

Ke Xu

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The Hong Kong University of Science and Technology, Hong Kong

EDUCATION

B.E. in Electronic Science and Technology, Nanjing University, China 2011 – 2015

- Ranking: **1/217**, Thesis: FPGA-based Design of FFT & FIR

HONORS & AWARDS

Best Paper Honorable Mention Award, ACM CHI Conference 2017, 2018

Excellent Student of Nanjing University, Nanjing University 2015

First Prize of Red Sun Scholarship, (for 30 students in Nanjing University) 2014

Baosteel Scholarship, (For 2 of Sophomores in Nanjing University) 2013

National Scholarship, Ministry of Education of the People's Republic of China 2012

RESEARCH EXPERIENCE

Ph.D. Candidate, HKUST, Hong Kong Sept 2015 – Now

- Conducted the visual analysis of Hong Kong weather for smart HK project
- Designed the digital circuit part for a 10Gbps Phase Interpolated based half-rate CDR in 65nm CMOS
- Constructed a FPGA-based Bit Error Rate Tester (BERT) for the high-speed CDR testing

Visiting Student, Tongji University, Shanghai, China Feb 2017 – Sept 2017

- Designed ECGLens, a visualization tool for Arrhythmia Detection with large scale ECG data
- Developed EventThread, a visual analytics system for summarizing event sequence data

Research Assistant, Nanjing University, Nanjing, China Dec 2014 – Apr 2015

- Facilitated a wideband filter module and FFT-based frequency estimation module by *Vivado HLS*

Summer Intern, McGill University, Montreal, Canada Jun 2014 – Sept 2014

- Provided a model to predict the screening-limited response of nanobiosensors
- Analyzed the reasons for some aspects of experimental results that were not well explained within the consistent theoretical framework

Project Leader, Nanjing University, Nanjing, China Jun 2013 – May 2014

- Lead the project “Microphone Array Acoustic Localization and Speech Enhancement”, a National Innovation Training Program
- Created and arranged the work schedule for our project team

PUBLICATIONS

[C2] Ke Xu, Shunan Guo, Nan Cao, David Gotz, Aiwon Xu, Huamin Qu, Zhenjie Yao, Yixin Chen. **ECGLens: Interactive Visual Exploration of Large Scale ECG Data for Arrhythmia Detection**. CHI'18: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 2018 (*Best Paper Honorable Mention*). [25% acceptance rate (505/2500)]

[C1] Shunan Guo, Ke Xu, Rongwen Zhao, David Gotz, Hongyuan Zha, Nan Cao. **EventThread: Visual Summarization and Stage Analysis of Event Sequence Data**. VAST'17: Proceedings of the IEEE Visual Analytics Science and Technology, 2017.

TECHNICAL SKILLS

Programming Python, Matlab

Web Development JavaScript, HTML, Flask, jQuery

SDKs & Toolkits D3.js, WebGL, NumPy, scikit-learn

Hardware Verilog (FPGA), Cadence, Vivado_HLS, HSPICE