Xiaowei Xu
(Curriculum Vitae)

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I. RESEARCH INTERESTS

Artificial Intelligence in Medical Data: *Medical Image Segmentation; Medical Image Classification; Spatio-Temporal Data Analysis; Medical Image Enhancement; Prognosis Prediction.*
Embedded Artificial Intelligence for Medical Applications: *Model Compression; Model Quantization; Efficient Segmentation; DNN Acceleration.*

II. EDUCATION

Ph.D. Electronic Science & Engineering — 09/2013 - 06/2016
Huazhong University of Science and Technology
Dissertation: Research on Acceleration of Similarity Metric for Big Data

M.Sc. Electronic Science & Engineering — 09/2011 - 04/2014
Huazhong University of Science and Technology

B.Sc. Electronic Science & Engineering — 09/2007 - 06/2011
Huazhong University of Science and Technology

III. EXPERIENCE

Assistant Professor, Guangdong Provincial People's Hospital, Guangzhou, China — 11/2019 - Now

Post-Doc Researcher, University of Notre Dame, US — 09/2016 - 10/2019

Visiting Researcher, Zhejiang University, Hangzhou, China — 06/2017 - 12/2017

Visiting Researcher, State University of New York, Buffalo, US — 03/2015 - 03/2016

Visiting Researcher, University of Alberta, Edmonton, CA — 05/2013 - 08/2013

IV. AWARDS & HONORS

- Best Student Paper Award, Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, Long Beach, CA, 2019.
- ACM/SIGDA Meritorious Service Award, 2019 (https://www.sigda.org/awards/service/)
- DAC syetem design contest special service recognition reward, 2018
- Outstanding contribution in reviewing, Integration, the VLSI journal, 2017
- Outstanding undergraduate thesis of Hubei Province, 2011 (**1%**)
- Intel Cup 2010 ***National*** Embedded Systems Undergraduate Electronic Design Contest Special, Invitational Contest, Third place, 2010

- Hubei Undergraduate Electronic Design Contest Special Contest ALTERA SOPC Cup, Third place, 2010
- UDC ***National*** University Design Competition, Third place, 2010

V. PUBLICATIONS

Google Scholar Citations: 793; h-index[1]: 14; i10-index[2]: 24

JOURNAL AND MAGAZINE ARTICLES

J28. Jiawei Zhang, Yanchun Zhang, Hailong Qiu, Wen Xie, Zeyang Yao, Yuan Haiyun, qianjun Jia, Tianchen Wang, Yiyu Shi, Meiping Huang, Jian Zhuang, **Xiaowei Xu***, "Pyramid-Net: Intra-layer Pyramid-scale Feature Aggregation for Retinal Vessel Segmentation", Frontiers in Medicine (**FM, IF=5.1**), accepted, 2021.

J27. Guisen Lin, Qile Liu, Yuchen Chen, Xiaodan Zong, Yue Xi, Tingyu Li, Yuelong Yang, An Zeng, Minglei Chen, Chen Liu, Yanting Liang, **Xiaowei Xu***, Meiping Huang*, "Machine learning to predict long-term cardiac-relative prognosis in patients with extra-cardiac vascular disease", Frontiers in Cardiovascular Medicine (**FCM, IF=6.0**), accepted, 2021.

J26. Jiawei Zhang, Yanchun Zhang*, Hailong Qiu, Tianchen Wang, Xiaomeng Li, Shanfeng Zhu, Meiping Huang*, Jian Zhuang*, Yiyu Shi, **Xiaowei Xu***, Constrained Multi-scale Dense Connections for Biomedical Image Segmentation, Pattern Recognition (**PR, IF=7.7**), under review, 2021.

