Yanzhi Wang

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AREAS OF INTEREST

1. Real-time and energy-efficient deep learning and artificial intelligence systems
2. Embodied AI and robotic foundational models
3. World modeling and physics AI
4. Large language models and large-scale generative AI systems
5. Neuromorphic computing and non-von Neumann computing paradigms

EDUCATION

08/2009 – 08/2014 University of Southern California
Ph.D. in Electrical Engineering
Advisor: Prof. Massoud Pedram
GPA: 4.0/4.0

09/2005 – 07/2009 Tsinghua University, Beijing
B.Eng. in Electronic Engineering (*with Distinction*)

WORK EXPERIENCES

Department of ECE, Northeastern University
Professor and Faculty Fellow
Khoury College of Computer Science (Affiliated)
Co-Director of Physical AI Research (PAIR) Center, Northeastern University

System Power Optimization & Regulation Technology Lab, USC Sept. 2009 – Aug. 2014
Research Assistant, Advisor: Prof. Massoud Pedram

Embedded Low Power Laboratory, Seoul National University June 2012 – July 2012
Visiting Student, Mentor: Prof. Naehyuck Chang

Sharp Laboratories of America May 2011 – Aug. 2011
Summer Intern, Mentor: Dr. Louis Kerofsky and Dr. Sachin Deshpande

State Key Lab Microwave & Digital Communication, Tsinghua Aug. 2008 – Jun. 2009
Research Assistant, Thesis Advisor: Prof. Wei Chen

China Society of Image and Graphics May 2008 – Aug. 2008
Summer Intern, Mentor: Prof. Huimin Ma

AWARDS & HONORS

Constantinos Mavroidis Translational Research Award, Northeastern University, 2024.
EECS Rising Star Award, 2024 (Ph.D. student Yifan Gong)
Top 100 Chip Achievement Award, 2023.
Highly Cited Scholar from Stanford University, 2023.
EECS Rising Star Award, 2023 (Ph.D. student Peiyan Dong)

ACM Student Research Competition 1st Place at ASP-DAC 2023 (Ph.D. student Zhengang Li).
Asia Pacific Signal and Information Processing Association (APSIPA) Distinguished Industrial Leader award, 2022.
Faculty Fellow Award, 2022.
2nd Place Award in HAET Workshop at ICLR 2022.
Communications of the ACM Featured Article with Interview, 2021.
Martin W. Essigmann Excellence in Teaching Award, Northeastern University, 2021.
Best Paper Award in HAET Workshop at ICLR 2021.
Ph.D. student Malith has won the 1st Place in the Student Research Competition at CGO 2021.
IEEE TC-SDM Early Career Award, 2021.
Most welcomed speaker award from TechBeat, 2021.
Best Paper Nomination, Design Automation and Test in Europe (DATE), 2021.
U.S. Army Research Office Young Investigator Award, 2020.
International Symposium on Low Power Electronics Design (ISLPED) Design Contest Award, First Place, 2020.
Best Paper Nomination, Design Automation and Test in Europe (DATE), 2020.
Faculty Research Award from MathWorks, 2020.
Massachusetts Acorn Innovation Award, 2019.
Best Paper Nomination, and Finally Top-3 paper, AdvML workshop co-located with KDD 2019.
Ph.D. student Ning Liu will start as a superstar employee at DiDi AI Research (DiDi Inc.), 2019.
Student Geng Yuan receives 2019 System Design Contest Special Service Recognition Award at Design Automation Conference (DAC), 2019.
Best Paper Nomination, Design Automation and Test in Europe (DATE), 2019.
Google Equipment Award (student Fuming Guo): Usage of 110 TPU-V2 and a cluster of 512 (further expanded to 2K) TPU-V3, 2019.
MIT Technology Review TR35 China Finalist, 2018.
Best Paper Nomination, IEEE/ACM Asia and South Pacific Design Automation Conference (ASP-DAC), 2018.
Best Paper Nomination, IEEE International Symposium on Quality Electronic Design (ISQED), 2018.
Best Paper Nomination, IEEE/ACM Asia and South Pacific Design Automation Conference (ASP-DAC), 2017.
Best Paper in Track, IEEE International Symposium on Low Power Electronics Design (ISLPED), 2017.
Three Students (Ao Ren, Ruizhe Cai, Hongjia Li) receive the A Richard Newton Young Student Support Award from Design Automation Conference (DAC), 2017.
Best Paper Award and Best Student Presentation Award, IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2017.
Best Poster Finalist, Numan Research Day, Syracuse University, 2017.
Best Paper Nomination, IEEE/ACM Asia and South Pacific Design Automation Conference (ASP-DAC), 2015.
Best Paper Award, IEEE/ACM International Symposium on Low Power Electronic Design (ISLPED), 2014.
Best Paper Award, IEEE Computer Society Annual Symposium on VLSI (ISVLSI), 2014.
Two journal papers selected as popular papers in IEEE Trans. on Computer-Aided Design, 2014.
Top Paper Award, IEEE Cloud Computing Conference (CLOUD), 2014.
Best Paper Nomination, IEEE Trans. on Computer-Aided Design, 2013
Best Paper Nomination, ACM Great Lakes Symposium on VLSI (GLS-VLSI), 2013.

Ming Hsieh Scholar of USC, 2013.
International Symposium on Low Power Electronics Design (ISLPED) Design Contest Award, First Place, 2012.
Young Student Support Award from Design Automation Conference (DAC), 2011.
USC Provost's PhD Fellowship, 2009
Graduate with Highest Honor in Tsinghua University and Beijing City, 2009.
Best Undergraduate Thesis Award, Tsinghua University, 2009.
National Scholarship of China, 2008.
Tsinghua University First Class Scholarship, 2006 & 2007.
Tsinghua University Second Class Scholarship for Freshman, 2005.
Second Prize of the 23th National Physics Competition for College Students, 2006.
Ranked 5th in the National University Entrance Exam among 100,000 students in Beijing, 2005.
Admission Examinations Waiver for Undergraduate Program in Tsinghua University, 2005.

PUBLICATION LIST (> 28,000 Citation with H-index 81 According to Google Scholar)

Year 2025 Conference and Journals:

1. Xuan Shen, Peiyan Dong, Zhenglun Kong, Yifan Gong, Changdi Yang, Zhaoyang Han, Yanyue Xie, Lei Lu, Cheng Lyu, Chao Wu, Yanzhi Wang, Pu Zhao, "Squat: Quant Small Language Models on the Edge", in *IEEE/ACM International Conference On Computer Aided Design* (ICCAD),2025 **(acceptance ratio 20%)**.
2. Xiaomeng Yang, Jian Gao, Yanzhi Wang, Xuan Zhang , "Zerosim: Zero-shot analog circuit evaluation with unified transformer embeddings ", in *IEEE/ACM International Conference On Computer Aided Design* (ICCAD), 2025 **(acceptance ratio 20%)**.
3. Qitao Tan, Sung-En Chang, Rui Xia, Huidong Ji, Chence Yang, Ci Zhang, Jun Liu, Zheng Zhan, Zhenman Fang, Zhuo Zou, Yanzhi Wang, Jin Lu, Geng Yuan , "Perturbation-efficient zeroth-order optimization for hardware-friendly on-device training ", in *IEEE/ACM International Conference On Computer Aided Design* (ICCAD), 2025
4. Wei Niu, Mengshu Sun, Zhengang Li, Jou-An Chen, Jiexiong Guan, Xipeng Shen, Jun Liu, Mei Zhang, Yanzhi Wang, Xue Lin, Bin Ren , "Mobile-3dcnn: An acceleration framework for ultra-real-time execution of large 3d cnns on mobile devices", in *ACM Transactions on Architecture and Code Optimization*, 2025 **(acceptance ratio 25%)**.
5. Z Kong, D Xu, Z Li, P Dong, H Tang, Y Wang, S Mukherjee , "Autovit: Achieving real-time vision transformers on mobile via latency-aware coarse-to-fine search", in *International Journal of Computer Vision,* 2025 **(acceptance ratio 20%)**.
6. Changdi Yang, Zheng Zhan, Ci Zhang, Yifan Gong, J Liu, X Shen, H Tang, G Yuan, P Zhao, X Lin, W Yanzhi , "Fairsmoe: Mitigating multi-attribute fairness problem with sparse mixture-of-experts", in *34th International Joint Conference on Artificial Intelligence,* 2025 **(acceptance ratio 15%)**.
7. Cihan Ruan, Lei Lu, Rongduo Han, Wei Jiang, Wei Wang, Haoyu Wu, Qiming Yuan, Yanting Guo, Yanzhi Wang, Nam Ling, "HDCompression-DNA: Hybrid-Diffusion Neural Image Compression via DNA Storage", in *IEEE International Conference on Multimedia and Expo (ICME),*2025 **(acceptance ratio 25%)**.
8. Ci Zhang, Chence Yang, Qitao Tan, Jun Liu, Ao Li, Yanzhi Wang, Jin Lu, Jinhui Wang, Geng Yuan, "Towards memory-efficient and sustainable machine unlearning on edge using zeroth-order optimizer", in *Great Lakes Symposium on VLSI,* 2025 **(acceptance ratio 35%)**.
9. Zhengang Li, Hongwu Peng, Xuan Shen, Masoud Zabihi, Xi Xie, Geng Yuan, Yanzhi Wang, Olivia Chen, Caiwen Ding, "Graph Convolutional Network Acceleration Using Adiabatic

Superconductor Josephson Devices", in *39th ACM International Conference on Supercomputing,* 2025 **(acceptance ratio 25%)**.

