



Wenwen Zhang

Mobile: 628-231-4922 E-mail: wenwenzhang@ece.ubc.ca | [Website](#) | [Linkedin](#)

Education

MASc in Electronic Engineering and Computer Science The University of British Columbia (UBC), Canada	08/2020-CURRENT
Visiting Graduate Researcher (Friedman Scholar) in EECS The University of California, Berkeley (UCB), US	09/2022-CURRENT
BSc in Electronic Engineering Tianjin University (TJU), China	08/2016-07/2020
• GPA: 3.88/4.0 GRE:326 (V:158/170 Q:168/170 AW:4)	

Publications and Patents

- **W. Zhang***, J Wang, C Silva, and L Sigal. Make Unsupervised Clustering Discriminative and Informative for Source-Free Domain Adaptation: A Feature Graph Guided Contrastive Learning Method (*In progress for 2023 Nips*).
- A. Tashakori*, **W. Zhang***, Z. Wang, and P. Servati, SemiPFL: Personalized Semi-Supervised Federated Learning Framework for Embedded Intelligence, *IEEE Internet of Things Journal*. [doi: 10.1109/JIOT.2022.3233599](https://doi.org/10.1109/JIOT.2022.3233599).
- **W. Zhang**, K. Ma*, H. Zhang and H. Fu, Design of a Compact SISL BPF With SEMCP for 5G Sub-6 GHz Bands, *IEEE Microwave and Wireless Components Letters*, vol. 30, no. 12, pp. 1121-1124, Dec. 2020, [doi: 10.1109/LMWC.2020.3030189](https://doi.org/10.1109/LMWC.2020.3030189).
- H Zhang, K Ma*, **W. Zhang**, et al. A Novel Self-packaged DBBPF with multiple TZs for 5G sub-6GHz applications. *Microw Opt Technol Lett*. 2022, 0895-2477, [doi: 10.1002/mop.33455](https://doi.org/10.1002/mop.33455).
- **W. Zhang***, A Tashakori, Z Jiang, A Servati, C Kuo, and P Servati*, A Flexible Sensor System for Lower Body Locomotion Estimation. *IEEE Transactions on Biomedical Engineering (In progress)*.
- **W. Zhang***, C Kuo and P Servati*, A Wearable Sensor System for Measuring Pathological Gait Parameters. *IEEE Transactions on Biomedical Engineering (In progress)*
- **W. Zhang***, J. Wang, L. Chrostowski, N Jaeger and P. Servati. Weight Bank Addition Photonic Accelerator for Artificial Intelligence. *Optics Express (In Progress)*.
- **W. Zhang***, H. Zhang, L. Chrostowski, N Jaeger and P. Servati. Ring resonator sensor based on Vernier Effect. *Optics Express (In Progress)*.
- K Ma, H Zhang*, H Fu, **W. Zhang**. 5G dual passband filter based on dielectric integrated suspension line. [CN 201910528184](https://doi.org/10.1109/201910528184).
- K Ma, **W. Zhang***, H Fu, H Zhang. Band-pass filter based on 5G double-frequency dielectric integrated suspension lines. [CN 201910862414](https://doi.org/10.1109/201910862414).

Conferences and Presentations

- **W. Zhang***, Arvin Tashakori, Zenan Jiang, Amir Servati, Calvin Kuo, and Peyman Servati, A Flexible Sensor System for Lower Body Locomotion Estimation. *Poster - 2022 Biomedical Engineering Society Annual Meeting*. [\(Link\)](#).
- **W. Zhang***, C Kuo and P Servati, A Wearable Sensor System for Measuring Pathological Gait Parameters. *Poster - 2022 Biomedical Engineering Society Annual Meeting*. [\(Link\)](#).
- **W. Zhang***, H Zhang, Probing Ring Resonator Sensor Based on Vernier Effect. *Poster – submitted to the 2023 IEEE Silicon Photonics Conference*.



Awards and Honors

- UBC Friedman Award for Scholars in Health (First female awardee in ECE: [My page](#)) 2022
- UBC Faculty of Applied Science Graduate Award 2022
- UBC International Tuition Award 2020-2021
- UBC Research Assistance Graduate Award 2020-2021
- China College Students Integrated Circuit Competition (the north region), (Top 1 of 140) 2019
- China College Students Integrated Circuit Competition (Final), Second Prize (1%) 2019
- USRP Excellent Project Award of Province (Top 1% in Engineering department) 2018
- First Prize in China Mathematical Contest in Modeling (5% - Tianjin area). 2018
- “Merit Student” Scholarship of Tianjin University 2017-2018
- Career Certification of HCNA Huawei 2018
- “Mathematical Contest in Modeling Certificate of Achievement (MCM)”, Honorable Mention 2017