J25. Tianchen Wang, Jiawei Zhang, Jinjun Xiong, Song Bian, Zheyu Yan, Meiping Huang, Jian Zhuang, Takashi Sato, Yiyu Shi, **Xiaowei Xu**, VisualNet: An End-to-End Human Visual System Inspired Framework to Reduce Inference Latency of Deep Neural Networks, IEEE Transactions on Computers (**TC, CCF-A**), **under review**, 2021

J24. Jiawei Zhang, Jialin Wang, Yanchun Zhang, Hailong Qiu, Wen Xie, Zeyang Yao, Tianchen Wang, Yiyu Shi,Chu Han, Xiaomeng Li, Meiping Huang, Jian Zhuang, and **Xiaowei Xu**, "QDD-Ens: Quantization-based Deep DiversifiedEnsemble for Biomedical Image Segmentation", IEEE Transactions on Medical Imaging (**TMI, IF=10**), **under review**, 2021.

J23. Zeyang Yao, Hailong Qiu, Yuan Haiyun, Jian Zhuang, Jiawei Zhang, Qianjun Jia, Yuhao Dong, Tianchen Wang, Yiyu Shi, Xiaowei Xu*, Meiping Huang*, "ImageTBAD: A 3D Computed Tomography Angiography Image Dataset for Automatic Segmentation of Type-B Aortic Dissection", Frontiers in Physiology (**FP**), 2021, 12. (**IF=4.1**)

J22. Zeyang Yao, Xiaobing Liu, Xinrong Hu, Wen Xie, Yuhao Dong, Hailong Qiu, Zewen Chen, Yiyu Shi, **Xiaowei Xu***, Meiping Huang* and Jian Zhuang*, "A machine learning-based pulmonary venous obstruction prediction model using clinical data and CT image", International Journal of Computer Assisted Radiology and Surgery (**IJCARS '21**), Vol. 29, Iss. 1-2, pp. 1-20, ISSN:1550-4832, 2021. (**IF=2.9**)

J21. Wentao Chen, Chutong Zhang, Yu Hu, Tianchen Wang, Qing Lu, Yiyu Shi*, **Xiaowei Xu***, "Quantization of Deep Neural Networks for Accurate Edge Computing", ACM Journal on Emerging Technologies of Computing Systems, accepted, 2021. (**Top journal in Embedded System, recommended C by CCF**)

J20. **Xiaowei Xu*** Hailong Qiu, Haiyun Yuan, Qianjun Jia, Zeyang Yao, Wen Xie, Humming Guo, Meiping Huang, Jian Zhuang, Yiyu Shi, "AI-CHD: An AI-based Framework for Cost-EffectiveSurgical Telementoring of Congenital Heart Disease", Communications of the ACM (CACM '21), Vol. 29, Iss. 1-2, pp. 1-14, ISSN:1520-9210, 2021. (**IF=6.99**)

[1] h-index is the largest number h such that h publications have at least h citations.
[2] i10-index is the number of publications with at least 10 citations.

J19. Mingqi Li, Dewen Zeng, Qiu Xie, Ruixue Xu, Yu Wang, Dunliang Ma, Yiyu Shi, **Xiaowei Xu***, Meiping Huang*, Hongwen Fei*, "A deep learning approach with temporal consistency for automatic myocardial segmentation of quantitative myocardial contrast echocardiography", The International Journal of Cardiovascular Imaging **(IJCAI '21)**, Vol. 29, Iss. 1-2, pp. 1-14, ISSN:1569-5794, 2021.

J18. Dongxu Wei, **Xiaowei Xu**, Kejie Huang, "AC-GAN: A General Method for Appearance-Controllable Human Video Motion Transfer", **IEEE Transactions on Multimedia (TMM)**, Accepted, 2020. (**Top journal in AI, recommended B by CCF**)

J17. Yukun Ding, Jinglan Liu, Jingjun Xiong, **Xiaowei Xu*** and Yiyu Shi*, "The Hardware Implication of Neural Networks Competency-Awareness", **Nature Electronics**, Accepted, 2020.