10. Xianglu Shen, Huixin Zhang, Yanzhi Wang, Qi R Wang, "Unveiling the dynamics of human mobility in response to wildfire-induced air quality degradation: an examination of the 2019 Kincade fire", in J*ournal of Management in Engineering,* 2025 **(acceptance ratio 20%)**.
11. Jun Liu, Zhenglun Kong, Pu Zhao, Changdi Yang, Xuan Shen, Hao Tang, Geng Yuan, Wei Niu, Wenbin Zhang, Xue Lin, Dong Huang, Yanzhi Wang , "Toward adaptive large language models structured pruning via hybrid-grained weight importance assessment", in *AAAI Conference on Artificial Intelligence,* 2025 **(acceptance ratio 25%)**.
12. Xuan Shen, Zhao Song, Yufa Zhou, Bo Chen, Jing Liu, Ruiyi Zhang, Ryan A Rossi, Hao Tan, Tong Yu, Xiang Chen, Yufan Zhou, Tong Sun, Pu Zhao, Yanzhi Wang, Jiuxiang Gu, "Numerical pruning for efficient autoregressive models", in *AAAI Conference on Artificial Intelligence,*2025 **(acceptance ratio 24%)**.
13. Xuan Shen, Zhao Song, Yufa Zhou, Bo Chen, Yanyu Li, Yifan Gong, Kai Zhang, Hao Tan, Jason Kuen, Henghui Ding, Zhihao Shu, Wei Niu, Pu Zhao, Yanzhi Wang, Jiuxiang Gu , "Lazydit: Lazy learning for the acceleration of diffusion transformers", in *AAAI Conference on Artificial Intelligence,* 2025 **(acceptance ratio 24%)**.
14. Lixia Han, Yiyang Chen, Siyuan Chen, Haozhang Yang, Ao Shi, Guihai Yu, Jiaqi Li, Zheng Zhou, Yijiao Wang, Yanzhi Wang, Xiaoyan Liu, Jinfeng Kang, Peng Huang, "CIMUS: 3D-stacked Computing-in-Memory Under Image Sensor Architecture for Efficient Machine Vision", in *IEEE Transactions on Computers,* 2025 **(acceptance ratio 24%)**.
15. Jun Liu, Zhenglun Kong, Peiyan Dong, Xuan Shen, Pu Zhao, Hao Tang, Geng Yuan, Wei Niu, Wenbin Zhang, Xue Lin, Dong Huang, Yanzhi Wang, "Rora: Efficient fine-tuning of llm with reliability optimization for rank adaptation", in *IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP), 2025 **(acceptance ratio 25%)**.
16. Xuan Shen, Hangyu Zheng, Yifan Gong, Zhenglun Kong, Changdi Yang, Zheng Zhan, Yushu Wu, Xue Lin, Yanzhi Wang, Pu Zhao, Wei Niu, "Sparse learning for state space models on mobile", in *The Thirteenth International Conference on Learning Representations,* 2025 **(acceptance ratio 30%)**.
17. Dan Wu, Yanzhi Wang, Yuqi Fei, Guowang Gao, "A novel mixed-precision quantization approach for cnns", in *IEEE Access,* 2025 **(acceptance ratio 35%)**.
18. Pinrui Yu, Zhenglun Kong, Pu Zhao, Peiyan Dong, Hao Tang, Fei Sun, Xue Lin, Yanzhi Wang, "Q-TempFusion: Quantization-Aware Temporal Multi-Sensor Fusion on Bird's-Eye View Representation", in *IEEE/CVF Winter Conference on Applications of Computer Vision* (WACV), 2025 **(acceptance ratio 30%)**.
19. Yuguang Yao, Jiancheng Liu, Yifan Gong, Xiaoming Liu, Yanzhi Wang, Xue Lin, Sijia Liu, "Can Adversarial Examples be Parsed to Reveal Victim Model Information? ", in *2025 IEEE/CVF Winter Conference on Applications of Computer Vision* (WACV)**,** 2025 **(acceptance ratio 30%)**.
20. Chao Wu, Cheng Ji, Li-Pin Chang, Zongwei Zhu, Congming Gao, Weichao Guo, Chao Yu, Yanzhi Wang, "{MedFS}: Pursuing Low Update Overhead via {Metadata-Enabled} Delta Compression for Log-structured File System on Mobile Device", in *23rd USENIX Conference on File and Storage Technologies* (FAST 25), 2025 **(acceptance ratio 25%)**.
21. Xuan Shen, Weize Ma, Jing Liu, Changdi Yang, Rui Ding, Quanyi Wang, Henghui Ding, Wei Niu, Yanzhi Wang, Pu Zhao, Jun Lin, Jiuxiang Gu, "Quartdepth: Post-training quantization for real-time depth estimation on the edge", in *Computer Vision and Pattern Recognition Conference,* 2025 **(acceptance ratio 25%)**.

22. Yushu Wu, Zhixing Zhang, Yanyu Li, Yanwu Xu, Anil Kag, Yang Sui, Huseyin Coskun, Ke Ma, Aleksei Lebedev, Ju Hu, Dimitris N Metaxas, Yanzhi Wang, Sergey Tulyakov, Jian Ren, "Snapgen-v: Generating a five-second video within five seconds on a mobile device", in *Computer Vision and Pattern Recognition Conference,* 2025 **(acceptance ratio 25%)**.

Year 2024 Conference and Journals:

23. Xuan Shen, Pu Zhao, Yifan Gong, Zhenglun Kong, Zheng Zhan, Yushu Wu, Ming Lin, Chao Wu, Xue Lin, Yanzhi Wang, "Search for efficient large language models", in *Advances in Neural Information Processing Systems,* 2024
24. Zheng Zhan, Zhenglun Kong, Yifan Gong, Yushu Wu, Zichong Meng, Hangyu Zheng, Xuan Shen, Stratis Ioannidis, Wei Niu, Pu Zhao, Yanzhi Wang, "Exploring token pruning in vision state space models", in *Advances in Neural Information Processing Systems,* 2024 **(acceptance ratio 25%)**.
25. Zheng Zhan, Yushu Wu, Yifan Gong, Zichong Meng, Zhenglun Kong, Changdi Yang, Geng Yuan, Pu Zhao, Wei Niu, Yanzhi Wang, "Fast and memory-efficient video diffusion using streamlined inference", in *Advances in Neural Information Processing Systems,* 2024 **(acceptance ratio 25%)**.
26. Hao Zhang, Malith Jayaweera, Bin Ren, Yanzhi Wang, Sucheta Soundarajan, "Reducing Unfairness in Distributed Community Detection", in *IEEE International Conference on Data Mining* (ICDM), 2024 **(acceptance ratio 30%)**.
27. Peiyan Dong, Jinming Zhuang, Zhuoping Yang, Shixin Ji, Yanyu Li, Dongkuan Xu, Heng Huang, Jingtong Hu, Alex K Jones, Yiyu Shi, Yanzhi Wang, Peipei Zhou, "EQ-ViT: Algorithm-hardware co-design for end-to-end acceleration of real-time vision transformer inference on Versal ACAP architecture", in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems,* 2024 **(acceptance ratio 25%)**.
28. Jun Liu, Zhenglun Kong, Pu Zhao, Weihao Zeng, Hao Tang, Xuan Shen, Changdi Yang, Wenbin Zhang, Geng Yuan, Wei Niu, Xue Lin, Yanzhi Wang, "Tsla: A task-specific learning adaptation for semantic segmentation on autonomous vehicles platform", in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems,* 2024 **(acceptance ratio 25%)**.
29. Zheng Zhan, Yushu Wu, Zhenglun Kong, Changdi Yang, Yifan Gong, Xuan Shen, Xue Lin, Pu Zhao, Yanzhi Wang, "Rethinking token reduction for state space models", in *Conference on Empirical Methods in Natural Language Processing,* 2024 **(acceptance ratio 25%)**.
30. Pu Zhao, Fei Sun, Xuan Shen, Pinrui Yu, Zhenglun Kong, Yanzhi Wang, Xue Lin, "Pruning foundation models for high accuracy without retraining", in *Findings of the Association for Computational Linguistics: EMNLP,* 2024 **(acceptance ratio 35%)**.
31. Xuan Shen, Zhaoyang Han, Lei Lu, Zhenglun Kong, Peiyan Dong, Zhengang Li, Yanyue Xie, Chao Wu, Miriam Leeser, Pu Zhao, Xue Lin, Yanzhi Wang, "Hotaq: Hardware oriented token adaptive quantization for large language models", in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems,* 2024**(acceptance ratio 25%)**.
32. Lei Lu, Yanyue Xie, Wei Jiang, Wei Wang, Xue Lin, Yanzhi Wang, "Hybridflow: Infusing continuity into masked codebook for extreme low-bitrate image compression", in *32nd ACM international conference on multimedia,* 2024 **(acceptance ratio 30%)**.
33. Chao Wu, Yifan Gong, Liangkai Liu, Mengquan Li, Yushu Wu, Xuan Shen, Zhimin Li, Geng Yuan, Weisong Shi, Yanzhi Wang, "Aye-edge: Automated deployment space search empowering accuracy yet efficient real-time object detection on the edge", in *43rd*

IEEE/ACM International Conference on Computer-Aided Design, 2024 **(acceptance ratio 22%)**.

34. Yifan Gong, Zheng Zhan, Yanyu Li, Yerlan Idelbayev, Andrey Zharkov, Kfir Aberman, Sergey Tulyakov, Yanzhi Wang, Jian Ren, "Efficient training with denoised neural weights", in *European Conference on Computer Vision,* 2024**(acceptance ratio 30%)**.
35. Zichong Meng, Changdi Yang, Jun Liu, Hao Tang, Pu Zhao, Yanzhi Wang, "Instructgie: Towards generalizable image editing", in *European Conference on Computer Vision,*2024 **(acceptance ratio 30%)**.
36. Zichong Meng, Jie Zhang, Changdi Yang, Zheng Zhan, Pu Zhao, Yanzhi Wang, "Diffclass: Diffusion-based class incremental learning", in *European Conference on Computer Vision,* 2024 **(acceptance ratio 50%)**.
37. Liangkai Liu, Yanzhi Wang, Weisong Shi, "CPT: A Configurable Predictability Testbed for DNN Inference in Avs", in *Tsinghua Science and Technology,* 2024 **(acceptance ratio 25%)**.
38. Geng Yang, Yanyue Xie, Zhong Jia Xue, Sung-En Chang, Yanyu Li, Peiyan Dong, Jie Lei, Weiying Xie, Yanzhi Wang, Xue Lin, Zhenman Fang, "Sda: Low-bit stable diffusion acceleration on edge fpgas", in *34th International Conference on Field-Programmable Logic and Applications (FPL),* 2024 **(acceptance ratio 25%)**.
39. Pinrui Yu, Dan Luo, Timothy Rupprecht, Lei Lu, Zhenglun Kong, Pu Zhao, Yanyu Li, Octavia I Camps, Xue Lin, Yanzhi Wang, "FasterVD: On Acceleration of Video Diffusion Models", in *International Joint Conference on Artificial Intelligence* (IJCAI), 2024 **(acceptance ratio 13%)**.
40. Yifan Gong, Yushu Wu, Zheng Zhan, Pu Zhao, Liangkai Liu, Chao Wu, Xulong Tang, Yanzhi Wang, "Lotus: learning-based online thermal and latency variation management for two-stage detectors on edge devices", in *61st ACM/IEEE Design Automation Conference,* 2024 **(acceptance ratio 20%)**.
41. Zhengang Li, Xuan Shen, Geng Yuan, Masoud Zabihi, Tomoharu Yamauchi, Yanzhi Wang, Olivia Chen, "Late Breaking Result: AQFP-aware Binary Neural Network Architecture Search", in *61st ACM/IEEE Design Automation Conference,* 2024 **(acceptance ratio 40%)**.
42. Zhengang Li, Alec Lu, Yanyue Xie, Zhenglun Kong, Mengshu Sun, Hao Tang, Peiyan Dong, Caiwen Ding, Xue Lin, Zhenman Fang, and Yanzhi Wang, "Quasar-ViT: Hardware-Oriented Quantization-Aware Architecture Search for Vision Transformers", in *Proc. of International Conference on Supercomputing* (ICS), 2024**(Acceptance Rate: 24%)**
43. Yanyu Li, Xian Liu, Anil Kag, Ju Hu, Yerlan Idelbayev, Dhritiman Sagar, Yanzhi Wang, Sergey Tulyakov, Jian Ren, "TextCraft: Your text encoder can be image quality controller", in *Proc. of Computer Vision and Pattern Recognition* (CVPR), 2024 **(acceptance ratio 25%)**.
44. Zhengang Li, Yan Kang, Yuchen Liu, Difan Liu, Tobias Hinz, Feng Liu, and Yanzhi Wang, "SNED: Superposition network architecture search for efficient video diffusion model", in *Proc. of Computer Vision and Pattern Recognition* (CVPR), 2024 **(acceptance ratio 25%)**.
45. Timothy Rupprecht, Sung-En Chang, Yushu Wu, Lei Lu, Enfu Nan, Chih-hsiang Li, Caiyue Lai, Zhimin Li, Zhijun Hu, Yumei He, David Kaeli, Yanzhi Wang, "Digital avatars: framework development and evaluation", in in *International Joint Conference on Artificial Intelligence* (IJCAI), 2024 **(acceptance ratio 15%)**.
46. Pinrui Yu, Dan Luo, Timothy Rupprecht, Lei Lu, Zhenglun Kong, Pu Zhao, Yanyu Li, Octavia I Camps, Xue Lin, Yanzhi Wang, "FasterVD: On Acceleration of Video Diffusion Models", in *International Joint Conference on Artificial Intelligence* (IJCAI), 2024 **(acceptance ratio 15%)**.

