Stanford

Joshua Ott

- Ph.D. Student in Aeronautics and Astronautics, admitted Autumn 2021
- Ph.D. Minor, Earth and Planetary Sciences

Bio

BIO

Joshua is a fourth-year Ph.D. Candidate in Aeronautics & Astronautics at Stanford University and is a recipient of the Stanford Graduate Fellowship (SGF) in Science & Engineering. He is currently serving on Active Duty in the United States Air Force through the DAWN-ED PhD fellowship. Joshua is a researcher in the Stanford Intelligent Systems Lab (SISL) where his research focuses on decision making under uncertainty for autonomous systems. Joshua has also conducted research in collaboration with SISL and NASA JPL related to the DARPA Subterranean Challenge.

Joshua earned his Bachelor of Science in Mechanical Engineering from the University of California, Berkeley in 2020. During his time at UC Berkeley, Joshua's work focused on optimization methods for bioinspired design, machine learning for real time manufacturing control, and experimental multi-phase flow analysis. Joshua has also interned at Lawrence Livermore National Laboratory and the NASA Jet Propulsion Laboratory.

HONORS AND AWARDS

- Stanford Graduate Fellowship (SGF) in Science & Engineering, Stanford University (03/2020)

EDUCATION AND CERTIFICATIONS

- M.S., Stanford University , Aeronautics & Astronautics (2021)
- B.S., University of California, Berkeley , Mechanical Engineering (2020)

LINKS

- LinkedIn: https://www.linkedin.com/in/joshua0tt/

Research & Scholarship

LAB AFFILIATIONS

- Mykel Kochenderfer, Stanford Intelligent Systems Laboratory (10/1/2020)

Publications

PUBLICATIONS

- **Safe and Efficient Navigation in Extreme Environments using Semantic Belief Graphs**
  Ginting, M., Kim, S., Peltzer, O., Ott, J., Jung, S., Kochenderfer, M. J., Agha-mohammadi, A., IEEE
  IEEE.2023: 5653-5658
- **Fast and Scalable Signal Inference for Active Robotic Source Seeking**
  Denniston, C. E., Peltzer, O., Ott, J., Moony, S., Kim, S., Sukhatme, G. S., Kochenderfer, M. J., Mac Schwager, Agha-mohammadi, A., IEEE

IEEE.2023: 7909-7915

- **Sequential Bayesian Optimization for Adaptive Informative Path Planning with Multimodal Sensing**
  Ott, J., Balaban, E., Kochenderfer, M. J., IEEE
  IEEE.2023: 7894-7901

- **Semantics-Aware Mission Adaptation for Autonomous Exploration in Urban Environments**
  Moon, S., Peltzer, O., Ott, J., Kim, S., Agha-Mohammadi, A., IEEE
  IEEE.2023: 2065-2070

- **Adaptive coverage path planning for efficient exploration of unknown environments** *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*
  Bouman, A., Ott, J., Kim, S., Chen, K., Kochenderfer, M. J., Lopez, B., Agha-mohammadi, A., Burdick, J.
  2022

- **FIG-OP: Exploring large-scale unknown environments on a fixed time budget** *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*
  Peltzer, O., Bouman, A., Kim, S., Senanayake, R., Ott, J., Delecki, H., Sobue, M., Kochenderfer, M. J., Schwager, M., Burdick, J., Agha-mohammadi, A.
  2022

- **Precise localization and semantic segmentation detection of printing conditions in fused filament fabrication technologies using machine learning** *ADDITIVE MANUFACTURING*
  Jin, Z., Zhang, Z., Ott, J., Gu, G. X.
  2021; 37

- **Algorithmic-driven design of shark denticle bioinspired structures for superior aerodynamic properties** *BIOINSPIRATION & BIOMIMETICS*
  Ott, J., Lazalde, M., Gu, G. X.
  2020; 15 (2): 026001