



Dakun Lai Ph.D.

Associate Professor

Director of Biomedical Imaging and Electrophysiology Lab
Center for Information in Medicine, School of Electronic Science and Engineering,

University of Electronic Science and Technology of China

My Brief CV:

"Dr. Lai is currently the director of the Biomedical Imaging and Electrophysiology Lab at the University of Electronic Science and Technology of China (UESTC). He received his Ph.D. in Medical Electronics from Fudan University in 2008. Then he completed a three-year Postdoctoral Associate in Biomedical Engineering at the University of Minnesota, USA. From 2012, he has been on the faculty of the School of Electronic Science and Technology, UESTC, China, where he was appointed as an Associate Professor of Electrical Science and Technology. Dr. Lai is members of IEEE and the Engineering in Medicine and Biology Society, and the member of American Heart Associate. He has served as a peer reviewer of IEEE Transaction on Biomedical Engineering, IEEE ACCESS, and related Chinese Journals. He has published 30 peer-reviewed papers in Circulation, Physics in Medicine and Biology, IEEE Transaction on Information Technology in Biomedicine etc. and holds 20 Chinese Patents. His research interests and main contributions include computational medicine and deep learning, bioelectromagnetism and medical applications, automated detection and prediction cardiac/neuro electrical disorder."

My selected publications:

- [1] **Dakun Lai**, Xinyue Zhang, Kefei Ma, Zichu Chen, Wenjing Chen, Heng Zhang, Han Yuan, Lei Ding, "Automated Detection of High Frequency Oscillations in Intracranial EEG Using the Combination of Short-Time Energy and Convolutional Neural Networks," *IEEE Access*, vol . 7, pp. 82501 – 82511, 2019. (SCI, IF 4.098)

- [2] **Dakun Lai**, Xinshu Zhang, Yuxiang Bu, Ye Su, Chang-Sheng Ma, “An Automatic System for Real-Time Identifying Atrial Fibrillation by Using a Lightweight Convolutional Neural Network,” *IEEE Access*, vol . 7, pp. 130074 - 130084, 2019. (SCI, IF 4.098)
- [3] **Dakun Lai**, Yifei Zhang, Xinshu Zhang, Ye Su, Md Belal Bin Heyat, “ An Automated Strategy for Early Risk Identification of Sudden Cardiac Death by Using Machine Learning Approach on Measurable Arrhythmic Risk Markers,” *IEEE Access*, vol . 7, pp. 94701 - 94716, 2019. (SCI, IF 4.098)
- [4] **Dakun Lai**, Md Belal Bin Heyat, Faez Iqbal Khan, Yifei Zhang, “Prognosis of Sleep Bruxism Using Power Spectral Density Approach Applied on EEG Signal of Both EMG1-EMG2 and ECG1-ECG2 Channels,” *IEEE Access*, vol . 7, pp. 82553 - 82562, 2019. (SCI, IF 4.098)
- [5] Md Belal Bin Heyat, **Dakun Lai**, Faez Iqbal Khan, Yifei Zhang, “Sleep Bruxism Detection Using Decision Tree Method by the Combination of C4-P4 and C4-A1 Channels of Scalp EEG,” *IEEE Access*, vol . 7, pp. 102542 - 102553, 2019. (SCI, IF 4.098)
- [6] **Dakun Lai**, Xinshu Zhang,, Yifei Zhang, Md Belal Bin Heyat, “Convolutional Neural Network Based Detection of Atrial Fibrillation Combining R-R intervals and F-wave Frequency Spectrum,” *41th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Berlin, Germany, 2019.
- [7] Kefei Ma, **Dakun Lai**, Zichu Chen, Zhuoheng Zeng, Wenjing Chen, and Heng Zhang, “Automatic Detection of High Frequency Oscillations (80-500Hz) based on Convolutional Neural Network in Human Intracerebral Electroencephalogram,” *41th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Berlin, Germany, 2019.
- [8] **Dakun Lai**, Xiaobiao Fan, Qinquan Chen, “A Numerical Evaluation of Multi-Lead Subcutaneous Implantable Cardioverter Defibrillator for Low Energy and Less Damage in Swine,” *41th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Berlin, Germany, 2019.
- [9] **Dakun Lai**, Zenghui Kan, Wenjing Chen, Heng Zhang, “High Frequency Oscillations Detection in Patients Combining Wavelet Decomposition and Back Propagation Neural Network”, *IEEE Biomedical Circuits and Systems Conference (BioCAS)*, Cleveland, USA, 2018.
- [10] Huanhuan Zhang, **Dakun Lai**, Heng Zhang, Wenjing Chen , “DTF-based Analysis of the Epileptic Prediction,” *Proceedings of IEEE 9th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics (CISP - BMEI)* , 2016.
- [11] Liang Mao, **Dakun Lai**, and Qi Xu, “Photoacoustic Imaging:A Potensial New Tool for Diagnosing Vasculogenic Erectile Dysfunction,” *Proceedings of IEEE 9th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics (CISP - BMEI)* ,2016.
- [12] Qi Xu, **Dakun Lai**, “A novel reconstruction method of magnetoacoustic tomography with magnetic induction based on the amplitude of Lorentz force,” *Proceedings of 20163rd International Conference on Information Science and Control Engineering (ICISCE)*, 2016.
- [13] **Dakun Lai**, Pengye Li, Qi Xi, A Multi-Criteria Evaluation Method for Assessing the Defibrillation Outcome of Different Electrode Placements in Swine , *37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Milan, ITALY, 2015.
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