control 2018
- ETRI Journal 2016 – 2018
- Multimedia Tools and Applications 2014, 2018
- IEEE Transactions on Mobile Computing 2017
- Journal of Intelligent and Robotic Systems 2012 – 2017
- Frontiers in Human Neuroscience 2016
- Journal of Field Robotics 2014, 2015
- Soft Computing 2014, 2015
- IEEE Transactions on Haptics 2014
- IEEE Journal on Selected Areas in Communications 2014
- IEEE Transactions on Mechatronics 2013
- Journal of Mechanical Engineering Science 2014
- Journal of Electromagnetic Waves and Applications 2013
- The Journal of Korea Information and Communications Society (J-KICS) 2013
- International Journal of Advanced Robotic Systems 2012
- Journal of Institute of Control, Robotics an Systems 2012

Conference Reviewer

- ACM conference on Designing Interactive Systems (DIS) 2019 2019
- IEEE International Conference on Soft Robotics (RoboSoft) 2019
- IEEE International Symposium on Safety, Security and Rescue Robotics (SSRR) 2018
- International Workshop on Virtual, Augmented and Mixed Reality for Human-Robot Interaction (VAM-HRI) 2018
- International Conference on Bioinformatics and Bioengineering (BIBE) 2018
- IEEE International Conference on Robotic Computing (IRC) 2017, 2018
- International Workshop on Communication for Humans, Agents, Robots, Machines and Sensors (CHARMS) 2016, 2017
- IEEE International Conference on Robotics and Automation (ICRA) 2015 – 2017
- International Conference on Social Robotics (ICSR) 2016
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2014, 2016
- IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN) 2016
- AAAI Conference on Artificial Intelligence (AAAI) 2015

- IEEE Sensors Applications Symposium (SAS) 2012 – 2015
- International Conference on Robot Intelligence Technology and Applications (RiTA) 2012, 2013
- International Conference on Control, Automation and Systems (ICCAS) 2010
- Chinese Control Conference (CCC) 2009

University Committee & Service

- Member: Purdue Robotics Accelerator Committee, Purdue University 2016 – Present

College Committee & Service

- Co-organizer: Purdue Polytechnic Postdoctoral Seminar Series, Purdue University 2017, 2018

Departmental Committee & Service

- Co-chair: Sub Curriculum Committee, Computer and Information Technology, Purdue University 2021 – Present
- Chair: Faculty Search Committee, Computer and Information Technology, Purdue University 2020 – 2021
- Member: Faculty Search Committee, Computer and Information Technology, Purdue University 2017 – 2020
- Chair: Election Committee, Computer and Information Technology, Purdue University 2018 – Present
- Co-chair: Election Committee, Computer and Information Technology, Purdue University 2017 – 2018
- Member: Curriculum Committee, Computer and Information Technology, Purdue University 2016 – 2018, 2021 – Present
- Member: Grad Education Committee, Computer and Information Technology, Purdue University 2016 – Present

PROFESSIONAL MEMBERSHIPS

Institute for Electrical and Electronics Engineers (IEEE), Student Member (2008 – 2014), Member 2014 – Present

Association for Computing Machinery (ACM), Member 2016 – Present

MORE INFORMATION

More information and auxiliary documents can be found at:

<http://web.ics.purdue.edu/~minb/> or

www.smart-laboratory.org.