Torin Adamson

CONTACT
INFORMATION

1 University of New Mexico
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RESEARCH INTERESTS   Motion Planning, Human-Automation Collaboration, Video Games

EDUCATION

University of New Mexico, Albuquerque, New Mexico

Ph.D., Computer Science, December, 2023

- Committee Chair: Dr. Lydia E. Tapia
- Committee Co-Chair: Dr. Bruna Jacobson
- Committee Members: Drs. Evan Carter, Chris Holden, and Shuang (Sean) Luan

University of New Mexico, Albuquerque, New Mexico

M.S., Computer Science, May, 2016

- Thesis "Molecular Docking With Haptic Guidance and Path Planning"
- Advisor: Dr. Lydia E. Tapia

University of New Mexico, Albuquerque, New Mexico

B.S., Computer Science, May, 2011

- Minor in Japanese

RECENT HONORS AND AWARDS

University of New Mexico School of Engineering Outstanding Graduate Student Award, 2020-2021

1st Place Poster Award, *Haptic-Guided Motion Planning Through Potential Fields*, 10th Annual UNM Computer Science Symposium, 2014

Thomas Keller Endowed Scholarship, 2013-2014

EXPERIENCE

University of New Mexico, Computer Science Department, Albuquerque, New Mexico

Army Educational Outreach Program (AEOP) Postdoctoral Fellow   **June 2023 - Present**
Research fellow working with Drs. Evan Carter and Lydia Tapia, studying human-automation collaboration behavior over long periods of time with human context.

Research Assistant   **January 2012 - June 2023**
Research assistant for the Tapia Lab Research Group.

Co-Instructor   **Fall 2018**
Instructor for CS 259 accelerated programming course, grading and creating assignments, planning material for lectures, and conducting code interview style whiteboard practice sessions.

Graduate Teaching Assistant   **January 2014 - December 2014**
Teaching Assistant for CS 351 Design of Large Programs, grading assignments and helping students during lab hours.

Undergraduate Teaching Assistant   **March 2009 - December 2011**
Teaching assistant for various introductory CS courses, grading assignments and helping students during lab hours.

PUBLICATIONS
* INDICATES ADVISEE OF
TORIN ADAMSON

[1] Liz DiGioia, Torin Adamson, Yazied Hasan, Lidia S. Obregon, Evan C. Carter, and Lydia Tapia. "Navigating With a Defensive Agent: Role Switching for Human Automation Collaboration", In *2023 Motion, Interaction and Games (MIG)*, Rennes, France. Nov. 2023.

[2] John E. G. Baxter, Torin Adamson, Yazied Hasan, Mohammad R. Yousefi, Lidia S. Obregon, Evan C. Carter, and Lydia Tapia. "Virtual Joystick Control Sensitivity and Usage Patterns in a Large-Scale Touchscreen-Based Mobile Game Study", In *2023 Motion, Interaction and Games (MIG)*, Rennes, France. Nov. 2023.

[3] Torin Adamson, Julian Antolin Camarena, Lydia Tapia, and Bruna Jacobson. "Optimizing Low Energy Pathways in Receptor-Ligand Binding with Motion Planning", In *2019 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, San Diego, CA, USA. Nov. 2019.

[4] Anna Chavez *, Torin Adamson, Lydia Tapia, and Bruna Jacobson. "A Mobile Game for Crowd-sourced Molecular Docking Pathways", In *2019 Motion, Interaction and Games (MIG)*, Newcastle Upon Tyne, United Kingdom. Oct. 2019.

[5] Torin Adamson, Hao-Tien Chiang, Meeko Oishi, and Lydia Tapia. "Busy Beeway: A Game for Testing Human-Automation Collaboration for Navigation", In *2017 ACM SIGGRAPH Conference on Motion in Games (MIG)*, Barcelona, Spain. Nov. 2017.