J16. Jinglan Liu, Jiaxin Zhang, Yukun Ding, Meng Jiang, **Xiaowei Xu**, Yiyu Shi (2020). Binarizing Weights Wisely for Edge Intelligence: Guide for Partial Binarization of Deconvolution-Based Generators. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**) (in print). (**Top journal in CAD, recommended A by CCF**)

J15. **Xiaowei Xu**, Xinyi Zhang, Bei Yu, Xiaobo Sharon Hu, Christopher Rowen, Jingtong Hu, Yiyu Shi, "DAC-SDC Low Power Object Detection Challenge for UAV Applications", IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), **In print**, 2019. (**Top journal in AI, recommended A by CCF**)

J14. Dawei Li, **Xiaowei Xu**, Leibo Liu, Yiyu Shi, Cheng Zhuo, "Optimal Design of a Low-Power, Phase-Switching Modulator for Implantable Medical Applications", Integration, the VLSI Journal. (**Top journal in CAD, recommended C by CCF**)

J13. **Xiaowei Xu**, Feng Lin, Wenyao Xu, Xinwei Yao and Yiyu Shi, Dewen Zeng, Yu Hu, "MDA: A Reconfigurable Memristor-based Distance Accelerator for Time Series Mining on Data Centers", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**) (in print). (**Top journal in CAD, recommended A by CCF**)

J12. **Xiaowei Xu**, Yukun Ding, Sharon Hu, Michael Niemier, Jason Cong, Yu Hu and Yiyu Shi, "Scaling of Deep Neural Networks for Edge Inference: A Race between Data Scientists and Hardware Architects", **Nature Electronics**, 2018, 1(4): 216. (**Top journal**)

J11. **Xiaowei Xu**, Feng Lin, Aosen Wang, Qing Lu, Wenyao Xu, Yiyu Shi and Yu Hu, "Accelerating Dynamic Time Warping with Memristor -based Customized Fabrics", IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**), 37(4), pp. 729-741, 2018. (**Top journal in CAD, recommended A by CCF**)

J10. **Xiaowei Xu**, Feng Lin, Aosen Wang, Yu Hu, Ming-chun Huang, and Wenyao Xu, "Body-Earth Mover's Distance: A Matching-Based Approach for Sleep Posture Recognition", IEEE Transactions on Biomedical Circuits and Systems (**TBioCAS**). 10(5), pp.1023-1035.(**SCI A**)

J9. **Xiaowei Xu**, "On the Quantization of Cellular Neural Networks for Cyber-Physical Systems", TC-CPS-letter, 1(5), February 01, 2018.

J8. **Xiaowei Xu**, Qing Lu, Tianchen Wang, Yu Hu, Chen Zhuo, Jinglan Liu, Yiyu Shi, "Efficient Hardware Implementation of Cellular Neural Networks with Incremental Quantization and Early Exit", Journal of Emerging Technologies in Computing Systems (**JETC**), Accepted. (**Top journal in CAD, recommended C by CCF**)

J7. Zhongyang Liu, Shanheng Luo, **Xiaowei Xu**, Yiyu Shi, Chen Zhuo, "A Multi-Level Optimization Framework for FPGA-Based Cellular Neural Network Implementation", Journal of Emerging Technologies in Computing Systems (**JETC**), Accepted. (**Top journal in CAD, recommended C by CCF**)

J6. Zhongyang Liu, Chen Zhuo, **Xiaowei Xu**, "An efficient segmentation method using quantized and non-linear CeNN for breast tumor classification", Electronics Letters, 2018. (SCI C)

J5. Feng Lin, Chen Song, **Xiaowei Xu**, Lora Cavuoto, Wenyao Xu, "Patient Handling Activity Recognition Through Pressure-Map Manifold Learning Using A Footwear Sensor", Elsevier Smart Health (SH), 1(2), June 2017, Pages 77-92.

