Mohamad Orabi

Graduate Student - Electrical Engineering and Computer Science - University of California, Irvine

orabim@uci.edu +1 949 245 4310 Irvine, Califonira, United States http://www.orabim.com

Experience

Research Intern at ASPIN Lab

University of California, Irvine

June 2019-Septmeber 2019 Irvine, California

Designed and developed a GPS software defined receiver in C++

- GPS signal acquisition and tracking
- Decoding system parameters from navigation message
- Position estimation via Kalman Filter
- Receiver optimization for real-time, multi-channel tracking.

Education

Ongoing Ph.D. in Electrical Engineering

University of California, Irvine

2020-Ongoing Irvine, California

- Research Project: Opportunistic navigation exploiting LTE, 5G, and low Earth Orbit satellite signals
- Supervised undergraduate students and guided their research

B.E. in Electrical Engineering

Lebanese American University (LAU)

2016 – 2020 Byblos, Lebanon

- GPA: 3.91
- Undergraduate Research Project: Iterative Learning Control
- Awarded full scholarship hosted by the US Embassy

Publications

A Machine Learning Multipath Mitigation Approach for Opportunistic Navigation with 5G Signals

ION GNSS+ 2021 - September 2021 - St. Louis, Missouri

Opportunistic Navigation with Doppler Measurements from Iridium Next and Orbcomm LEO Satellites

IEEE Aerospace - April 2021 - Virtual

Iterative Learning Control: Practical Implementation and Automation

IEEE Transactions on Industrial Electronics - March 2021

Carpe Signum: Seize the Signal

Inside GNSS - February 2021

A Machine Learning Approach for GPS Code Phase Estimation in Multipath Environments

IEEE/ION PLANS - April 2020 - Virtual

Areas of Interest

- Software Defined Receiver Design
- Design and analysis of tracking algorithms
- Deep Reinforcement Learning
- Multipath Mitigation for Navigation
- Cellular Signals (5G & LTE)
- Low Earth orbit satellite signals

Qualifications

- Good knowledge of pseudorange model and sources of errors in GNSS measurements
- Estimation Theory, Probability, and Random Processes
- Matlab, C++, Python
- Keras, Tensorflow, NumPy
- Sensor fusion
- Version control

Languages

English ●●●●●

Arabic ●●●●●

French ●●○○○