

List of Publications

Junaed Sattar
Department of Computer Science and Engineering
University of Minnesota

March 18, 2018

1 In preparation

- [PRE3] **Junaed Sattar**, *James Little and Gregory Dudek*. Quantitative Modeling of Task Confirmations in Human–Robot Dialog. Journal.
- [PRE2] *Md Jahidul Islam, Jungseok Hong, and Junaed Sattar*. Person Following by Autonomous Robots: A Categorical Overview. Journal.
- [PRE1] **Junaed Sattar**, *Anqi Xu and Gregory Dudek*. RoboChat – A Natural Gesture Interface for Mobile Robot Programming and Control. Journal.

2 Under Review

- [REV2] *Jiawei Mo and Junaed Sattar*. Enhancing Lane Appearance for Autonomous and Assisted Driving Under Limited Visibility. IEEE/RSJ Conference on Intelligent Robots and Systems (IROS 2018). Under Review.
- [REV1] *Michael Fulton, Jungseok Hong, Md Jahidul Islam and Junaed Sattar*. Robotic Detection of Marine Litter Using Deep Visual Detection Models. IEEE/RSJ Conference on Intelligent Robots and Systems (IROS 2018). Under Review.

3 Journal Publications

- [J3] **Junaed Sattar** and *Gregory Dudek*. Visual Identification of Biological Motion for Underwater Human-Robot Interaction. *Autonomous Robots*, pages 1–14. June 2017.
- [J2] **Junaed Sattar**, *Philippe Giguère and Gregory Dudek*. Sensor-Based Behavior Control for an Autonomous Underwater Vehicle. *International Journal of Robotics Research (IJRR)*. Volume 28, No. 6, pages 701-713, June 2009.

- [J1] *Gregory Dudek, Philippe Giguère, Chris Prahacs, Shane Saunderson, **Junaed Sattar**, and Luz-Abril Torres-Mendez, McGill University; Michael Jenkin, Andrew German, Andrew Hogue, Arlene Ripsman, and Jim Zacher, York University; Evangelos Milios, Hui Liu, and Pifu Zhang, Dalhousie University; Martin Buehler, Boston Dynamics; Christina Georgiades, MathWorks.* Aqua: An Amphibious Autonomous Robot. IEEE Computer Magazine, Volume 40, Number 1, Pages 46-53, January 2007.

4 Fully Peer-reviewed Conference Publications

- [PUB28] *Cameron Fabbri, Jahidul Islam and **Junaed Sattar*** Enhancing Underwater Imagery using Generative Adversarial Networks. IEEE International Conference on Robotics and Automation (ICRA 2018). Accepted for publication.
- [PUB27] *Jahidul Islam, Marc Ho and **Junaed Sattar**.* Dynamic Reconfiguration of Mission Parameters in Underwater Human-Robot Collaboration. IEEE International Conference on Robotics and Automation (ICRA 2018). Accepted for publication.
- [PUB26] *Florian Shkurti, Wei-Di Chang, Peter Henderson, Md Jahidul Islam, Juan Camilo Gamboa Higuera, Jimmy Li, Travis Manderson, Anqi Xu, Gregory Dudek, and **Junaed Sattar**.* Underwater Multi-Robot Convoying using Visual Tracking by Detection. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2017), pages 4189–4196. September 2017, Vancouver, BC, Canada.
- [PUB25] *Md Jahidul Islam and **Junaed Sattar**.* Mixed-domain Biological Motion Tracking for Underwater Human-Robot Interaction. International Conference on Robotics And Automation (ICRA 2017), pages 4457–4464. May-June 2017. Singapore City, Singapore.
- [PUB24] *Cameron Fabbri and **Junaed Sattar**.* smartTalk: A Learning Based Framework for Natural Human-Robot Interaction. The Thirteenth International Conference on Computer and Robot Vision (CRV 2016), pages 376–382. June 2016, Victoria, BC, Canada..
- [PUB23] *Luis C. González-García, Julieta Martínez, **Junaed Sattar**, Luz Abril Torres-Méndez and James Little.* Are You Talking to Me? Detecting Attention in First-Person Interactions. The Seventh International Conference on Advanced Cognitive Technologies and Applications (COGNITIVE 2015). March 2015, Nice, France.
- [PUB22] *Pouria TalebiFard, **Junaed Sattar** and Ian Mitchell.* A Risk Assessment Infrastructure for Powered Wheelchair Motion Commands without Full Sensor Coverage. IEEE International Conference on Intelligent Robots and Systems (IROS 2014), pages 3592–3597. September 2014, Chicago, IL, USA.
- [PUB21] ***Junaed Sattar** and James Little.* Ensuring Safety in Human-Robot Dialog – a Cost-Directed Approach. IEEE International Conference on Robotics and Automation (ICRA 2014), pages 6660–6666. May-June 2014, Hong Kong, China.