J4. **Xiaowei Xu**, Lu Pu, Tao Jiang, Zhijun Qiu, and Yu Hu, "A Comparison Study of Connected Vehicle Systems between Named Data Networking and IP", Journal of Internet Technology, 16(2), pp.343-350, 2015. (SCI C)

J3. Li Zhang, **Xiaowei Xu**, Dawei Li, Xiaofei Chen, Xuecheng Zou, "A single phase modulation for pulse-based inductive-coupling connection in 3D stacked chip", IEICE Electronics Express, 2017, 14(20). (SCI C)

J2. Li Zhang, Dawei Li, Xuecheng Zou, Yu Hu, **Xiaowei Xu**, "Scalable and Parameterized Architecture for Efficient Stream Mining", IEICE transections on Fundamentals of Electronics, Communications and Computer Sciences, Vol.E101-A, No.1, pp.219-231, 2018. (SCI C)

J1. Jiangchen Li, **Xiaowei Xu**, Junpei Han, Yu Hu, and Xuecheng Zou, "Synchronized pulsed LED algorithm for ambient infrared noise minimization in FTIR-based multitouch system", Infrared and Laser Engineering, 42(6), 2013.

CONFERENCE AND WORKSHOP PROCEEDINGS

C43. Yu-Jen Chen, Yen-Jung Chang, Shao-Cheng Wen, Yiyu Shi, **Xiaowei Xu**, Tsung-Yi Ho, Meiping Huang, Haiyun Yuan, and Jian Zhuang, "“One-Shot” Reduction of Additive Artifacts in Medical Images", IEEE International Conference on Bioinformatics and Biomedicine (**BIBM, CCF B**).

C42. Zeng Dewen, Li Mingqi, Ding Yukun, **Xiaowei Xu**, Xie Qiu, Xu Ruixue, Fei Hongwen, Huang Meiping, Zhuang Jian, Shi Yiyu, "Segmentation with Multiple Acceptable Annotations: A Case Study of Myocardial Segmentation in Contrast Echocardiography", 27th international conference on Information Processing in Medical Imaging (**IPMI'21, Top coference in medical imaging**), Virtual, June 28th – July 2nd, 2021.

C41. Jiawei Zhang, Yanchun Zhang, **Xiaowei Xu**, "Pyramid U-Net for Retina Vessel Segmentation", IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP'21, CCF B**), Virtual, 2021.

C40. Dongxu Wei, **Xiaowei Xu**, Haibin Shen, Kejie Huang, "C2F-FWN: Coarse-to-Fine Flow Warping Network for Spatial-Temporal Consistent Motion Transfer", 35th AAAI Conference on Artificial Intelligence (**AAAI'21, CCF A**), Virtual, 2021.

C39. Dewen Zeng, Yukun Ding, **Xiaowei Xu**, Haiyun Yuan, Hongwen Fei, Meiping Huang, Jian Zhuang, Jingtong Hu, Yiyu Shi,, "Hardware-aware Real-time Myocardial Segmentation Quality Control in Contrast Echocardiography", Proc. of IEEE/ACM Design Automation Conference (**DAC'21, CCF-A**), Virtual, 2021.

C38. Shao-Cheng Wen, Yu-Jen Chen, Zihao Liu, Wujie Wen, **Xiaowei Xu**, Yiyu Shi, Tsung-Yi Ho, Meiping Huang, Haiyun Yuan, and Jian Zhuang, "Do noises bother human and neural networks in the same way? A medical image analysis perspective", IEEE International Conference on Bioinformatics and Biomedicine (**BIBM'2020, CCF B**), 2020.

C37. Jiawei Zhang, Yanchun Zhang, Shanfeng Zhu, **Xiaowei Xu**, "Constrained Multi-scale Dense Connections for Accurate Biomedical Image Segmentation", IEEE International Conference on Bioinformatics and Biomedicine (**BIBM'2020, CCF B**), 2020.