47. Yifan Gong, Yushu Wu, Pu Zhao, Zheng Zhan, Liangkai Liu, Chao Wu, Xulong Tang, Yanzhi Wang, "Lotus: learning-based online thermal and latency variation management for two-stage detectors on edge devices", in *Proc. of Design Automation Conference,* 2024 **(acceptance ratio 20%)**.
48. Zhengang Li et al., "LBR: And-NAS: AQFP-aware binary neural network search", in *Proc. of Design Automation Conference,* 2024 **(acceptance ratio 20%)**.
49. Sheng Li, Geng Yuan, Yawen Wu, Yue Dai, Chao Wu, Alex Jones, Jingtong Hu, Yanzhi Wang, and Xulong Tang, "EdgeOL: Efficient in-situ online learning on edge devices", in *Proc. of International Conference on Learning Representation* (ICLR), 2024.
50. Xuan Shen, Peiyan Dong, et al., "Agile-Quant: Activation-Guided Quantization for Faster Inference of LLMs on the Edge", in *the AAAI Conference on Artificial Intelligence* (AAAI), 2024 **(Acceptance Rate: 20.9%)**
51. Yushu Wu, Chao Wu, Geng Yuan, et al., "DACO: Pursuing Ultra-low Power Consumption via DNN-Adaptive CPU-GPU CO-optimization on Mobile Devices", in *Proc. of the Design, Automation and Test in Europe Conference* (DATE), 2024.
52. Yanyue Xie, Peiyan Dong, et al., "SuperFlow: A Fully-Customized RTL-to-GDS Design Automation Flow for Adiabatic Quantum-Flux-Parametron Superconducting Circuits", in *Proc. of the Design, Automation and Test in Europe Conference* (DATE), 2024.
53. Malith Jayweera, Yanyu Li, Bin Ren, David Kaeli, and Yanzhi Wang, "EFCON: Deformable Convolutions Leveraging Interval Search and GPU Texture Hardware", in *Proc. of IEEE International Parallel and Distributed Processing Symposium* (IPDPS), 2024 **(acceptance ratio 20%)**.
54. Malith Jayweera, Martin Kong, Yanzhi Wang, and David Kaeli, "Energy-aware tile size selection for affine programs on GPUs", in *Proc. of Code Generation and Optimization Conference* (CGO), 2024 **(acceptance ratio 27%)**.
55. Husheng Han et al., "Real-Time Robust Video Object Detection System Against Physical-World Adversarial Attacks", in *IEEE Trans. on Computer Aided Design of Integrated Circuits and Systems* (TCAD), 2024.

Year 2023 Conference and Journals:

56. Peiyan Dong, Lei Lu, Chao Wu, Cheng Lyu, Geng Yuan, Hao Tang, and Yanzhi Wang, "PackQViT: Faster sub-8-bit vision transformers via full and packed quantization on the mobile", in *Proc. of Neural Processing Information Systems* (NeurIPS), 2023. **(acceptance ratio 25%)**
57. Peiyan Dong, Zhenglun Kong, Xin Meng, Pinrui Yu, Yifan Gong, Geng Yuan, Hao Tang, and Yanzhi Wang, "HoTBEV: Hardware-oriented transformer-based multi-view 3D detector for BEV perception", in *Proc. of Neural Processing Information Systems* (NeurIPS), 2023. **(acceptance ratio 25%)**
58. Yanyu Li, Huan Wang, Qing Jin, Ju Hu, Pavlo Chemerys, Yun Fu, Yanzhi Wang, Sergey Tulyakov, and Jian Ren, "SnapFusion: Text-to-image diffusion model on mobile devices within two seconds", in *Proc. of Neural Processing Information Systems* (NeurIPS), 2023. **(acceptance ratio 25%)**
59. Zhengang Li, Geng Yuan, Tomoharu Yamauchi, Massoud Zahibi, Yanyue Xie, Nobuyuki Yoshikawa, Devesh Tiwari, Olivia Chen, and Yanzhi Wang, "SupeRBNN: Randomized binary neural network using adiabatic superconductor Josephson devices", in 56th IEEE/ACM International Symposium on Microarchitecture (MICRO), 2023. **(acceptance ratio 18%)**

60. Hao Zhang, Malith Jayaweera, Bin Ren, Yanzhi Wang, and Sucheta Soundarajan, "Unfairness in distributed graph frameworks", in *Proc. of International Conference on Data Mining* (ICDM), 2023 **(acceptance ratio 20%)**.
61. Yanyu Li, Ju Hu, Yang Wen, Georgios Evangelidis, Kamyar Salahi, Yanzhi Wang, et al., "Rethinking vision transformers for MobileNet size and speed", in *Proc. of International Conference on Computer Vision* (ICCV), 2023 **(acceptance ratio 25.9%)**.
62. Changdi Yang, Yi Sheng, Peiyan Dong, Zhenglun Kong, Yanyu Li, Pinrui Yu, Lei Yang, Xue Lin, and Yanzhi Wang, "Fast and fair medical AI on the edge through neural architecture search for hybrid vision models", in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2023 **(acceptance ratio 23.5%)**.
63. Yushu Wu, Chao Wu, Yifan Gong, Zheng Zhan, Geng Yuan, Yanyu Li, Qi Wang, and Yanzhi Wang, "MOC: Multi-objective mobile CPU-GPU co-optimization for power-efficient DNN inference", in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2023 **(acceptance ratio 23.5%)**.
64. Peiyan Dong, Zhenglun Kong, Xin Meng, et al., "SpeedDETR: Speed-aware Transformers for End-to-end Object Detection", in *International Conference on Machine Learning* (ICML), 2023 **(acceptance ratio 19.8%)**.
65. Zifeng Wang, Zheng Zhan, Yifan Gong, Yucai Shao, Stratis Ioannidis, Yanzhi Wang, and Jennifer Dy, "DualHSIC: HSIC-Bottleneck and Alignment for Continual Learning", in *International Conference on Machine Learning* (ICML), 2023 **(acceptance ratio 19.8%)**.
66. Xuan Shen, Zhenglun Kong, Minghai Qin, et al., "Data Level Lottery Ticket Hypothesis for Vision Transformers", in *International Joint Conference on Artificial Intelligence* (IJCAI), 2023 **(acceptance ratio 15%)**.
67. Chuxu Zhang, Dongkuan Xu, et al., "ReIKD 2023: International Workshop on Resource-Efficient Learning for Knowledge Discovery", in Proc. of KDD, 2023.
68. Xuan Shen, Yaohua Wang, Ming Lin, Dylan Huang, Hao Tang, Xinyu Sun, and Yanzhi Wang, "DeepMAD: Mathematical architecture design for deep convolutional neural network", to appear in *Proc. of Computer Vision and Pattern Recognition* (CVPR), 2023 **(acceptance ratio 25%)**.
69. Shengkun Tang, Yaqing Wang, Zhenglun Kong, Tianchi Zhang, Yao Li, Caiwen Ding, Yanzhi Wang, Yi Liang, and Dongkuan Xu, "You need multiple exiting: dynamic early exiting for accelerating unified vision language model", to appear in *Proc. of Computer Vision and Pattern Recognition* (CVPR), 2023 **(acceptance ratio 25%)**.
70. Changdi Yang, Pu Zhao, Yanyu Li, Wei Niu, Jiexiong Guan, et al., "Pruning parameterization with bi-level optimization for efficient semantic segmentation on the edge", to appear in *Proc. of Computer Vision and Pattern Recognition* (CVPR), 2023 **(acceptance ratio 25%)**.
71. Yifan Gong, Pu Zhao, Zheng Zhan et al., "Condense: A framework for device and frequency adaptive neural network models on the edge", in *Proc. of Design Automation Conference* (DAC), 2023 **(acceptance ratio 20%)**.
72. Zhengang Li, Yanyue Xie, Xue Lin and Yanzhi Wang, "Ubiquitous deep learning acceleration on the edge", in *Proc. of Design Automation Conference* (DAC), 2023 **(acceptance ratio 20%)**.
73. Yifan Gong, Yuguang Yao, Yize Li, et al., "Reverse engineering of imperceptible adversarial image pertubations", in *Proc. of International Conference on Learning Representation* (ICLR), 2023.