- [PUB20] *Vignesh Sankaranarayanan, **Junaed Sattar** and Laks V. S. Lakshmanan.* Auto-play: A Data Mining Approach to ODI Cricket Simulation and Prediction. SIAM International Conference on Data Mining (SDM2014), pages 1064–1072. April 2014, Philadelphia, PA, USA.
- [PUB19] *Daniel Troniak, **Junaed Sattar**, Ankur Gupta, James Little, Wesley Chan, Ergun Caliskan, Elizabeth Croft and Machiel Van der Loos.* Charlie Rides the Elevator—Integrating Vision, Navigation and Manipulation Towards Multi-Floor Robot Locomotion. Proceedings of the 2013 Conference on Robot Vision (CRV’13), pages 1–8. May 2013, Regina, SK, Canada.
- [PUB18] ***Junaed Sattar** and Gregory Dudek.* On the Performance Evaluation of a Vision-based Human-Robot Interaction Framework. Proceedings of the 2012 Performance Metrics for Intelligent Systems (PerMIS ’12) Workshop. ACM Publications, pages 21–28. March 2012, College Park, MD, USA.
- [PUB17] ***Junaed Sattar** and Gregory Dudek.* Towards Quantitative Modeling of Task Confirmations in Human-Robot Dialog. Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 1957–1963. May 2011, Shanghai, China.
- [PUB16] ***Junaed Sattar** and Gregory Dudek.* Reducing Uncertainty in Human-Robot Interaction: A Cost Analysis Approach. Proceedings of the International Symposium on Experimental Robotics (ISER), as Experimental Robotics—The 12th International Symposium. Springer Tracts in Advanced Robotics. New Delhi and Agra, India. December 2010.
- [PUB15] ***Junaed Sattar**, Anqi Xu, Gabrielle Charette and Gregory Dudek.* Graphical State-Space Programmability as a Natural Interface for Robotic Control. Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 4609–4614. May 2010, Anchorage, AK, USA.
- [PUB14] *Ioannis Rekleitis, Gregory Dudek, Yasmina Schoueri, Philippe Giguère, **Junaed Sattar**.* Telepresence across the Ocean. Proceedings of the Seventh Canadian Conference on Computer and Robot Vision (CRV), pages 261–268. May 2010, Ottawa, Ontario, Canada.
- [PUB13] ***Junaed Sattar** and Gregory Dudek.* Underwater Human-Robot Interaction via Biological Motion Identification. Proceedings of the 2009 Conference on Robotics: Science and Systems V (RSS), MIT Press, pages 185–192. June-July 2009, Seattle, WA, USA.
- [PUB12] ***Junaed Sattar** and Gregory Dudek.* Robust Servo-control for Underwater Robots using Banks of Visual Filters. Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 3583–3588. May 2009, Kobe, Japan.
- [PUB11] ***Junaed Sattar** and Gregory Dudek.* A Vision-based Control and Interaction Framework for a Legged Underwater Robot. Proceedings of the Sixth Canadian Conference on Computer and Robot Vision (CRV), pages 329–336. May 2009, Kelowna, British Columbia, Canada. *Best Robotics Paper Award.*