C36. Xinrong Hu, Zeyang Yao, Furong Liu, Wen Xie, Hailong Qiu, Yuhao Dong, Qianjun Jia, Meiping Huang, Jian Zhuang, **Xiaowei Xu** and Yiyu Shi, "Joint Clinical Data and CT Image based Prognosis: A Case Study on Postoperative Pulmonary Venous Obstruction Prediction," in Proc. of Medical Image Computing and Computer Assisted Interventions (**MICCAI**) Workshop on Predictive Intelligence in Medicine (PRIME), 2020

C35. Dewen Zeng, Weiwen Jiang, Tianchen Wang, **Xiaowei Xu**, Haiyun Yuan, Meiping Huang, Jian Zhuang, Jingtong Hu and Yiyu Shi, "Towards Cardiac Intervention Assistance: Hardware-Aware Neural Architecture Exploration for Real-Time 3D Cardiac Cine MRI Segmentation," in Proc. of IEEE/ACM International Conference on Computer-Aided Design, 2020 (Invited Paper)(**Top conference in CAD, recommended B by CCF**)

C34. **Xiaowei Xu**, Tianchen Wang, Jian Zhuang, Haiyun Yuan, Meiping Huang, Qianjun Jia, Jianzheng Cen, Yuhao Dong, Yiyu Shi (2020). ImageCHD: A 3D Computed Tomography Image Dataset for Classification of Congenital Heart Disease. In Proc. of Medical Image Computing and Computer Assisted Interventions (**MICCAI'20**), Lima, Peru, pp. 8300–8308.

C33. Tianchen Wang, Jinjun Xiong, **Xiaowei Xu**, Qianjun Jia, Haiyun Yuan, Meiping Huang, Jian Zhuang, Yiyu Shi. ICA-UNet: ICA Inspired Statistical UNet for Real-time 3D Cardiac Cine MRI Segmentation. In Proc. of Medical Image Computing and Computer Assisted Interventions (**MICCAI'20**), Lima, Peru, pp. 8300–8308.

C32. Zihao Liu, Sicheng Li, Yen-Kuang Chen, Tao Liu, Qi Liu, **Xiaowei Xu**, Yiyu Shi, Wujie Wen (2020). Orchestrating Medical Image Compression and Remote Segmentation Networks. In Proc. of Medical Image Computing and Computer Assisted Interventions (**MICCAI'20**), Lima, Peru, pp. 8300–8308.

C31. Song Bian, **Xiaowei Xu**, Weiwen Jiang, Yiyu Shi, Takashi Sato (2020). BUNET: Blind Medical Image Segmentation Based on Secure UNET. In Proc. of Medical Image Computing and Computer Assisted Interventions (**MICCAI'20**), Lima, Peru, pp. 8300–8308.

C30. Yukun Ding, Jinglan Liu, **Xiaowei Xu**, Meiping Huang, Jian Zhuang, Jinjun Xiong, Yiyu Shi. Uncertainty-Aware Training of Neural Networks for Selective Medical Image Segmentation. In Proc. Of Medical imaging with Deep Learning (**MIDL'20**), Montreal, Canada, pp. 8300–8308, 2020.

C29. Yu-Jen Chen, Yen-Jeng Chang, Shao-Cheng Wen, **Xiaowei Xu**, Tsung-Yi Ho, Qianjun Jia, Meiping Huang, Jian Zhuang, Yiyu Shi. Zero-Shot Medical Image Artifact Reduction. In IEEE International Symposium on Biomedical Imaging (**ISBI'20**), 2020, Iowa city, pp. 8300–8308.

C29. Qing Lu, Weiwen Jiang, **Xiaowei Xu**, Yiyu Shi, Jingtong Hu (2019). On Neural Architecture Search for Resource-Constrained Hardware Platforms. Proc. of IEEE/ACM 2017 International Conference On Computer-Aided Design (**ICCAD'19**), CA, 2019. (**Top conference in CAD, recommended B by CCF**)

C28. **Xiaowei Xu**, Tianchen Wang, Yiyu Shi, "Multi-model Whole-Heart and Great Vessel Segmentation in Congenital Heart Disease using Deep Neural Networks and Graph Matching", the 22nd International Conference on Medical Image Computing and Computer Assisted Intervention (**MICCAI'19**), 2019.