74. Sizhe Chen, Geng Yuan, Xinwen Cheng, Yifan Gong et al., "Self-ensemble protection" training check-points are good data protectors", in *Proc. of International Conference on Learning Representation* (ICLR), 2023.
75. Sheng Li, Geng Yuan, Yue Dai, Youtao Zhang, Yanzhi Wang, and Xulong Tang, "SmartFRZ: An efficient training framework using attention-based layer freezing", in *Proc. of International Conference on Learning Representation* (ICLR), 2023.
76. Hongyu Li, Zhengang Li, Neset Akmandor, Huaizu Jiang, Yanzhi Wang, and Taskin Padir, "StereoVoxelNet: Real-Time Obstacle Detection Based on Occupancy Voxels from a Stereo Camera Using Deep Neural Networks", in *International Conference on Robotic Automation* (ICRA), 2023.
77. Yanyu Li, Changdi Yang, Pu Zhao, Geng Yuan, et al., "Towards real-time segmentation on the edge", in *the AAAI Conference on Artificial Intelligence* (AAAI), 2023. **(Acceptance Rate: 20.9%)**
78. Zhenglun Kong, Haoyu Ma, Geng Yuan, Mengshu Sun, et al., "Peeling the onion: hierarchical reduction of data redundancy for efficient vision transformer training", in *the AAAI Conference on Artificial Intelligence* (AAAI), 2023. **(Acceptance Rate: 20.9%)**
79. Sung-En Chang, Geng Yuan, Alec Lu, Mengshu Sun, Yanyu Li, Xiaolong Ma, Zhengang Li, Yanyue Xie, Minghai Qin**,** Xue Lin, Zhenman Fang, and Yanzhi Wang, "ESRU: Extremely low-bit and hardware-efficient stochastic rounding unit design for 8-bit DNN training", in *Proc. of the Design, Automation and Test in Europe Conference* (DATE), 2023.
80. Peiyan Dong, Mengshu Sun, Alec Lu, et al., "HeatViT: Hardware-efficient adaptive token pruning for vision transformers", in *Proc. of the IEEE International Symposium on High Performance Computer Architecture* (HPCA), 2023. **(Acceptance Rate: 24%)**
81. Jou-An Chen, Wei Niu, Bin Ren, Yanzhi Wang, and Xipeng Shen, "Survey: Exploiting Data Redundancy for Optimization of Deep Learning", to appear in ACM Computing Surveys, 2023 (**Impact Factor 14.32**).
82. Yushuo Guan, Ning Liu, et al., "DAIS: Automatic Channel Pruning via Differentiable Annealing Indicator Search", to appear in IEEE TNNLS, 2023 (**Impact Factor 12.18**).
83. Zeinab Jalali, Chenghong Wang, et al., "Memristor-based spectral decomposition of matrices and its applications" to appear in *IEEE Trans, on Computers*, 2023.
84. Yinan Tang, Tongtong Yuan, Zhiyuan Xu, Weiyi Zhang, Jian Tang, Guoliang Xue, and Yanzhi Wang, "AI-enabled experience-driving networking: vision, state-of-the-art and future directions", *IEEE Network Magazine*, 2023. **(Impact Factor 10.3)**
85. Chen Pan, Wen Zhang, Yanzhi Wang, and Mimi Xie, "ELIXIR: An expedient connection paradigm for self-powered IoT devices", in *IEEE Trans. on Computer Aided Design of Integrated Circuits and Systems* (TCAD), 2023.
86. Zhiyuan Xu, Dejun Yang, Chengxiang Yin, Jian Tang, Yanzhi Wang, and Guoliang Xue, "A co-scheduling framework for DNN models on mobile and edge devices with heterogeneous hardware", to appear in *IEEE Trans. on Mobile Computing* (TMC), 2023. **(Impact Factor 6.1)**

Year 2022 Conference:

87. Yanyu Li, Geng Yuan, et al., "Efficientformer: vision transformers at mobilenet speed", in *Proc. of Neural Processing Information Systems* (NeurIPS), 2022. **(acceptance ratio 25%)**
88. Yihua Zhang, Yuguang Yao, et al., "Advancing Model Pruning via Bi-level Optimization", in *Proc. of Neural Processing Information Systems* (NeurIPS), 2022. **(acceptance ratio 25%)**

89. Zifeng Wang, Zheng Zhan, et al., "SparCL: Sparse Continual Learning on the Edge", in *Proc. of Neural Processing Information Systems* (NeurIPS), 2022. **(acceptance ratio 25%)**
90. Geng Yuan, Yanyu Li, et al., "Layer Freezing & Data Sieving: Missing Pieces of a Generic Framework for Sparse Training", in *Proc. of Neural Processing Information Systems* (NeurIPS), 2022. **(acceptance ratio 25%)**
91. Liangkai Liu, Zheng Dong, Yanzhi Wang and Weisong Shi, "Prophet: Realizing a Predictable Real-time Perception Pipeline for Autonomous Vehicles", in *Proc. of IEEE Real-Time Systems Symposium* (RTSS), 2022.
92. Wei Niu, Jiexiong Guan, Xipeng Shen, Yanzhi Wang, Gagan Agrawal, Bin Ren, "*GCD^2: A Globally Optimizing Compiler for Mapping DNNs to Mobile DSPs",* in 55th IEEE/ACM International Symposium on Microarchitecture (MICRO), 2022. **(acceptance ratio 18%)**
93. Zifeng Wang, Tong Jian, Jennifer Dy, Yanzhi Wang, and Stratis Ioannidis, "Pruning Adversarially Robust Neural Networks without Adversarial Examples", in *Proc. of International Conference on Data Mining* (ICDM), 2022 **(acceptance ratio 20%)**.
94. Yifan Gong, Zheng Zhan, Pu Zhao, Yushu Wu, Chao Wu, Caiwen Ding, Weiwen Jiang, Minghai Qin, and Yanzhi Wang, "All-in-One: A Highly Representative DNN Pruning Framework for Edge Devices with Dynamic Power Management", in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2022 **(acceptance ratio 23.5%)**.
95. Zhirui Hu, Peiyan Dong, Zhepeng Wang, Youzuo Lin, Yanzhi Wang, and Weiwen Jiang, "Quantum Neural Network Compression", in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2022 **(acceptance ratio 23.5%)**.
96. Yushu Wu, Yifan Gong, Pu Zhao, Yanyu Li, Zheng Zhan, Wei Niu, Hao Tang, Minghai Qin, Bin Ren, and Yanzhi Wang, "Compiler-Aware Neural Architecture Search for On-Mobile Real-time Super-Resolution", in *Proc. of European Conference on Computer Vision* (ECCV), 2022.
97. Zhenglun Kong, Peiyan Dong, et al., "SPViT: Enabling Faster Vision Transformers via Soft Token Pruning", in *Proc. of European Conference on Computer Vision* (ECCV), 2022.
98. Geng Yuan, Sung-en Chang, et al., "You Already Have It: A Generator-Free Low-Precision DNN Training Framework using Stochastic Rounding", in *Proc. of European Conference on Computer Vision* (ECCV), 2022.
99. Tianlong Chen, Xuxi Chen, Xiaolong Ma, Yanzhi Wang, and Zhangyang Wang, "Coarsening the granularity: towards structurally sparse lottery tickets", in *International Conference on Machine Learning* (ICML), 2022 **(acceptance ratio 19.8%)**.
100. Yanyu Li, Pu Zhao, Geng Yuan, Xue Lin, Yanzhi Wang, and Xin Chen, "Pruning-as-Search: Efficient Neural Architecture Search via Channel Pruning and Structural Reparameterization", in *International Joint Conference on Artificial Intelligence* (IJCAI), 2022 **(acceptance ratio 15%)**.
101. Yanyu Li*,* Xuan Shen, Geng Yuan, Jiexiong Guan, Wei Niu, Hao Tang, Bin Ren, Yanzhi Wang, "Real-Time Portrait Stylization on the Edge", in *International Joint Conference on Artificial Intelligence* (IJCAI), 2022 (Demonstration Track).
102. Pu Zhao et al., "Learning to generate image source-agnostic universal adversarial perturbations", in *International Joint Conference on Artificial Intelligence* (IJCAI), 2022 **(acceptance ratio 15%)**.
103. Qing Jin, Jian Ren, Richard Zhaung, Sumant Hanumante, Zhengang Li, Zhiyu Chen, Kaiyuan Yang, Yanzhi Wang, and Sergey Tulyakov, "F8Net: Fixed-Point 8-bit Only Multiplication for Network Quantization", in *Proc. of International Conference on Learning Representation* (ICLR), 2022. **(Oral Paper: Top 1.5%)**

104. Xiaolong Ma, Minghai Qin, Fei Sun, Zejiang Hou, Kun Yuan, Yi Xu, Yanzhi Wang, Yen-Kuang Chen, Rong Jin, and Yuan Xie, "Effective Model Sparsification by Scheduled Grow-and-Prune Methods", in *Proc. of International Conference on Learning Representation* (ICLR), 2022.
105. Yifan Gong, Yuguang Yao, et al., "Reverse Engineering of Imperceptible Adversarial Image Perturbations", in *Proc. of International Conference on Learning Representation* (ICLR), 2022.
106. Peiyan Dong, Yanyue Xie, Hongjia Li, Mengshu Sun, Olivia Chen, Nobuyuki Yoshikawa, and Yanzhi Wang, "TAAS: A Timing-Aware Analytical Strategy for AQFP-Capable Placement Automation", in *Proc. of Design Automation Conference* (DAC), 2022 **(acceptance ratio 20%)**.
107. Mengshu Sun, Zhengang Li, et al., "FPGA-Aware Automatic Acceleration Framework for Vision Transformer with Mixed-Scheme Quantization", in *Proc. of Design Automation Conference* (DAC) LBR, 2022 **(acceptance ratio 20%)**.
108. Sung-en Chang, Geng Yuan, et al., "Hardware-efficient stochastic rounding unit design for DNN training", to appear in *Proc. of Design Automation Conference* (DAC) LBR, 2022 **(acceptance ratio 20%)**.
109. Hsin-Hsuan Sung et al., "Enabling Level-4 Autonomous Driving on a Single $1k Off-the-Shelf Card", in *Proc. of* RTAS 2022 (Industry Paper).
110. Bingyao Li, Qi Xue, Geng Yuan, Sheng Li, Xiaolong Ma, Yanzhi Wang, and Xulong Tang, "Optimizing data layout for trainining deep neural networks", in the *Proc. of* WWW, 2022.
111. Mengshu Sun, Sheng Lin, Shan Liu, Wei Jiang, Wei Wang, Yanzhi Wang and Songnan Li, "Hardware-Friendly Acceleration for Deep Neural Networks with Micro-Structured Compression", in *Proc. of* FCCM 2022.
112. Zhiyu Chen, Qing Jin, Zhanghao Yu, Yanzhi Wang, and Kaiyuan Yang, "DCT-RAM: A Driver-Free Process-In-Memory 8T SRAM Macro with Multi-Bit Charge-Domain Computation and Time-Domain Quantization", in *Proc. of* CICC, 2022.
113. Nasim Soltani, Yanyu Li, Deniz Erdogmus, Yanzhi Wang, and Kaushik Chowdhurry, "NN-key: A neural network-based secret key for demapping OFDM symbols", in *Proc. of* CCNC, 2022.
114. Md. Oli-Uz-Zaman, Saleh Ahmad Khan, Geng Yuan, Yanzhi Wang, Zhiheng Liao, Jingyan Fu, Caiwen Ding, and Jinhui Wang, "Reliability improvement in RRAM-based DNN for edge computing", in *Proc. of* ISCAS, 2022.
115. Xiaolong Ma, Geng Yuan, Zhengang Li et al., "BLCR: Towards real-time DNN execution with block-based reweighted pruning", in *Proc. of* ISQED, 2022.
116. Mengshu Sun et al., "FILM-QNN: Efficient FPGA Acceleration of Deep Neural Networks with Intra-Layer, Mixed-Precision Quantization", in *Proc. of ACM International Symposium on Field Programmable Gate Arrays* (FPGA), 2022. **(Acceptance Rate: 25%)**
117. Sung-en Chang et al., "Low-Bit DNN Training with Hardware-Efficient Stochastic Rounding Unit Design", in HAET Workshop at ICML 2022. **(2nd Place Paper Award)**

Year 2022 Journal:

118. Cheng Gong et al., "Elastic Significant Bit Quantization and Acceleration for Deep Neural Networks" in IEEE TPDS, 2022 (**Impact Factor 4.2**).
119. Yifan Gong, Zheng Zhan, et al., "Automatic Mapping of the Best-Suited DNN Pruning Schemes for Real-Time Mobile Acceleration", in IEEE TODAES, 2022.
120. Nasim Soltani et al., "Neural Network-based OFDM Receiver for Resource Constrained IoT Devices", in *IEEE Internet of Things Magazine*, 2022 (**Impact Factor 9.9**).

