

Ethan K. Gordon

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Education

- 2018 – 2023 (exp) 📌 **Ph.D., University of Washington** Computer Science and Engineering
Personal Robotics Lab, Advisor: Siddhartha Srinivasa
M.S. (June 2020), GPA: 4.0
- 2013 – 2017 📌 **B.S.E., Princeton University** Electrical Engineering, *Summa Cum Laude*
GPA: 3.77, Dept. GPA: 3.92, Research Advisor: Paul Prucnal
Cert.: Engineering Physics, Robotics & Intelligent Systems, Applications of Computing
Thesis Title: *Design and Control of a Photonic Neural Network Applied to High-Bandwidth Classification*
Awards: (2017) Engineering Physics Senior Thesis Award, Optical Engineering Award of Excellence, Election to Sigma Xi, (2016) Rhodes Finalist, District 10, (2015) Shapiro Prize for Academic Excellence
- 2011 – 2013 📌 **Illinois Math and Science Academy (IMSA)**
Awards: (2013) National Merit Scholarship, Northwestern University (turned-down)

Publications

Conference Proceedings

- 1 **E. K. Gordon** and R. S. Zarrin, “Online augmentation of learned grasp sequence policies for more adaptable and data-efficient in-hand manipulation,” in *2023 IEEE International Conference on Robotics and Automation (ICRA)*, 2023, pp. 5970–5976. 📄DOI: 10.1109/ICRA48891.2023.10161003.
- 2 **E. K. Gordon***, A. Nanavati*, R. Challa, B. H. Zhu, T. A. Kessler Faulkner, and S. S. Srinivasa, “Towards general single-utensil food acquisition with human-informed actions,” in *2023 Conference on Robot Learning (CoRL)*, 2023.
- 3 A. Nanavati, P. Alves-Oliveira, T. Schrenk, **E. K. Gordon**, M. Cakmak, and S. S. Srinivasa, “Design principles for robot-assisted feeding in social contexts,” in *2023 18th ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, **Best Design Paper Award Winner**, 2023. 📄DOI: 10.1145/3568162.3576988.
- 4 S. Belkhale, **E. K. Gordon**, Y. Chen, S. Srinivasa, T. Bhattacharjee, and D. Sadigh, “Balancing efficiency and comfort in robot-assisted bite transfer,” in *2022 International Conference on Robotics and Automation (ICRA)*, 2022, pp. 4757–4763. 📄DOI: 10.1109/ICRA46639.2022.9812332.
- 5 **E. K. Gordon**, S. Roychowdhury, T. Bhattacharjee, K. Jamieson, and S. S. Srinivasa, “Leveraging post hoc context for faster learning in bandit settings with applications in robot-assisted feeding,” in *2021 IEEE International Conference on Robotics and Automation (ICRA)*, 2021, pp. 10 528–10 535. 📄DOI: 10.1109/ICRA48506.2021.9561520.
- 6 T. Bhattacharjee, **E. K. Gordon**, R. Scalise, *et al.*, “Is more autonomy always better? exploring preferences of users with mobility impairments in robot-assisted feeding,” in *2020 15th ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, 2020, pp. 181–190. 📄DOI: 10.1145/3319502.3374818.
- 7 **E. K. Gordon**, X. Meng, T. Bhattacharjee, M. Barnes, and S. S. Srinivasa, “Adaptive robot-assisted feeding: An online learning framework for acquiring previously unseen food items,” in *2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2020, pp. 9659–9666. 📄DOI: 10.1109/IROS45743.2020.9341359.
- 8 R. Feng, Y. Kim, G. Lee, *et al.*, “Robot-assisted feeding: Generalizing skewering strategies across food items on a plate,” in *Robotics Research*, T. Asfour, E. Yoshida, J. Park, H. Christensen, and O. Khatib, Eds., Cham: Springer International Publishing, 2019, pp. 427–442. 📄DOI: 10.1007/978-3-030-95459-8_26.

Journal Articles

- 1 N. Funk, C. Schaff, R. Madan, *et al.*, “Benchmarking structured policies and policy optimization for real-world dexterous object manipulation,” *IEEE Robotics and Automation Letters*, vol. 7, no. 1, pp. 478–485, 2022. [DOI: 10.1109/LRA.2021.3129139](#).

Patents

- 1 E. K. Gordon and R. S. Zarrin, “Online augmentation of learned grasping,” App. ID Pending, Oct. 2022.
- 2 E. K. Gordon and R. S. Zarrin, “System and method for providing accelerated reinforcement learning training,” App. 17/950552, Sep. 2022.
- 3 A. Byagowi, R. Raskar, A. H. Coward, and E. K. Gordon, “Light field display tilting,” US1156828B1 (App. 16/028,382), Oct. 2021.
- 4 J. Metnick, R. Chiu, A. O. Smith, and E. K. Gordon, “Cryptocurrency verification system,” US20160203448A1 (App. 14/791,781), Jul. 2016.
- 5 A. Tait, M. Nahmias, B. Shastri, and E. K. Gordon, “System and method for mode-based photonic processing,” Provisional App. 62/844,435, Jun. 2016.

