XU WENG

Email: xu_weng@outlook.com **Website**: www.xuweng.top
Address mail: 37 Xueyuan Road, Haidian, Beijing 100191, China **Phone**: (+86) 18811528169

Education

Beihang University Beijing, China
School of Electronic and Information Engineering
Master's Degree in Electronic and Communication Engineering, GPA: 3.57/4.0 Sep. 2015 – Mar. 2018

National Aerospace University - "Kharkiv Aviation Institute" Kharkiv, Ukraine
Department of Aerospace Radio-Electronic Systems
Exchange Student in Radio Engineering, GPA: 94/100 Aug. 2013 – Jun. 2014

Nanjing University of Aeronautics and Astronautics Nanjing, China
College of Astronautics
Bachelor's Degree in Information Engineering, GPA: 87/100 Sep. 2011 – Jun. 2015

Work Experience

Keysight Technologies (China) Co., Ltd. Beijing, China
Research and Development Engineer, *PathWave Software Organization* Jun. 2019 - Present

Research and Projects

Keysight Technologies (China) Co., Ltd., Jun. 2019 - Present
Project: ***IoT Physical Layer Waveform Generation and Test Solutions*** Manager: Mr. Rui Zhang

- Developed features of IEEE 802.15.4-2015 UWB PHY and IEEE 802.15.4z UWB Enhanced Ranging Device PHY for the *Keysight* software ***Signal Studio for IoT***.
- Develop the software defined UWB receiver compliant with IEEE 802.15.4 standard.
- Utilize the timestamp-based ToF (Time of Flight) measurement and maximum likelihood estimation to extract vital signs (respiration or heart rates) from UWB signals with the Keysight UWB testbed.

Beihang University, School of Electronic and Information Engineering Sep. 2015 – Mar. 2018
Project: ***Short Multipath Mitigation in Pseudo-satellite Based Indoor Positioning*** Supervisor: Pro. Yanhong Kou

- Proposed two efficient short multipath mitigation algorithms based on correlator/discriminator techniques to mitigate single short multipath ray with a delay of less than 30m for GPS L1 C/A signals.
- Utilized C/C++ to develop the software-defined GPS L1 C/A signal simulator with multipath channels and receivers based on traditional and the proposed algorithms.
- Tested the proposed algorithms in real short multipath scenes with the GPS RF signal simulator developed by our group and a broadband high-speed data recording system.
- Published one paper and orally presented it in an international conference.

Nanjing University of Aeronautics and Astronautics, College of Astronautics Sep. 2014 – Jun. 2015
Project: ***Detection and Tracking of Moving Targets in Slowly Spinning Background*** Supervisor: Pro. Junhua Yan

- Used Lucas - Kanade sparse optical flow algorithm to detect moving objects.
- Eliminated the interference of slowly spinning background by updating templates of targets.
- Utilized normalized correlation coefficients to match targets and used Kalman filter to improve the real-time performance and stability of target tracking.
- Utilized C++, Open CV to simulate and test above detection and tracking algorithms.

Research Papers

1. **Xu Weng**, Yanhong Kou, "Modified Code Tracking Loop Aided by Short Multipath Insensitive Code Loop Discriminator", *Proceedings of the 2017 International Technical Meeting of the Institute of Navigation (ITM)*, Monterey, California, January 2017. (Published and Orally Presented www.ion.org/publications/abstract.cfm?articleID=14935)
2. **Xu Weng**, Yanhong Kou, "Modified Delay Lock Loop Aided by Short Multipath Insensitive Code Loop Discriminator", *Navigation*, *the Journal of the Institute of Navigation*. (Under Review, ID: NAVI-2019-132, Submitted on 01-Dec-2019, Revised on 08-Jul-2020 http://www.xuweng.top/publication3.html)
3. **Xu Weng**, Yanhong Kou, "Extended Short Multipath Insensitive Code Loop", *IEEE Internet of Things Journal*. (Under Review, ID: IoT-10230-2020, Submitted on 29-Feb-2020, Revised on 03-Aug-2020 http://www.xuweng.top/publication2.html)

Software

1. ***Signal Studio for IoT*** for Windows –released in Jan. 2020 and updated in Jul. 2020
2. Software-defined GPS L1 C/A Anti-Multipath Receiver for Windows
3. Software-defined GPS L1 C/A Signal Generator with Multipath Channels for Windows

Standardized Test

GRE	331 (**Quantitative 170**, Verbal 161), Analytical Writing 3.5
TOEFL	105 (Reading 29, Listening 24, **Speaking 25**, Writing 27)

Skills

Computer: C/C++, C#, MATLAB, Python, .NET Framework, OpenCV, Team Foundation Server, JIRA, Microsoft Office, LaTeX
Lab Equipment: Agilent/Keysight Spectrum Analyzers (including *N9020A* MXA and *N9040B* UXA), Signal Generators (including *N5182A/B* MXG, *M9384B* VXG) and Wideband Transceivers (including *E7760A* and VXT)
Language: English (TOEFL 105), **Russian (College Russian Test Band-6)**, Chinese (Native Speaker)

Teaching Experience

Beihang University, *Teaching Assistant* Spring 2016
Undergraduate Course: *Telecommunication Principles*

- Contributed to creating finals and quizzes for the course, taught the review session before finals.
- Graded written assignments, quizzes and finals.

Awards

Outstanding Graduate Student, Beihang University 2018
Excellent Graduate Student Scholarship, Beihang University 2015**,** 2016, 2017
Excellent Student Cadres, Beihang University 2016
National Scholarship, Ministry of Education of the People's Republic of China 2014
Excellent Student Scholarship (First Prize), Nanjing University of Aeronautics and Astronautics 2012, 2013
"Soochow National High-Tech District" Scholarship, Soochow National High-Tech District Government 2013
Excellent Student Cadres, Nanjing University of Aeronautics and Astronautics 2012, 2014
Merit Student Pacesetter, Nanjing University of Aeronautics and Astronautics 2012, 2013, 2014