University of Connecticut

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Department of Biomedical Engineering

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Xu Zhang

Education

Aug 2017 – Jun 2022   **University of Connecticut**
PhD Student, Department of Biomedical Engineering (Neural Engineering)
Storrs, Connecticut, United States

Sep 2013 – Jun 2017   **Southern University of Science and Technology**
B.Eng., Biomedical Engineering
Shenzhen, Guangdong, China

Research Experience

Aug 2017 – present   **PhD Candidate**
University of Connecticut, Department of Biomedical Engineering
Storrs, United States
Advisor: Sabato Santaniello

Jul 2016 – Sep 2016   **CSST Visiting Student**
UCLA (University of California, Los Angeles), Department of Neurosurgery ,
United States
Supervisor: Prof. Nader Pouratian (NPouratian@mednet.ucla.edu)
Project: Changes in Brain Connectivity Underlying Movement in Parkinson's Disease:
To discover changes of several brain connectivity measures during two types of
movement tasks in patients with Parkinson's disease, which may serve as potential
biomarkers for closed-loop deep brain stimulation (DBS)
Duties: signal processing and connectivity analysis of ECoG from M1, PMC and LFP
from GPi, based on power change, phase clustering and phase-amplitude coupling.

May 2015 – Apr 2017   **Undergraduate Researcher**
Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences,
Research Center for Neural Engineering
Shenzhen, Guangdong, China

Skills

Programming with MATLAB, python and C++; Signal and image processing;
pattern recognition and machine learning; ECoG/LFP-based brain
connectivity analysis; Neuronal modeling with MATLAB, Simulink, and
NEURON; Control systems design; Finite element analysis with COMSOL;
Spike data (single-unit recording) analysis.

Journal Publications

Xu Zhang, Xiangxin Li, Oluwarotimi Williams Samuel, Zhen Huang, Peng Fang, Guanglin Li: *Improving the Robustness of Electromyogram-Pattern Recognition for Prosthetic Control by a Postprocessing Strategy*. Frontiers in Neurorobotics 09/2017; 11., DOI:10.3389/fnbot.2017.00051

Xiangxin Li, Oluwarotimi Williams Samuel, **Xu Zhang**, Hui Wang, Peng Fang, Guanglin Li: *A motion-classification strategy based on sEMG-EEG signal combination for upper-limb amputees*. Journal of NeuroEngineering and Rehabilitation 01/2017; 14(1):2., DOI:10.1186/s12984-016-0212-z

Conference Proceedings

Xiangxin Li, Qifang Zhuo, **Xu Zhang**, Oluwarotimi Williams Samuel, Zeyang Xia, Xiaoqing Zhang, Peng Fang, Guanglin Li: *FMG-Based Body Motion Registration Using Piezoelectret Sensors*. The 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'16), Orlando, Florida USA; 08/2016, DOI:10.1109/EMBC.2016.7591758

Oluwarotimi Williams Samuel, Xiangxin Li, **Xu Zhang**, Hui Wang, Guanglin Li: *A Hybrid Non-Invasive Method for the Classification of Amputee's Hand and Wrist Movements*. International Conference on Biomedical Engineering and Health Informatics, Haikou, China (ICBHI 2015); 10/2015