- [PUB10] **Junaed Sattar**, Gregory Dudek, Olivia Chiu, Ioannis Rekleitis, Alec Mills, Philippe Giguère, Nicolas Plamondon, Chris Prahacs, Yogesh Girdhar, Meyer Nahon and John-Paul Lobos. Enabling Autonomous Capabilities in Underwater Robotics. Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), pages 3628–3634. September 2008, Nice, France.
- [PUB9] **Junaed Sattar** and Gregory Dudek. A Boosting Approach to Visual Servo-Control of an Underwater Robot. Proceedings of the International Symposium on Experimental Robotics (ISER), as Experimental Robotics – The Eleventh International Symposium. Springer Tracts in Advanced Robotics (STAR), Volume 54, pages 417–428. July 2008, Athens, Greece.
- [PUB8] Anqi Xu, Gregory Dudek and **Junaed Sattar**. A Natural Gesture Interface for Operating Robotic Systems. Proceedings of the IEEE International Conference of Robotics and Automation (ICRA), pages 3557–3563. May 2008, Pasadena, CA, USA.
- [PUB7] **Junaed Sattar** and Gregory Dudek. Where is Your Dive Buddy: Tracking Scuba Divers using Spatio-Temporal Features. Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), pages 3654–3659. October–November 2007, San Diego, CA, USA.
- [PUB6] **Junaed Sattar**, Eric Bourque, Philippe Giguère and Gregory Dudek. Fourier Tags: Smoothly Degradable Fiducial Markers for use in Human-Robot Interaction. Proceedings of the Fourth Canadian Conference on Computer and Robot Vision (CRV), pages 165–174. May 2007, Montréal, QC, Canada.
- [PUB5] Gregory Dudek, **Junaed Sattar** and Anqi Xu. A Visual Language for Robot Control and Programming: A Human-Interface Study. Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 2507–2513. April 2007, Rome, Italy.
- [PUB4] Gregory Dudek, Philippe Giguère and **Junaed Sattar**. Sensor-Based Behavior Control for an Autonomous Underwater Vehicle. Proceedings of the International Symposium on Experimental Robotics (ISER), as Experimental Robotics – The Tenth International Symposium. Springer Tracts in Advanced Robotics (STAR), Volume 39, pages 267–276. July 2006, Rio de Janeiro, Brasil.
- [PUB3] **Junaed Sattar** and Gregory Dudek. On the Performance of Color Tracking Algorithms for Underwater Robots under Varying Lighting and Visibility. Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), pages 3550–3555. May 2006, Orlando, FL, USA.
- [PUB2] **Junaed Sattar**, Philippe Giguère, Gregory Dudek and Chris Prahacs. A Visual Servoing System for an Aquatic Swimming Robot. Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), pages 1483–1488. August 2005, Edmonton, AB, Canada.

- [PUB1] Gregory Dudek, Michael Jenkin, Chris Prahacs, Andrew Hogue, **Junaed Sattar**, Philippe Giguère, Andrew German, Hongyu Liu, Shane Saunderson, Arlene Ripsman, Saul Simhon, Luz Abril Torres-Méndez, Evangelos Milios, Pifu Zhang, and Ioannis Rekleitis. A Visually Guided Swimming Robot. Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), pages 3604–3609. August 2005, Edmonton, AB, Canada.

5 Posters

- [P4] Ankur Gupta, Wesley Chan, Daniel Troniak, **Junaed Sattar**, Elizabeth Croft, Jim Little, Machiel Van der Loos. PR2 Rides the Elevator. Robotics and AI Multimedia Fair, Twenty-Sixth Conference on Artificial Intelligence (AAAI-12). Toronto, Ontario, Canada.
- [P3] **Junaed Sattar**. Tracking Humans Underwater using Spatio-Temporal Features. Intelligent Systems 2008, Windsor, Ontario, Canada.
- [P2] **Junaed Sattar**. Visual Servoing and Navigation for an Amphibious Legged Robot. Intelligent Systems 2006, Victoria, British Columbia, Canada.
- [P1] **Junaed Sattar**. A Visual Servoing System for an Aquatic Swimming Robot. Center for Intelligent Machines. CIM 20-year anniversary, May 2005, Montréal, Canada.

6 Thesis

- [T2] **Junaed Sattar**. Towards a Robust Framework for Visual Human-Robot Interaction. PhD Thesis, McGill University. August 2011.
- [T1] **Junaed Sattar**. A Visual Servoing System for an Amphibious Legged Robot. Master's Thesis, McGill University. August 2005.

7 Other Publications

- [OP2] **Junaed Sattar**, Marc Grimson and James Little. A Software Framework for Multi-Robot Human Interaction. Workshop on Fully Decentralized Multi-Robot Systems: Hardware, Software and Integration. IEEE International Conference on Robotics and Automation (ICRA). May 2013, Karlsruhe, Germany.
- [OP1] **Junaed Sattar** and Gregory Dudek. Cooperative task execution through Human-robot Interaction for an Autonomous Underwater Robot. Workshop on Aquatic Robotics: Ocean Science and Marine Systems, Robotics: Science and Systems VII (RSS). June-July 2011, Los Angeles, CA, USA.

8 Books

- [B1] ***Junaed Sattar***. A Visual Servoing System for an Amphibious Legged Robot. VDM Verlag Dr. Muller Aktiengesellschaft and Co. Kg.
ISBN: 978363901433. ISBN (Ten digit): 3639014332.