121. Runze Han, Peng Huang, Yachen Xiang et al., "Floating Gate Transistor-based Accurate Digital In-Memory Computing for Deep Neural Networks", in *Advanced Intelligent Systems*, 2022 (**Impact Factor 7.3**).
122. Bahar Azari, hai Cheng, Nasim Soltami et al., "Automated deep learning-based wide-band receiver", in *Computer Networks*, 2022 (**Impact Factor 4.5**).
123. Timothy Rupprecht and Yanzhi Wang, "A survey for deep reinforcement learning in markovian cyber-physical systems: Common problems and solutions", *Elsevier Neural Networks Journal*, 2022 (**Impact Factor 9.7**).
124. Fuxun Yu, Zirui Xu, Chenchen Liu, et al., "AntiDoteX: Attention-Based Dynamic Optimization for Neural Network Runtime Efficiency", in *IEEE Trans. on Computer Aided Design* (TCAD), 2022.
125. Geng Yuan, Peiyan Dong, Mengshu Sun, et al., "Mobile or FPGA? A comprehensive evaluation on energy efficiency and a unified optimization framework", in *ACM Trans. on Embedded Computing Systems* (TECS), 2022.
126. Jingyu Wang, Songming Yu, Zhuqing Yuan, et al., "PACA: A Pattern Pruning Algorithm and Channel-Fused High PE Utilization Accelerator for CNNs", in *IEEE Trans. on Computer Aided Design* (TCAD), 2022.
127. Yixuan Hu et al., "A 28nm 198.9 TOPS/W Fault-Tolerant Stochastic Computing Neural Network Processor", in *IEEE Solid-State Circuits Letters*, 2022.
128. Chengxiang Yin, Jian Tang, Tongtong Yuan, Zhiyuan Xu, and Yanzhi Wang, "Bridging the gap between semantic segmentation and instance segmentation", in *IEEE Trans. on Multimedia*, 2022. **(Impact Factor 5.5)**
129. Wei Niu, Zhengang Li, Xiaolong Ma, Peiyan Dong, Gang Zhou, Xuehai Qian, Xue Lin, Yanzhi Wang, and Bin Ren, "GRIM: A general real-time deep learning inference framework for mobile devices based on fine-grained structured weight sparsity", in *IEEE Trans. on Pattern Recognition and Machine Intelligence* (TPAMI), 2022. **(Impact Factor 17.86)**
130. Tianyun Zhang, Shaokai Ye, Xiaoyu Feng, Xiaolong Ma, Kaiqi Zhang, Zhengang Li, Jian Tang, Sijia Liu, Xue Lin, Yongpan Liu, Makan Fardad, and Yanzhi Wang, "StructADMM: Achieving Ultra-High Efficiency in Structured Pruning for DNNs", in *IEEE Trans. on Neural networks and Learning Systems* (TNNLS), 2022. **(Impact Factor 12.18)**
131. Yanzhi Wang et al., "Non-Structured DNN Weight Pruning: Is it Beneficial in Any Problem?", in *IEEE Trans. on Neural networks and Learning Systems* (TNNLS), 2022. **(Impact Factor 12.18)**
132. Zhiyuan Xu, Jian Tang, Chengxiang Yin, Yanzhi Wang, Guoliang Xue, Jing Wang, and Mustafa Gursoy, "ReCARL: Resource Allocation in Cloud RANs with Deep Reinforcement Learning", in *IEEE Trans. on Mobile Computing* (TMC), 2022. **(Impact Factor 6.1)**
133. Tong Jian, Zifeng Wang, Zheng Zhan, Nasim Soltani, Yifan Gong, Runbin Shi, Kaushik Chowdhury, Jennifer Dy, Yanzhi Wang, and Stratis Ioannidis, "Radio frequency fingerprinting on the edge", in *IEEE Trans. on Mobile Computing* (TMC), 2022. **(Impact Factor 6.1)**

Year 2021 Conference:

134. Geng Yuan, Xiaolong Ma, et al., "MEST: Accurate and Fast Memory-Economic Sparse Training Framework on the Edge", in *Proc. of Neural Processing Information Systems* (NeurIPS), 2021 **(Spotlight paper, top 5%)**
135. Xiaolong Ma, Geng Yuan, et al., "Sanity Checks for Lottery Tickets: Does Your Winning Ticket Really Win the Jackpot?", to appear in *Proc. of Neural Processing Information*

Systems (NeurIPS), 2021 **(acceptance ratio 26%)**

136. Husheng Han, Kaidi Xu, Xing Hu, et al., "ScaleCert: Scalable Certified Defense against Adversarial Patches with Sparse Superficial Layers", to appear in *Proc. of Neural Processing Information Systems* (NeurIPS), 2021 **(acceptance ratio 26%)**
137. Kaidi Xu et al., "Beta-CROWN: Efficient Bound Propagation with Per-neuron Split Constraints for Neural Network Robustness Verification", to appear in *Proc. of Neural Processing Information Systems* (NeurIPS), 2021 **(acceptance ratio 26%)**
138. Sung-en Chang, Yanyu Li, Mengshu Sun, Weiwen Jiang, Sijia Liu, Yanzhi Wang, and Xue Lin, "RMSMP: A novel deep neural network quantization framework with row-wise mixed schemes and multiple precisions", to appear in *Proc. of International Conference on Computer Vision* (ICCV), 2021 **(acceptance ratio 25.9%)**.
139. Fangxin Liu, Wenbo Zhao, Zhezhi He, Yanzhi Wang, Zongwu Wang, Changzhi Dai, Xiaoyao Liang, and Li Jiang, "Improving neural network efficiency via post-training quantization with adaptive floating-point", to appear in *Proc. of International Conference on Computer Vision* (ICCV), 2021 **(acceptance ratio 25.9%)**.
140. Zheng Zhan, Yifan Gong, Pu Zhao, et al., "Achieving on-Mobile Real-Time Super-Resolution with Neural Architecture and Pruning Search", to appear in *Proc. of International Conference on Computer Vision* (ICCV), 2021 **(acceptance ratio 25.9%)**.
141. Weizheng Xu, Ashutosh Pattnaik, Geng Yuan, Yanzhi Wang, Youtao Zhang, and Xulong Tang, "ScaleDNN: Data Movement Aware DNN Training on Multi-GPU", to appear in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2021 **(acceptance ratio 23.5%)**.
142. Ning Liu, Geng Yuan, Xiaolong Ma, Xuan Shen, Qing Jin, Jian Ren, Jian Tang, Sijia Liu, and Yanzhi Wang, "Lottery ticket preserves weight correlation: Is it desirable or not?" to appear in *Proc. of International Conference on Machine Learning* (ICML), 2021. **(Acceptance Rate: 21.4%)**
143. Wei Niu, Jiexiong Guan, Gagan Agrawal, Yanzhi Wang, and Bin Ren, "DNNFusion: Accelerating deep neural networks execution with advanced operator fusion", to appear in *Proc. of ACM International Conference on Programming Language Design and Implementation* (PLDI), 2021. **(Acceptance Rate: 21%)**
144. Geng Yuan, Payman Behnam, Zhengang Li, Ali Shafiee, Sheng Lin, Xiaolong Ma, Hang Liu, Xuehai Qian, Mahdi Bojnordi, Yanzhi Wang, and Caiwen Ding, "FORMS: Fine-grained polarized ReRAM-based in-situ computation with mixed-signal DNN accelerator", in *Proc. of International Symposium on Computer Architecture* (ISCA), 2021. **(Acceptance Rate: 18.9%)**
145. Chengming Zhang, Geng Yuan, Wei Niu, Jiannan Tian, Sian Jin, Donglin Zhuang, Zhe Jiang, Yanzhi Wang, Bin Ren, Shuaiwen Leon Song, and Dingwen Tao, "ClickTrain: Efficient and accurate end-to-end deep learning training via fine-grained architecture-preserving pruning", in *Proc. of International Conference on Supercomputing* (ICS), 2021. **(Acceptance Rate: 24%)**
146. Zhengang Li et al., "NPAS: A compiler-aware framework of unified network pruning and architecture search for beyond real-time mobile acceleration", in *Proc. of Computer Vision and Pattern Recognition* (CVPR), 2021. **(Oral paper, Top 5%)**
147. Qing Jin, Jian Ren, Oliver Woodford, Jiazhuo Wang, Geng Yuan, Yanzhi Wang, and Sergey Tulyakov, "Teachers do more than teach: Compressing image-to-image models", to appear in *Proc. of Computer Vision and Pattern Recognition* (CVPR), 2021. **(Acceptance Rate: 25%)**