Projects

- ***Ti Lab*** **Supervisor: Prof. Grigory Tikhomirov**
Electronic Engineering and Computer Science Department, Graduate Scholar
 Optics-free DNA Microscopy Imaging by Machine Learning 09/2022-04/2023
 - Post-processing cell chemical reaction bio-information and locating molecule relative position through spectral maximum likelihood estimation via using machine learning. (Python)
- ***Flexible Electronics and Energy Lab (FEEL)*** **Supervisor: Prof. Peyman Servati**
Electronic and Computer Engineering Department, Research Assistant
 Personalized Semi-supervised Federated Learning for Embedded Intelligence 09/2021-01/2022
 - The Federated learning method considers a large proportion of no-label data with huge data heterogeneity at the different device ends.
 Wearable Sensor System for Gait Disorder Patients 01/2022-09/2022
 - Developing real-time algorithms to predict gait parameters of patients with disorders (Parkinson, stroke & geriatric).
 Teaching Assistant for CPEN 211 Computing Systems (instructor: Prof. Tor Aamodt)
 Teaching Assistant for ELEC 315 Electronic Materials and Devices (instructor: Prof. Peyman Servati)
- ***Texavie Technologies, Inc.***
R&D Intern, Hardware/Firmware and Data Processing 12/2021-06/2022
 Smart Knee Sleeves Based on Flexible Sensors 12/2021-06/2022
 - Lower extremity estimation & movement tracking & muscle condition monitoring by data from flexible sensors (stress, temperature, etc.) integrated into knee braces.
 Intelligent Glove with Embedded Wearable Sensors. 12/2021-03/2022
 - Hand gesture reconstruction of post-stroke patients to assess upper extremity function and help motivate recovery progress.
- ***Human Motion Biomechanics Lab (HuMBL)*** **Co-Supervisor: Prof. Calvin Kuo**
Biomedical Engineering Department, Research Assistant
 Real-World Biomechanical Measurements of Impacts on Humans 12/2021-01/2022
 - Quantifying measurement errors in wearable inertial measurement unit devices caused by soft tissue movement artifacts.
 Auto-calibration of Multi-sensors 01/2021-06/2021
 - Automatic calibration of relative sensor location and orientation movement during slow motions.
- ***Microsystems and Nanotechnology (MiNa) Lab*** **Instructor: Prof. Lukas Chrostowski**



Electronic and Computer Engineering Department

- Weight Bank Addition Photonic Accelerator in Neuromorphic Networks 04/2021-12/2021
- Designing and implementing cascaded micro-ring weight bank reporting the observations of weight addition and subtraction in neuromorphic networks based on silicon on insulators (SOI). – Course project
- Extended FSR Micro-Ring Modulator – Course project 09/2020-05/2021
- Designing parallel and cascaded ring resonators exhibiting the Vernier effect and extended free spectral range (FSR).
- **Interconnection Perception Microelectronics Laboratory, Tianjin University** Supervisor: Prof. Kaixue Ma
Electronic and Computer Engineering Department, Research Assistant
- Dual-band Microwave Filters for 5G Sub-6GHz Base-station 09/2018-04/2020
- Design a self-packaged dual bandpass filter with improved suppression for 5G sub-6 GHz applications based on the substrate integrated suspended line technology.
- **High-Performance Computing Lab, Tianjin University** Supervisor: Prof. Shanjiang Tang
Department of Intelligent Computer Science, Research Assistant
- APAC HPC-AI Competition (Singapore) 08/2018-09/2018
- Refining performance of RDMA based on TensorFlow by python.
- **Machine Learning and Biomedical Development Laboratory, Tianjin University** Supervisor: Prof. Ran Su
Intelligence and Computing Department, Research Student
- Feature Extraction of Brain Tumor and Classification 2017-2018
- **Electronic Information Engineering Department, Tianjin University** Supervisor: Prof. Jingyu Yang
Undergraduate Student, Research Student
- Wireless Calculator for Communication Composed of Sampling, Coding, Modulation, Demodulation, Detection of Acoustic Signal 2017

Workshop & Seminar

- 2022 Stanford AI + Health online conference
- 2022 Machine Learning for Health (ML4H)
- 2022 Biomedical Engineering Society Annual Meeting
- 2021 SIEPIC Active Silicon Photonics
- The Smart Innovations for Technology Connected Health (STITCH)
- QSciTech-QuantumBC Virtual Workshop: Gate-based Quantum Computing Using IBM-Q
- 2020 SIEPIC Passive Silicon Photonics
- 2019/2020 International Workshop on Microwave and Microsystems

Community Service

- ACM/BMES/IEEE/Optica student member
- IEEE Women in Engineering member 2019-CURRENT
- IEEE MWCL, TCAS-II, MOTL, Journal of IoT (volunteer as a reviewer)

Skills

- Python, MATLAB, C, C++, Swift, PHP, Lumerical, Ansys, HFSS, Unity, Linux, Git.