C27. **Xiaowei Xu**, Meiping Huang, Qianjun Jia, Hailong Qiu, Haiyun Yuan, Yuhao Dong, Jian Zhuang and Yiyu Shi, "Accurate Congenital Heart Disease Model Generation for 3D Printing," in Proc. of IEEE International Workshop in Signal Processing Systems, Nanjing, China, 2019.

C26. Boyang Li, Changhao Chenli, **Xiaowei Xu**, Taeho Jung and Yiyu Shi, "Exploiting Computation Power of Blockchain for Biomedical Image Segmentation," in Proc. of IEEE Conference on Computer Vision and Pattern Recognition (**CVPR'18**) Workshops, Long Beach, CA, 2019. (Best Student Paper Award)

C25. Tianchen Wang, **Xiaowei Xu**, jingjun, Xiong, Yiyu Shi, "Multiscale SD-Net: Multiscale Statistical Dense Neural Network for Efficient 3D Cardiovascular MRI Segmentation", the 22nd International Conference on Medical Image Computing and Computer Assisted Intervention (**MICCAI'19**).

C24. Zihao Liu, **Xiaowei Xu**, Tao Liu, Qi Liu, Yanzhi Wang, Meiping Huang, Haiyun Yuan,Jian Zhuang, Yiyu Shi, "Machine Vision Guided 3D Medical Image Compression for Efficient Transmission and Accurate Segmentation in the Clouds", IEEE Conference on Computer Vision and Pattern Recognition (**CVPR'19**), Accepted(**Top conference in AI, recommended A by CCF**).

C23. Tianchen Wang, **Xiaowei Xu**, jingjun, Xiong, Yiyu Shi, "SCNN: A General Distribution based Statistical Convolutional Neural Networkwith Application to Video Object Detection", The Thirty-Third AAAI Conference on Artificial Intelligence (**AAAI'19**), Honolulu, 2019. Accept (**Top conference in AI, recommended A by CCF**)

C22. **Xiaowei Xu**, Qing Lu, Lin Yang, Sharon Hu, Danny Chen, Yu Hu, Yiyu Shi, "Quantization of Fully Convolutional Networks for Accurate Biomedical Image Segmentation", IEEE Conference on Computer Vision and Pattern Recognition (**CVPR'18**), Salt lake city, 2018. (**Top conference in AI, recommended A by CCF**)

C21. **Xiaowei Xu**, Tianchen Wang, Qing Lu, Yiyu Shi, "Resource Constrained Cellular Neural Networks for Real-time Obstacle Detection using FPGAs", The 19th International Symposium on Quality Electronic Design (**ISQED'18**), Santa Clark, USA, 2018.

C20. **Xiaowei Xu**, Dewen Zeng, Wenyao Xu, Yiyu Shi, Yu Hu, "An Efficient Memristor-Based Distance Accelerator for Time Series Data Mining on Data Centers", 54th Design Automation Conference (**DAC'17**), 2017. (**Top conference in CAD, recommended A by CCF**)

C19. **Xiaowei Xu**, Qing Lu, Tianchen Wang, Jinglan Liu, Chen Zhuo, Sharon Hu, Yiyu Shi, "Empowering Mobile Telemedicine with Compressed Cellular Neural Networks", in Proc. of IEEE/ACM 2017 International Conference On Computer-Aided Design (**ICCAD'17**), CA, 2017. (**Top conference in CAD, recommended B by CCF**)

C18. **Xiaowei Xu**, Qing Lu, Tianchen Wang, Jinglan Liu, Yu Hu and Yiyu Shi, "Efficient Hardware Implementation of Cellular Neural Networks with Powers-of-Two Based Incremental Quantization", **Neuromorphic Computing Symposium**, Knoxville, 2017.

C17. Zeyu Yan, **Xiaowei Xu**, Guangyu Yu, Hu Yu, "Empowering Edge Mining on Smartphones with Reconfigurable Fabrics", China Semiconductor Technology International Conference (**CSTIC'17**), Shanghai, China, 2018.