148. Pu Zhao, Geng Yuan, Yuxuan Cai, Wei Niu, Qi Liu, Wujie Wen, Bin Ren, Yanzhi Wang, and Xue Lin, "Neural pruning search for real-time object detection of autonomous vehicles", to appear in *Proc. of Design Automation Conference* (DAC), 2021. **(Acceptance Rate: 24%)**
149. Tianyun Zhang, Xiaolong Ma, Zheng Zhan, Shanglin Zhou, Caiwen Ding, Makan Fardad, and Yanzhi Wang, "A unified DNN weight pruning framework using reweighted optimization methods", to appear in *Proc. of Design Automation Conference* (DAC), 2021. **(Acceptance Rate: 24%)**
150. Xuan Shen, Geng Yuan, Wei Niu, Bin Ren, and Yanzhi Wang, "Towards fast and accurate multi-person pose estimation on mobile devices", to appear in *International Joint Conference on Artificial Intelligence* (IJCAI), 2021. (Demonstration Track)
151. Wei Niu, Zhenglun Kong, Geng Yuan, Weiwen Jiang, Bin Ren, and Yanzhi Wang, "A compression-compilation framework for on-mobile real-time BERT applications", to appear in *International Joint Conference on Artificial Intelligence* (IJCAI), 2021. (Demonstration Track)
152. Yuxuan Cai, Hongjia Li, Geng Yuan, Wei Niu, Yanyu Li, Xulong Tang, Bin Ren, and Yanzhi Wang, "YOLObile: Real-Time Object Detection on Mobile Devices via Compression-Compilation Co-Design", in *the Thirty Third AAAI Conference on Artificial Intelligence* (AAAI), 2021. **(Acceptance Rate: 20.9%)**
153. Wei Niu, Mengshu Sun, Zhengang Li, Jou-An Chen, Jiexiong Guan, Xipeng Shen, Xue Lin, Bin Ren, and Yanzhi Wang, "RT3D: Achieving Real-Time Execution of 3D Convolutional Neural Networks on Mobile Devices", in *the Thirty Third AAAI Conference on Artificial Intelligence* (AAAI), 2021. **(Acceptance Rate: 20.9%)**
154. Yuxuan Cai, Hongjia Li, Geng Yuan, Wei Niu, Yanyu Li, Xulong Tang, Bin Ren, and Yanzhi Wang, "A Compression-Compilation Co-Design Framework Towards Real-Time Object Detection on Mobile Devices", in *the Thirty Third AAAI Conference on Artificial Intelligence* (AAAI) (Demonstration Paper), 2021. **(Acceptance Rate: 20.9%)**
155. Pu Zhao et al., "Towards real-time 3D object detection for autonomous vehicles with pruning search", in *Proc. of IEEE Real-Time and Embedded Technology and Applications Symposium* (RTAS), 2021. (Industry Paper)
156. Jinliang Xie, Jie Tang, Yanzhi Wang, Qi Zhu, and Shaoshan Liu, "An infrastructure-aided high definition map data provisioning service for autonomous driving", in *Proc. of IEEE Real-Time and Embedded Technology and Applications Symposium* (RTAS), 2021. (Industry Paper)
157. Sung-en Chang, Yanyu Li, Mengshu Sun, Runbin Shi, Hayden So, Yanzhi Wang, Xuehai Qian, and Xue Lin, "Mix and Match: A Novel FPGA-Centric Deep Neural Network Quantization Framework" in *Proc. of High-Performance Computing Architecture* (HPCA), 2021. **(Acceptance Rate: 24%)**
158. Geng Yuan, Yuxuan Cai, et al., "TinyADC: Peripheral Circuit-aware Weight Pruning Framework for Mixed-signal DNN Accelerators", in *Proc. of Design Automation and Test in Europe* (DATE), 2021. **(Best Paper Nomination)**
159. Hongjia Li, Mengshu Sun, Tianyun Zhang, Olivia Chen, Nobuyuki Yoshikawa, Bei Yu, Yanzhi Wang, and Yibo Lin, "Towards AQFP-capable physical design automation", in *Proc. of Design Automation and Test in Europe* (DATE), 2021.
160. Teng Li, Zhiyuan Xu, Jian Tang, Kun Wu, and Yanzhi Wang, "EXTRA: An experience-driving control framework for distributed stream data processing with a variable number of threads", in *Proc. of IEEE/ACM International Symposium on Quality of Service* (IWQoS), 2021. **(Acceptance Rate: 25%)**

161. Qin Li et al., “A 22.3 nJ/frame low-memory beyond-real-time keyword-spotting chip with configurable feature extraction and distributed perceptual computation”, in *International Symposium on Solid-State Circuits* (ISSCC) SRP, 2021.
162. Malith Jayaweera, Yanzhi Wang, and David Kaeli, “Data vs. instructions: runtime code generation for convolutions”, in *Proc. of IEEE/ACM International Symposium on Code Generation and Optimization* (CGO) SRC, 2021 **(First-place award at Student Research Competition)**
163. Geng Yuan, Xiaolong Ma, Zhengang Li, Wei Niu, Bin Ren, Xue Lin, and Yanzhi Wang, “Memory-bounded sparse training on the edge”, in *HAET Workshop at International Conference on Learning Representation* (ICLR), 2021. **(Best Paper Award)**

Year 2021 Journal:

164. Shaoshan Liu, Bin Ren, Xipeng Shen, Yanzhi Wang, “CoCoPIE: Enabling Real-Time AI on Off-the-Shelf Mobile Devices via Compression-Compilation Co-Design“, in *Communications of ACM* (CACM), 2021. **(CACM Featured Article with Interview)** (https://cacm.acm.org/magazines/2021/6/252819-cocopie/fulltext)
165. Zhiyuan Xu, Dejun Yang, Jian Tang, Yinan Tang, Tongtong Yuan, Yanzhi Wang, and Guoliang Xue, “An actor-critic-based transfer learning framework for experience-driven networking“, in *IEEE/ACM Trans. on Networking* (ToN), 2021. **(Impact Factor 5.1)**
166. Jinshan Yue et al., “STICKER-T: An Energy Efficient Neural Network Processor Using Block-Circulant Algorithm and Unified Frequency-Domain Acceleration“, in *IEEE Journal of Solid-State Circuits* (JSSC), 2021. **(Impact Factor 5.2)**
167. Youwei Zhuo et al., “Distributed graph processing system and process-in-memory architecture with precise loop-carried dependency guarantee”, in *ACM Trans. on Computer Systems* (TOCS), 2021.
168. Zhiyu Chen et al., “CAP-RAM: A Charge-Domain In-Memory Computing 6T-SRAM for Accurate and Precision-Programmable CNN Inference”, in *IEEE Journal of Solid-State Circuits* (JSSC), 2021. **(Impact Factor 5.2)**
169. Zhiyuan Xu, Kun Wu, Weiyi Zhang, Jian Tang, Yanzhi Wang, and Guoliang Xue, “PnP-DRL: a plug-and-play deep reinforcement learning approach for experience-driven networking”, in *IEEE Journal on Selected Areas in Communications* (JSAC), 2021.
170. Qin Li et al., “NS-FDN: Near-Sensor processing architecture of Feature-configurable Distributed Network for beyond-real-time always-on keyword spotting”, in *IEEE Trans. on Circuits and Systems I* (TCAS-I), 2021.

Year 2020 Conference:

171. Yi-Chen Chang, Hongjia Li, Olivia Chen, Yanzhi Wang, Nobuyuki Yoshikawa, and Tsung-yi Ho, “ASAP: An Analytical Strategy for AQFP Placement“, in *Proc. of International Conference on Computer-Aided Design* (ICCAD), 2020. **(Acceptance Rate: 24%)**
172. Qi Liu, Wujie Wen, and Yanzhi Wang, “Concurrent Weight Encoding-based Detection for Bit-Flip Attack on Neural Network Accelerators“, in *Proc. of International Conference on Computer-Aided Design* (ICCAD), 2020. **(Acceptance Rate: 24%)**
173. Kaidi Xu, Gaoyuan Zhang, Sijia Liu, Quanfu Fan, Mengshu Sun, Hongge Chen, Pin-yu Chen, Yanzhi Wang, and Xue Lin, “Adversarial T-shirt! evading person detectors in a physical world“, in *Proc. of European Conference on Computer Vision* (ECCV), 2020. **(Spotlight Presentation, Top 5%)**

174. Xiaolong Ma, Wei Niu, Tianyun Zhang, Sijia Liu, Sheng Lin, Hongjia Li, Xiang Chen, Jian Tang, Kaisheng Ma, Bin Ren, and Yanzhi Wang, "An Image Enhancing Pattern-based Sparsity for Real-Time Inference on Mobile Devices", in *Proc. of European Conference on Computer Vision* (ECCV), 2020. **(Acceptance Rate: 26%)**
175. Wei Niu, Mengshu Sun, Zhengang Li, Geng Yuan, Pu Zhao, Xue Lin, Yanzhi Wang, and Bin Ren, "Real-time 3D CNN Inference for Action Recognition on Mobile Devices", in *European Conference on Computer Vision* (ECCV), 2020. (Demonstration Paper) **(Acceptance Rate: 26%)**
176. Zheng Zhan, Pu Zhao, Geng Yuan, Wei Niu, Bin Ren, Xue Lin, and Yanzhi Wang, "Real-time DNN Accelerations on Mobile Devices for Versatile Practical Deep Learning Applications", in *European Conference on Computer Vision* (ECCV), 2020. (Demonstration Paper) **(Acceptance Rate: 26%)**
177. Zifeng Wang, Tong Jian, Kaushik Chowdhury, Yanzhi Wang, Jennifer Dy, and Stratis Ioannidis, "Learn-Prune-Share for Lifelong Learning", in *International Conference on Data Mining* (ICDM), 2020. **(Full Paper Acceptance Rate: 9.8%)**
178. Shichao Xu, Yixuan Wang, Yanzhi Wang, Zheng O'Neill, and Qi Zhu, "One for many: transfer learning for building HVAC control", in *Proc. of International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation* (Buildsys), 2020. **(Acceptance Rate: 20%)**
179. Masuma Akter Rumi, Xiaolong Ma, Yanzhi Wang, and Peng Jiang, " Accelerating Sparse CNN Inference on GPUs with Performance-Aware Weight Pruning", in *Proc. of International Conference on Parallel Architectures and Compilation Techniques* (PACT), 2020. **(Acceptance Rate: 26%)**
180. Wei Niu, Pu Zhao, Zheng Zhan, Xue Lin, Yanzhi Wang, and Bin Ren, "Towards Real-Time DNN Inference on Mobile Platforms with Model Pruning and Compiler Optimization" in *Proc. of International Joint Conferences on Artificial Intelligence Organization* (IJCAI), 2020. **(Acceptance Rate: 15.8%)**
181. Runbin Shi, Peiyan Dong, Tong Geng, Yuhao Ding, Xiaolong Ma, Martin Herbordt, Ang Li, Hayden So, and Yanzhi Wang, "CSB-RNN: A faster-than-realtime RNN Acceleration Framework with Compressed Structured Blocks", in *Proc. of International Conference on Supercomputing* (ICS), 2020. **(Acceptance Rate: 25%)**
182. Wei Niu, Xiaolong Ma, Sheng Lin, Shihao Wang, Xuehai Qian, Xue Lin, Yanzhi Wang, and Bin Ren, "PatDNN: Achieving real-time DNN execution on mobile devices with pattern-based weight pruning" in *ACM International Conference on Architectural Support for Programming Languages and Operating Systems* (ASPLOS), 2020. **(Acceptance Rate: 17.4%)**
183. Chaoqun Chu, Yanzhi Wang, Yilong ZHao, Xiaolong Ma, Shaokai ye, Yunyan Hong, Xiaoyao Liang, Yinhe Han, Yun Chen, Xiaosong Cui, and Li Jiang, "PIM-Prune: Fine-grained DCNN pruning for crossbar-based process-in-memory architecture", in *Design Automation Conference* (DAC), 2020. **(Acceptance Rate: 22%)**
184. Zhanhong Tan, Jiebo Song, Xiaolong Ma, Sia-Huat Tan, Hongyang Chen, Yuanqing Miao, Yifu Wu, Shaokai Ye, Yanzhi Wang, Dehui Li, and Kaisheng Ma, "PCNN: Pattern-based fine-grained regular pruning towards optimizing CNN accelerators", in *Design Automation Conference* (DAC), 2020. **(Acceptance Rate: 22%)**
185. Peiyan Dong, Siyue Wang, Wei Niu, Chengming Zhang, Sheng Lin, Zhengang Li, Yifan Gong, Bin Ren, Xue Lin, Yanzhi Wang, Dingwen Tao, "RTMobile: Beyond Real-time Mobile Acceleration of RNNs for Speech Recognition", in *Design Automation Conference* (DAC), 2020. **(Acceptance Rate: 22%)**