[6] Torin Adamson, John E. G. Baxter, Kasra Manavi, April Suknot, Bruna Jacobson, Patrick Kelley, and Lydia Tapia. "Molecular Tetris: Crowdsourcing Molecular Docking Using Path-Planning and Haptic Devices", In *Proceedings of the ACM SIGGRAPH Motion in Games (MIG)*, pp. 133-138, Los Angeles, CA, USA. Nov. 2014.

[7] Torin Adamson, John E. G. Baxter, Kasra Manavi, Bruna Jacobson, and Lydia Tapia. "Crowd-sourced Molecular Docking Using Path-Planning and Haptic Devices", In *Proceedings of RSS Workshop on Robotics Methods for Structural and Dynamic Modeling of Molecular Systems (RMMS)*, Berkeley, CA, USA. Jul. 2014.

TECH REPORTS

[1] Torin Adamson, Liz DiGioia, Yazied Hasan, Ava Naffah, Matthias Mehl, Lydia Tapia, and Evan C. Carter. "Generalization Between Two Human-Automation Collaborative Tasks via Data-Based Transfer Learning", *DEVCOM Army Research Laboratory*, Feb. 2025.

[2] Torin Adamson, Alexander Danvers, Javier Mendoza, Yazied Hasan, Andrew Campbell, Matthias Mehl, Lydia Tapia, and Evan C. Carter. "A Multi-Timescale Analysis of Reward Functions Learned from Human-Automation Collaboration", *DEVCOM Army Research Laboratory*, Dec. 2023.

[3] Torin Adamson, Arvind Pillai, Andrew Campbell, Lydia Tapia, Lidia S. Obregon, and Evan Carter. "Long-Term Analysis of a Human-AI Collaboration Study Using a Mobile Game", *DEVCOM Army Research Laboratory*, Oct. 2022.

[4] Torin Adamson, Weichen Wang, Yazied Hasan, Andrew Campbell, Lydia Tapia, and Evan Carter. "A Mobile Data Collection System for Studying Human Autonomy Teaming in Conjunction with Passive Context and Psychophysiological Sensing", *DEVCOM Army Research Laboratory*, Nov. 2021.

POSTERS

"Long-Term Analysis of a Human-AI Collaboration Study Using a Mobile Game". Torin Adamson, Arvind Pillai, Andrew Campbell, Lydia Tapia, Lidia S. Obregon, and Evan Carter. *Panel on Assessment of Humans in Complex Systems (HCxS) Meeting*, US Army Aberdeen Proving Ground (APG), Maryland, Nov. 2022.

"Interactive Molecular Docking Game". Torin Adamson, Bruna Jacboson, and Lydia Tapia. *q-Bio Conference 2018*, Houston, Texas, Jun. 2018.

"Haptic-Guided Motion Planning Through Potential Fields". Torin Adamson, John E. G. Baxter, and Lydia Tapia. *2014 10th Annual UNM Computer Science Symposium*, Albuquerque, New Mexico, Apr. 2014.

"Haptic-Aided Ligand (Antigen) Binding Motion Planning". Torin Adamson and Lydia Tapia. *2013 10th Annual UNM Computer Science Symposium*, Albuquerque, New Mexico, Mar. 2013.

UNDERGRADUATE
MENTEES

- Ms. Anna Carey, Undergraduate in Computer Science at UNM, 2018-2019.

- Ms. Valerie Sheffey, Undergraduate in Computer Science at UNM, 2016-2017.

ACADEMIC SERVICE
AND ACTIVITIES

- *Discover STEM Day*, Volunteer, 2019, 2018, 2017. At the National Museum of Nuclear Science & History, Albuquerque, NM, USA.

- *Becoming a Robot Guru 3: Integrating Science, Engineering and Creativity Workshop*, Graduate Student Mentor, 2018. At the 2018 WAFR Conference, Merida, Mexico.

- *The UNM Nanoscience and Microsystems Program's NanoDays Children's Activities*, Volunteer, 2016. At Gerald Peters Gallery, Santa Fe, NM, USA.

- *Inventory of Light: The Art of Systems Biology and Nanoscience*, Volunteer, 2015. At Gerald Peters Gallery, Santa Fe, NM, USA.