C16. Guangyu Yu, **Xiaowei Xu**, Zeyu Yan and Hu Yu, "Accelerating Earth Movers Distance with Instruction Set Extension for Image Retrieval", China Semiconductor Technology International Conference (**CSTIC'17**), Shanghai, China, 2018.

C15. Guanbing Deng, Hanqing Zhou, Guangyu Yu, Zeyu Yan, Yu Hu, **Xiaowei Xu**, "Scalable and parameterized dynamic time warping architecture for efficient vehicle re-identification", In Transportation Information and Safety (**ICTIS'17**), 4th International Conference on, 2017.

C14. Zhongyang Liu, Shaoheng Luo, **Xiaowei Xu**, Yiyu Shi and Chen Zhuo, "A Multi-Level Optimization Framework for Efficient FPGA-Based Cellular Neural Network Implementation", Neuromorphic Computing Symposium, Knoxville, July 2017.

C13. Kun Woo Cho, Feng Lin, Chen Song, **Xiaowei Xu**, Fuxing Gu, and Wenyao Xu, "Thermal Handprint Analysis for Forensic Identification using Heat-Earth Mover's Distance", 2016 IEEE International Conference on Identity, Security and Behavior Analysis (**ISBA'16**), Sendai, Japan, February, 2016.

C12. Feng Lin, Chen Song, **Xiaowei Xu**, Lora Cavuoto, Wenyao Xu, "Sensing from the Bottom: Smart Insole Enabled Patient Handling Activity Recognition Through Manifold Learning", IEEE International Conference on Connected Health: Applications, Systems and Engineering Technologies (**CHASE'16**), Washington D.C., June 2016.

C11. Feng Lin, **Xiaowei Xu**, Aosen Wang, Lora Cavuoto, Wenyao Xu, "Automated patient handling activity recognition for at-risk caregivers using an unobtrusive wearable sensor", IEEE International Conference on Biomedical and Health Informatics (**BHI'16**), Las Vegas, February 2016.

C10. Kun Woo Cho, Feng Lin, Chen Song, **Xiaowei Xu**, Michelle Hartley-McAndrew, Kathy Doody, Wenyao Xu, "Gaze-Wasserstein: A Quantitative Screening Approach to Autism Spectrum Disorder", IEEE Annual Wireless Health Conference (**WH'16**), Bethesda, MD, October 2016.

C9. **Xiaowei Xu**, Feng Lin, Aosen Wang, Chen Song, Yu Hu, and Wenyao Xu, "On-bed Sleep Posture Recognition Based on Body-Earth Movers Distance", IEEE Conference on Circuits and Systems (**BioCAS'15**), Atlanta, Georgia, October, 2015.

C8. Aosen Wang, Chen Song, **Xiaowei Xu**, Feng Lin, Zhanpeng Jin, and Wenyao Xu, "Selective and Compressed Sensing for Energy-Efficient Implantable Neural Encoding", IEEE Conference on Circuits and Systems (**BioCAS'15**), Atlanta, 2015.

C7. Hanqing Zhou, **Xiaowei Xu**, Yu Hu, Guangyu Yu, Zeyu Yan, Feng Lin, and Wenyao Xu, "An Energy-efficient Pipelined DTW Architecture on Hybrid Embedded Platform", IEEE Green and Sustainable Computing Conference (**IGSC'15**), Las Vegas, 2015.

C6. **Xiaowei Xu**, Lu Pu, Hanqing Zhou, Yu Hu, Aosen Wang, and Wenyao Xu, "Energy Characterization and Optimization of Embedded Data Mining Algorithms: a Case Study of the DTW-kNN Framework", International Workshop on Green Programming, Computing, and Data Processing (**GPCDP'14**), Dallas, Texas, 2014.

C5. Lu Pu, **Xiaowei Xu**, Han He, Haning Zhou, Zhijun Qiu, and Yu Hu, "A flexible control study of variable speed limit in connected vehicle systems", International Workshop on Mobile Internet Big Data (**IWMBD'14**), Wuhan, China, May, 2014.

