ZACHARIAS KOMODROMOS

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EXPERIENCE

Graduate Research Assistant

University of Texas at Austin

Fall 2021 – Present

Austin, Texas

- Member of WNCG Radionavigation Laboratory run by Prof. Todd Humphreys
- Research in game-theory for Pursuit-Evasion scenario
- Research in opportunistic PNT from Starlink Satellites
- Teaching assistant for Aerial Robotics class ASE 479W

GPS and Navigation Intern

MITRE

Summer 2023

Bedford, MA

- Analyzed, modeled, and simulated a signal lock detector
- Integrated and tested the implementation on GNSSTA (C++ based project)
- Explored and developed post-processing tools in matched spectrum jamming

Design Engineer Intern

Garmin

Summer 2021

Olathe, Kansas

- Used Cadstar for schematic revision and PCB design
- Designed PCB for new feature testing (capacitive touch features)
- Designed PCB for High-speed (USB 3.2) testing

Teaching Assistant/Tutor

Iowa State University

Fall 2019 – Spring 2021

Ames, Iowa

- Teaching assistant for EE330 Integrated Circuits during Fall 2020 and Spring 2021, under Dr. Randall L. Geiger and Dr. Degang Chen.
- Led lab sections, constructed and graded homework and labs
- Tutor for Academic Success Center for EE201 and EE230 Circuit analysis classes

SKILLS

Matlab
C, C++
Bash Scripting/Linux
Python
Java
Altium Designer, Cadstar

EDUCATION

MSc and PhD track

University of Texas at Austin

Fall 2021 – Present

BSc Electrical Engineering
Minor in Computer Science

Iowa State University

Fall 2017– Spring 2021

- Summa Cum Laudem with Honors
- Communications track

PAPERS

Related Work

- Humphreys, Todd E. et al. (2023). "Signal Structure of the Starlink Ku-Band Downlink". In: *IEEE Transactions on Aerospace and Electronic Systems*, pp. 1–16. DOI: 10.1109/TAES.2023.3268610.
- Komodromos, Zacharias M., Wenkai Qin, and Todd E. Humphreys (2023). "Signal Simulator for Starlink Ku-Band Downlink". In: *ION GNSS+*.
- Komodromos, Zacharias M., Nick G. Montalbano, and Todd E. Humphreys (2022). *Quasi-Nash Optimal Algorithm for Reach and Avoid Differential Game*. Tech. rep. UT Austin, Radionavigation Laboratory.

INTERESTS

- Low Earth Orbit (LEO) Communications
- Digital Communications
- Position, Navigation and Timing
- Estimation