Talks, Workshops, and Demos

- Jul 2023 [📌](#) Generalizeable Manipulation Policy Learning Workshop at RSS, *Daegu, SK*
 - [📌](#) Learning Dexterous Manipulation Workshop at RSS, *Daegu, SK*
- Jun 2023 [📌](#) Assistive Manipulation Workshop at ICRA, **Best Poster**, *London, UK*
- Mar 2023 [📌](#) HRI Pioneer, *Stockholm, SE*
- June 2022 [📌](#) KTH/RPL Summer School, *Stockholm, SE*
- May 2022 [📌](#) Northwest Robotics Symposium, University of Washington, *Seattle, WA*
- Nov 2019 [📌](#) Workshop on Robotic Food Manipulation at Humanoids, *Toronto, CA*
- Aug 2019 [📌](#) Workshop on AI × Food at IJCAI, *Macau*
- Dec 2018 [📌](#) NeurIPS Industry Demo Day (with Kinova Robotics), *Montreal, CA*, **Best Demonstration Award**
 - [📌](#) See robotfeeding.io/demos/ for complete list.
- Aug 2015 [📌](#) MIRTHE REU Summer Colloquium, RF Self-Interference Cancellation, *Princeton, NJ*

Service and Leadership

- Mentorship [📌](#) *MS*: Sumegh (Amazon), Xiang (PhD, Harvard); *Ugrad*: Ramya (PhD OSU), Jaclyn (HBO), Sam (MS CMU); *HS*: Daniel (BS Columbia), Haya, Nicholas
- Peer Reviewer [📌](#) ICRA, IROS, HRI, IEEE T-RO, IEEE R-AL, SORO, JIST, Humanoids
- Student Volunteer [📌](#) CoRL 2023, HRI 2023, ACC 2021, HRI 2020* (canceled, COVID)
- UW [📌](#) Prospective Admissions Mentor (2021, 2022); PhD Admissions: Reviewer (2019-2022) and Robotics Student Area Chair (2021-2022); 1st-Year PhD Mentorship: Mentor (2022-2023) and Coordinator (2020-2021); Robotics Visit Days Coordinator (2019-2021)
- Mar 2024 [📌](#) **HRI Pioneers 2024**, General Chair (US), *Boulder, CO*
- Mar 2023 [📌](#) **Workshop on HIRL at HRI**, Organizer, *Stockholm, SE*
- Jul 2020 — [📌](#) **FamilyWorks Seattle Food Bank**, ‘Food Rescue’ pickup from grocery stores.
- Feb 2019 — [📌](#) **Giving What We Can Pledge**, Will donate 10% lifetime earnings.

Service and Leadership (continued)

- Jan 2019 **FIRST Robotics**, Vex IQ Challenge Judge
- 2014 — 2017 **Princeton Splash**, Circuit Design (2016, 2017), Special Relativity (2014)

Industry and Teaching

- Teaching Assistant **CSE 490v VR Systems (W20, UW)**, **CSE 481c Robotics Capstone (W19, UW)**, **CSE 481v VR Capstone (F18, UW)**, **ELE 302 Car Lab (S17, Princeton)**
- Jan – Apr 2022 **Honda Research, San Jose, CA**, In-Hand Manipulation, with Rana Soltani Zarrin
- June – Aug 2021 **Summer STEM Institute, Remote**, Mentored 2 high school students.
- Aug 2017 – Sep 2018 **Oculus VR, Menlo Park, CA**, Varifocal displays for VAC and prescription correction, with Douglas Lanman
- Jun - Aug 2016 **Facebook Connectivity Lab, Menlo Park, CA**, Wearable BLE mesh network, with Ramesh Raskar
- Jun - Aug 2014 **JARST, Inc., Chicago, IL**, github.com/encryptedmessaging, with Josh Metnick

Miscellaneous Experience

Engineering Projects

- 2020 — 2021 **Real Robot Challenge**, Max Planck Institute, Runner-Up (€2000), See Github
- 2017 **Princeton Hyperloop (Fluxor)**, Analyzed pod dynamics and levitation physics.
- 2015 — 2017 **Brown Robotics Olympiad**, 3rd Place (2015)
- 2016 **Ball-Catching Robot**, ELE 302 Course Project, see Github
- 2014 **Implementing CoinJoin**, COS 597e Course Project, see Github
- Hackathons **Android App Sound Localization + Subtitles (HackPrinceton 2016, Top 10)**, **AR Sound Localization + Subtitles (HackPrinceton 2015, Top 10)**, **RGB Sign Language Letter Transcriber (HackPrinceton 2014 1st Place)**

Arts

- Aug 2017 — Sep 2018 **Vocal Network**, Meta's A Cappella Group, performs annually in Techapella
- 2013 — 2017 **Acapellago**, Princeton's No-Audition A Cappella Group, Founder
- 2014 — 2017 **Koleinu**, Princeton's Jewish A Cappella Group, President (2016), Performed at White House Hanukkah Celebration
- 2013 — 2015 **Lighting Designer**, *Theatre Intime*; All-Freshman Revue (2013), Student Playwrights' Festival (2014), *How the Other Half Loves* (2015)