C4. Jiangchen Li, **Xiaowei Xu**, Hongpeng Zhao, Yu Hu, and Tony Z. Qiu, "An Energy Efficient Sub-Nyquist Sampling Method Based on Compressed Sensing in a Wireless Sensor Network for Vehicle Detection", The 2nd International Conference on Connected Vehicles and Expo (**ICCVE'13**), Las Vegas, Nevada, 2013.

C3. Tao Jiang, **Xiaowei Xu**, Lu Pu, Yu Hu, and Zhijun Qiu, "A simulation study of connected vehicle systems using named data network", 4th International Conference on Cloud Computing (**ICCC'14**), Wuhan, China, 2013.

C2. **Xiaowei Xu**, Tao Jiang, Pengfei Li, Tony Qiu, and Yu Hu, "A High-Level-Architect SimIVC for Simulating Traffic Network", The 2nd International Conference on Transportation Information and Safety (**ICTIS'13**), Wuhan, 2013.

C1. **Xiaowei Xu**, Wanghui Zou, Jinran Du, Xiaofei Chen, and Xuecheng Zou, Predictive calculation of coupling coefficient between on-chip small-area multilayer inductors", Solid-State and Integrated Circuit Technology, 2012 IEEE (**ICSICT'12**), Xian, 2012.

VI. TALKS

INVITED TALKS

- **Invited Talk**, *"Efficient Machine Learning for IoT Applications"*, **Zhejiang University**, Hangzhou, China, October, **2018**.
- **Invited Talk**, *"Efficient Machine Learning for IoT Applications"*, Shandong University, Qingdao, China, July **2018**.
- **Invited Talk**, *"Hardware Acceleration for Deep Learning"*, Zhejiang University of Technology, Hangzhou, China, June **2017**.

VII. PROFESSIONAL ACTIVITY & MEMBERSHIPS

- **Organizing Committee Member:**
  - **Program Committee Member**, HBAI 2020: Joint Workshop on Human Brain and Artificial Intelligence, Held in Conjunction With **IJCAI**-PRICAI, **2020**.
  - **TPC Member**, 2019 IEEE Computer Society Annual Symposium on VLSI, **ISVLSI** 2019, Miami, FL, USA, July 15-17, 2019.
  - **TPC Member**, 37th IEEE International Conference on Computer Design, **ICCD** 2019, Abu Dhabi, United Arab Emirates, November 17-20, **2019**.
  - **TPC Member**, International Symposium on Quality Electronic Design (**ISQED**). **2019, 2020, 2021**.
  - **TPC Member**, 2018 IEEE Computer Society Annual Symposium on VLSI, **ISVLSI** 2018, Hong Kong, China, July 8-11, **2018**
- **Professional Memberships:**
  - **Member of IEEE** (Institute of Electrical and Electronics Engineers)
  - Member of **ACM** (Association for Computing Machinery)
  - Member of **MICCAI** (The Medical Image Computing and Computer Assisted Intervention Society)
- **Reviewer:**
  - Nature Computational Science (**Nature NCS**)
  - IEEE Transactions on Neural Networks and Learning Systems (**IEEE TNNLS**)
  - IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD**)
  - IEEE Transactions on Very Large Scale Integration (**TVLSI**)
  - IEEE Transactions on Computer (**TC**)
  - Integration the VLSI Journal (**Integration**)
  - IEEE International Conference on Computer Aid Design (**ICCAD**) 2018
  - IEEE Design Automation Conference (**DAC**) 2017
  - IEEE Computer Society Annual Symposium on VLSI (**ISVLSI**), 2018
  - IEEE International Conference on Computer Design (**ICCD**), 2018
  - International Symposium on Quality Electronic Design (**ISQED**) 2019
  - Medical Image Computing and Computer Assisted Interventions (**MICCAI**), Lima, Peru, 2020 and 2021
  - MDPI Sensors
  - **AAAI** 2022