186. Youwei Zhuo, Jingji Chen, Qinyi Luo, Yanzhi Wang, Hailong Yang, Depei Qian, and Xuehai Qian, "SympleGraph: Distributed graph processing with precise loop-carried dependency guarantee", in *ACM SIGPLAN Conference on Programming Language Design and Implementation* (PLDI), 2020. **(Acceptance Rate: 17.4%)**
187. Fuxun Yu, Chenchen Liu, Di Wang, Yanzhi Wang, Xiang Chen, "AntiDOte: Attention-based dynamic optimization for neural network runtime efficiency", in *Proc. of Design Automation and Test in Europe* (DATE), 2020. **(Best Paper Nomination)**
188. Yawen Zhang, Sheng Lin, Runsheng Wang, Yanzhi Wang, Yuan Wang, Weikang Qian, Ru Huang, "When Sorting Network Meets Parallel Bitstreams: A Fault-Tolerant Parallel Ternary Neural Network Accelerator based on Stochastic Computing", in *Proc. of Design Automation and Test in Europe* (DATE), 2020.
189. Qin Li, Sheng Lin, Changlu Liu, Yidong Liu, Fei Qiao, Yanzhi Wang, Huazhong Yang, "NS-KWS: joint optimization of near-sensor processing architecture and low-precision GRU for always-on keyword spotting", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2020.
190. Xiaolong Ma, Fu-Ming Guo, Wei Niu, Xue Lin, Jian Tang, Kaisheng Ma, Bin Ren, and Yanzhi Wang, "PCONV: the missing but desirable sparsity in DNN weight pruning for real-time execution on mobile device", in *the Thirty Third AAAI Conference on Artificial Intelligence* (AAAI), 2020. **(Acceptance Rate: 20.9%)**
191. Ning Liu, Xiaolong Ma, Zhiyuan Xu, Yanzhi Wang, Jian Tang, and Jieping Ye, "AutoCompress: an automatic DNN structured pruning framework for ultra-high compression rates", in *the Thirty Third AAAI Conference on Artificial Intelligence* (AAAI), 2020. **(Acceptance Rate: 20.9%)**
192. Ao Ren, Tao Zhang, Yuhao Wang, Sheng Lin, Peiyan Dong, Yen-kuang Chen, Yuan Xie, and Yanzhi Wang, "DARB: a density-adaptive regular-block pruning for deep neural networks", in *the Thirty Third AAAI Conference on Artificial Intelligence* (AAAI), 2020. **(Acceptance Rate: 20.9%)**
193. Siyu Liao, Jie Chen, Yanzhi Wang, Qinru Qiu, and Bo Yuan, "Embedding compression with isotropic iterative quantization", in *the Thirty Third AAAI Conference on Artificial Intelligence* (AAAI), 2020. **(Acceptance Rate: 20.9%)**
194. Yuxuan Cai, Hongjia Li, Geng Yuan, Wei Niu, Yanyu Li, Xulong Tang, Bin Ren, and Yanzhi Wang, "YOLObile: Real-Time Object Detection on Mobile Devices via Compression-Compilation Co-Design", in *NeurIPS 2020 Workshop on Machine Learning for Autonomous Driving*.
195. Sheng Lin, Chenghong Wang, Hongjia Li, Jieren Deng, Yanzhi Wang and Caiwen Ding, "ESMFL: Efficient and Secure Models for Federated Learning", in *NeurIPS 2020 Workshop on SpicyFL* (Scalability, Privacy, and Security in Federated Learning).

Year 2020 Journal:

196. Burak Kakillioglu, Ao Ren, Yanzhi Wang, and Senem Velipasalar, "3D capsule networks for object classification with weight pruning", in *IEEE Access*, 2020. **(Impact Factor 4.1)**
197. Yidong Liu, Siting Liu, Yanzhi Wang, Fabrizio Lombardi, and Jie Han, "A Survey of Stochastic Computing Neural Networks for Machine Learning Applications", in *IEEE Trans. on Neural networks and Learning Systems* (TNNLS), 2020. **(Impact Factor 12.18)**
198. Yukui Luo, Weiqiang Liu, Yanzhi Wang, and Xiaolin Xu, "A High-Performance and Secure TRNG Based on Chaotic Cellular Automata Topology", in *IEEE Trans. on Circuits and Systems I* (TCAS-I), 2020.

199. Xuehai Qian, Yanzhi Wang, and Avinash Karanth, "Introduction to the Special Issue on Machine Learning Architectures and Accelerators", in *IEEE Trans. on Computers*, 2020.

Year 2019 Conference:

200. Shaokai Ye, Kaidi Xu, Sijia Liu, Hao Cheng, Jan-Henrik Lambrechts, Huan Zhang, Aojun Zhou, Kaisheng Ma, Yanzhi Wang, and Xue Lin, "Adversarial robustness vs. model compression, or both?," in *Proc. of International Conference on Computer Vision* (ICCV), 2019. **(Acceptance Rate: 25%)**
201. Ao Ren, Tianyun Zhang, Shaokai Ye, Jiayu Li, Wenyao Xu, Xuehai Qian, Xue Lin, and Yanzhi Wang, "ADMM-NN: An algorithm-hardware co-design framework of DNNs using alternating direction methods of multipliers," in *ACM International Conference on Architectural Support for Programming Languages and Operating Systems* (ASPLOS), 2019. **(Acceptance Rate: 17.4%)**
202. Ruizhe Cai, Ao Ren, Olivia Chen, Ning Liu, Caiwen Ding, Xuehai Qian, Jie Han, Wenhui Luo, Nobuyuki Yoshikawa, and Yanzhi Wang, "A stochastic-computing based deep learning framework using adiabatic quantum-flux-parametron superconducting technology," in *Proc. of International Symposium on Computer Architecture* (ISCA), 2019. **(Acceptance Rate: 18%)**
203. Zhe Li, Caiwen Ding, Siyue Wang, Wujie Wen, Youwei Zhuo, Qinru Qiu, Wenyao Xu, Xue Lin, Xuehai Qian, and Yanzhi Wang, "E-RNN: Design optimization for efficient recurrent neural networks in FPGAs," in *Proc. of High-Performance Computing Architecture* (HPCA), 2019. **(Acceptance Rate: 22%)**
204. Tianyun Zhang, Sijia Liu, Yanzhi Wang, and Makan Fardad, "Generation of low distribution adversarial attacks via convex programming," in *Proc. of International Conference on Data Mining* (ICDM), 2019 **(Acceptance Rate: 25.2%)**, also **Best Paper Nomination (Finally Top 3 Paper)** at *AdvML Workshop at KDD*, 2019.
205. Jinshan Yue, Ruoyang Liu, Wenyu Sun, Zhe Yuan, Zhibo Wang, Yung-Ning Tu, Yi-Ju Chen, Ao Ren, Yanzhi Wang, et al., "A 65nm 0.39-to-140.3TOPS/W 1-to-12b unified neural network processor using block-circulant-enabled transpose-domain acceleration with 8.1X higher TOPS/mm^2 and 6T HBST-TRAM-based 2D data-reuse architecture," in *Proc. of International Solid-State Circuits Conference* (ISSCC), 2019.
206. Youwei Zhuo, Chao Wang, Mingxing Zhang, Rui Wang, Dimin Niu, Yanzhi Wang, and Xuehai Qian, "GraphQ: Scalable PIM-based graph processing," in *IEEE/ACM International Symposium on Microarchitecture* (MICRO), 2019. **(Acceptance Rate: 18.6%)**
207. Zihao Liu, Tao Liu, Qi Liu, Nuo Xu, Xue Lin, Yanzhi Wang, and Wujie Wen, "Feature distillation: DNN-oriented JPEG compression against adversarial examples," in *Proc. of IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), 2019. **(Acceptance Rate: 25.2%)**
208. Hao Tang, Dan Xu, Nice Sebe, Yanzhi Wang, Jason J. Corso, and Yan Yan, "Multi-channel attention selection GAN with cascaded semantic guidance for cross-view image translation," in *Proc. of IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), 2019. **(Oral presentation, acceptance Rate: 6%)**
209. Zihao Liu, Xiaowei Xu, Tao Liu, Qi Liu, Yanzhi Wang, Yiyu Shi, Wujie Wen, Meiping Huang, Haiyun Yuan, and Jian Zhuang, "Machine vision guided 3D medical image compression for efficient transmission and accurate segmentation in the clouds," in *Proc. of IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), 2019. **(Acceptance Rate: 25.2%)**

