Connor Mattson, PhD Student

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Education

2022 – Curr. **Ph.D. Robotics, University of Utah (Current)**
4.0 / 4.0 GPA
Advised by Daniel S. Brown.

2018 – 2022 **B.S. Computer Science, Brigham Young University**
3.82 / 4.0 GPA
Minor: Mathematics

Research Publications

Refereed Conference Proceedings

1. A. Aribandi*, **C. Mattson***, and D. S. Brown, "Representation learning for cross-embodiment inverse reinforcement learning from mixed-quality demonstrations," in *2024 Reinforcement Learning Conference (RLC)*, 2024, (Accepted for Publication).
2. **C. Mattson** and D. S. Brown, "Leveraging human feedback to evolve and discover novel emergent behaviors in robot swarms," in *Genetic and Evolutionary Computation Conference (GECCO)*, 2023.
3. **C. Mattson**, J. C. Clark, and D. S. Brown, "Exploring behavior discovery methods for heterogeneous swarms of limited-capability robots," in *2023 International Symposium on Multi-Robot and Multi-Agent Systems (MRS)*, IEEE, 2023, pp. 163–169.

Under Review

1. A. Belsare*, Z. Karimi*, **C. Mattson***, and D. S. Brown, "Vosa: Partially observable shared autonomy via end-effector vision for zero-shot manipulation intent recognition," in *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2024, (Under Review).
2. C. Rubow, C. H. Tsai, E. Brewer, **C. Mattson**, D. S. Brown, and H. Zhang, "A dataset of paired head and eye movements during visual tasks in virtual environments," in *Nature Scientific Data*, 2024, (Under Review).
3. R. Vega, **C. Mattson**, D. S. Brown, and C. Nowzari, "Indirect swarm control: Characterization and analysis of emergent swarm behaviors," in *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2024, (Under Review).
4. K. Zhu, **C. Mattson**, S. Snyder, *et al.*, "Spiking neural networks as a controller for emergent swarm agents," in *ACM International Conference on Neuromorphic Systems (ICONS)*, 2024, (Under Review).

Non-Refereed Articles

1. R. Vega, K. Zhu, **C. Mattson**, D. S. Brown, and C. Nowzari, *Swarm mechanics and swarm chemistry: A transdisciplinary approach for robot swarms*, 2023.

*Indicates Equal Contribution

Teaching Experience

2019 – 2021 **Teaching Assistant:** CS260 Web Development (Brigham Young University)

Awards and Honors

2022 **National Science Foundation:** Graduate Research Fellowship Program (GRFP) - Honorable Mention

Academic Service

Journal Review

- *Springer Autonomous Robots* (2023)

Conference Review

- ICRA: *IEEE International Conference on Robotics and Automation* (2024)
- IROS: *IEEE/RSJ International Conference on Intelligent Robots and Systems* (2024)

Workshop Organization

1. N. Wilde, J. Alonso-Mora, D. S. Brown, **C. Mattson**, and K. Sycara, "Human multi-robot interaction (hmri) workshop," in *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2023.

Outreach

High School Computer Science, Technology, and Robotics

- *FIRST Robotics*: Regional Competition Volunteer (2023-2024)
- *SkillsUSA Utah Web Development*: Competition Judge (2023-2024), National Team Advisor (2024)