210. Kaidi Xu, Sijia Liu, Pu Zhao, Pin-Yu Chen, Huan Zhang, Quanfu Fan, Deniz Erdogmus, Yanzhi Wang, and Xue Lin, "Structured adversarial attack: towards general implementation and better interpretability," in *Proc. of the International Conference on Learning Representations* (ICLR), 2019. **(Acceptance Rate: 31%)**
211. Siyu Liao, Zhe Li, Liang Zhao, Qinru Qiu, Yanzhi Wang, and Bo Yuan, "CircConv: A structured convolution with low complexity," in *the Thirty Third AAAI Conference on Artificial Intelligence* (AAAI), 2019. **(Acceptance Rate: 16.2%)**
212. Yanzhi Wang, Zheng Zhan, Jian Tang, Bo Yuan, Liang Zhao, Wei Wen, Siyue Wang, and Xue Lin, "Universal approximation property and equivalence of stochastic computing-based neural networks and binary neural networks," in *the Thirty Third AAAI Conference on Artificial Intelligence* (AAAI), 2019. **(Acceptance Rate: 16.2%)**
213. Siyue Wang, Xiao Wang, Pin-Yu Chen, Yanzhi Wang, Xue Lin, and Peter Chin, "Protecting neural networks with hierarchical random switching: towards better robustness-accuracy trade-off for stochastic defenses," in *Proc. of International Joint Conferences on Artificial Intelligence Organization* (IJCAI), 2019. **(Acceptance Rate: 17.8%)**
214. Fuxun Yu, Zhuwei Qin, Chenchen Liu, Liang Zhao, Yanzhi Wang, and Xiang Chen, "Interpreting and evaluating neural network robustness," in *Proc. of International Joint Conferences on Artificial Intelligence Organization* (IJCAI), 2019. **(Acceptance Rate: 17.8%)**
215. Tao Liu, Wujie Wen, Lei Jiang, Yanzhi Wang, Chengmo Yang, and Gang Quan, "A fault-tolerant neural network architecture," in *Proc. of Design Automation Conference* (DAC), 2019. **(Acceptance Rate: 22%)**
216. Pu Zhao, Siyue Wang, Cheng Gongye, Yanzhi Wang, Yunsi Fei, and Xue Lin, "Fault sneaking attack: a stealthy framework for misleading deep neural networks," in *Proc. of Design Automation Conference* (DAC), 2019. **(Acceptance Rate: 22%)**
217. Caiwen Ding, Shuo Wang, Ning Liu, Kaidi Xu, Yanzhi Wang, and Yun (Eric) Liang, "REQ-YOLO: A resource-aware, efficient quantization framework for object detection on FPGAs," in *Proc. of ACM International Symposium on Field Programmable Gate Arrays* (FPGA), 2019. **(Acceptance Rate: 25%)**
218. Wei Niu, Xiaolong Ma, Yanzhi Wang, and Bin Ren, "26ms inference time for ResNet-50: Towards real-time execution of all DNNs on smartphone," workshop paper of *International Conference on Machine Learning* (ICML), 2019.
219. Yue Niu, Hanqing Zeng, Ajitesh Srivastava, Kartik Lakhotia, Rajgopal Kannan, Yanzhi Wang, Viktor K. Prasanna, "SPEC2: SPECtral SParsE CNN Accelerator on FPGAs", in *IEEE International Conference on High Performance Computing, Data, and Analytics* (HiPC), 2019.
220. Ruizhe Cai, Olivia Chen, Ao Ren, Ning Liu, Nobuyuki Yoshikawa, Yanzhi Wang, "A Buffer and Splitter Insertion Framework for Adiabatic Quantum-Flux-Parametron Superconducting Circuits", in *IEEE International Conference on Computer Design* (ICCD), 2019.
221. Geng Yuan, Xiaolong Ma, Caiwen Ding, Sheng Lin, Tianyun Zhang, Zeinab S. Jalali, Yilong Zhao, Li Jiang, Sucheta Soundarajan, Yanzhi Wang, "An Ultra-Efficient Memristor-Based DNN Framework with Structured Weight Pruning and Quantization Using ADMM", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2019.
222. Pu Zhao, Kaidi Xu, Sijia Liu, Yanzhi Wang, Xue Lin, "ADMM attack: an enhanced adversarial attack for deep neural networks with undetectable distortions", in *Proc. of Asia and South Pacific Design Automation Conference* (ASP-DAC), 2019.

223. Tao Liu, Nuo Xu, Qi Liu, Yanzhi Wang, Wujie Wen, “A system-level perspective to understand the vulnerability of deep learning systems“, in *Proc. of Asia and South Pacific Design Automation Conference* (ASP-DAC), 2019.

Year 2019 Journal:

224. Zhiyuan Xu, Jian Tang, Chengxiang Yin, Yanzhi Wang, and Guoliang Xue, “Experience-driven congestion control: when multi-path TCP meets deep reinforcement learning,” *IEEE Journal on Selected Areas in Communications* (JSAC), 2019.
225. Chengxiang Yin, Jian Tang, Zhiyuan Xu, and Yanzhi Wang, “Memory augmented deep recurrent neural network for video question answering,” in *IEEE Trans. on Neural networks and Learning Systems* (TNNLS), 2019 **(Impact Factor 12.18).**
226. Yi Qiang, Ao Ren, Xianzhe Zhang, Preyaa Patel, Xun Han, Kyung-Jin Seo, Zhan Shi, Yanzhi Wang, and Hui Fang, “Deep reinforcement learning for dynamic treatment regimes on medical registry data”, *2D Materials*, 2019 **(Impact Factor 6.9)**
227. Ning Liu, Ying Liu, Brent Logan, and Yanzhi Wang, “Deep reinforcement learning for dynamic treatment regimes on medical registry data”, *Nature Scientific Reports*, 2019 (**Impact Factor 5.23**)
228. Olivia Chen, Ruizhe Cai, Yanzhi Wang, Fei Ke, Taiki Yamae, Ro Saito, Naoki Takeuchi, and Nobuyuki Yoshikawa, “Adiabatic quantum-flux-parametron: Towards building extremely energy-efficient circuits and systems,” *Nature Scientific Reports*, 2019 (**Impact Factor 5.23**)
229. Ji Li, Zihao Yuan, Zhe Li, Ao Ren, Caiwen Ding, Jeffrey Draper, Shahin Nazarian, Qinru Qiu, Bo Yuan, Yanzhi Wang, "Normalization and dropout for stochastic computing-based deep convolutional neural networks", *Elsevier Journal of VLSI Integration*, 2019.
230. Zhe Li, Ji Li, Ao Ren, Ruizhe Cai, Caiwen Ding, Xuehai Qian, Jeffrey Draper, Bo Yuan, Jian Tang, Qinru Qiu, Yanzhi Wang, "HEIF, " Highly Efficient Stochastic Computing-Based Inference Framework for Deep Neural Networks", *IEEE Trans. on Computer Aided Design* (TCAD). 2019.
231. Siyu Liao, Yi Xie, Xue Lin, Yanzhi Wang, Min Zhang, Bo Yuan, "Reduced-Complexity Deep Neural Networks Design Using Multi-Level Compression", *IEEE Trans. on Sustainable Computing*, 2019.

Year 2018 Conference:

232. Zhengxiong Li, Aditya Singh Rathore, Chen Song, Sheng Wei, Yanzhi Wang, and Wenyao Xu, “PrinTracker: Fingerprinting 3D printers using commodity scanners,” *ACM Conference on Computer and Communications Security* (CCS), 2018. **(Acceptance Rate: 16%)**
233. Teng Li, Zhiyuan Xu, Jian Tang, and Yanzhi Wang, “Model-free control for distributed stream data processing using deep reinforcement learning,” in *International Conference on Very Large Data Bases* (VLDB), 2018. **(Acceptance Rate: 21%)**
234. Tianyun Zhang, Shaokai Ye, Kaiqi Zhang, Jian Tang, Wujie Wen, Makan Fardad, and Yanzhi Wang, “A systematic DNN weight pruning framework using alternating direction method of multipliers,” *European Conference on Computer Vision* (ECCV), 2018. **(Acceptance Rate: 28%)**
235. Ruizhe Cai, Ao Ren, Ning Liu, Xuehai Qian, Massoud Pedram, and Yanzhi Wang, “VIBNN: Hardware acceleration of Bayesian neural networks,” in *ACM International Conference on Architectural Support for Programming Languages and Operating Systems* (ASPLOS), 2018. **(Acceptance Rate: 17.4%)**

236. Massoud Pedram and Yanzhi Wang, "Design automation methodology and tools for superconducting electronics," in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2018. **(Acceptance Rate: 24%)**
237. Pu Zhao, Sijia Liu, Yanzhi Wang, and Xue Lin, "An ADMM-based universal framework for adversarial attacks on deep neural networks", in *Proc. of ACM Multimedia* (ACM MM), 2018. **(Acceptance Rate: 24%)**
238. Sheng Lin, Ning Liu, Mahdi Nazemi, Hongjia Li, Caiwen Ding, Yanzhi Wang, Massoud Pedram, "FFT-based deep learning deployment in embedded systems", in *Proc. of Design Automation and Test in Europe* (DATE), 2018. **(Best Paper Nomination)**
239. Yidong Liu, Yanzhi Wang, Fabrizio Lombardi, Jie Han, "An energy-efficient stochastic computational deep belief network", in *Proc. of Design Automation and Test in Europe* (DATE), 2018
240. Yanzhi Wang, Caiwen Ding, Zhe Li, Geng Yuan, et al., "Towards ultra-high performance and energy efficiency of deep learning systems: an algorithm-hardware co-optimization framework," in *the Thirty Second AAAI Conference on Artificial Intelligence* (AAAI), 2018. **(Acceptance Rate: 25%)**
241. Youwei Zhuo, Jinglei Cheng, Qinyi Luo, Jidong Zhai, Yanzhi Wang, Zhongzhi Luan, and Xuehai Qian, "CSE: Parallel finite state machines with convergence set enumeration," in *IEEE/ACM International Symposium on Microarchitecture* (MICRO), 2018. **(Acceptance Rate: 18.6%)**
242. Zhe Li, Shuo Wang, Caiwen Ding, Qinru Qiu, Yanzhi Wang, and Yun (Eric) Liang, "Efficient recurrent neural networks using structured matrices in FPGAs," in *International Conference on Learning Representation* (ICLR) (short paper), 2018.
243. Shuo Wang, Zhe Li, Caiwen Ding, Bo Yuan, Qinru Qiu, Yanzhi Wang, and Yun (Eric) Liang, "C-LSTM: Enabling efficient LSTM using structured compression techniques on FPGAs," in *Proc. of ACM International Symposium on Field Programmable Gate Arrays* (FPGA), 2018. **(Acceptance Rate: 25%)**
244. Zihao Liu, Jie Xu, Lei Jiang, Yanzhi Wang, Gang Quan, and Wujie Wen, "DeepN-JPEG: A deep neural network favorable JPEG-based image compression framework," in *Design Automation Conference* (DAC), 2018. **(Acceptance Rate: 25%)**
245. Zhiyuan Xu, Jingsong Meng, Weiyi Zhang, Dejun Yang, Jian Tang, and Yanzhi Wang, "Experience-driven networking: a deep reinforcement learning based approach," in *IEEE International Conference on Computer Communications* (INFOCOM), 2018. **(Acceptance Rate: 17%)**
246. Qi Liu, Tao Liu, Zihao Liu, Yanzhi Wang, Yier Jin, and Wujie Wen, "Security analysis and enhancement of model compressed deep learning systems under adversarial attacks," to appear in *Proc. of Asia and South Pacific Design Automation Conference* (ASP-DAC), 2018. **(Best paper nomination) (Acceptance Rate: 28%)**
247. Pu Zhao, Yanzhi Wang, Naehyuck Chang, Qi Zhu, Xue Lin, "A deep reinforcement learning framework for optimizing fuel economy of hybrid electric vehicles", in *Proc. of Asia and South Pacific Design Automation Conference* (ASP-DAC), 2018.
248. Pu Zhao, Kaidi Xu, Tianyun Zhang, Makan Fardad, Yanzhi Wang, Xue Lin, "Reinforced Adversarial Attacks on Deep Neural Networks Using ADMM", in *IEEE Global Conference on Signal and Information Processing* (GlobalSIP), 2018.
249. Ziyi Zhao, Krittaphat Pugdeethosapol, Sheng Lin, Zhe Li, Caiwen Ding, Yanzhi Wang, Qinru Qiu, "Learning Topics Using Semantic Locality", in *International Conference on Pattern Recognition* (ICPR), 2018.

Year 2018 Journal:

250. Yidong Liu, Siting Liu, Yanzhi Wang, Fabrizio Lombardi, and Jie Han, "A stochastic computational multi-layer perceptron with backward propagation," in *IEEE Trans. on Computers*, 2018.
251. Caiwen Ding, Hongjia Li, Weiwei Zheng, Yanzhi Wang, Xue Lin, "Reconfigurable Photovoltaic Systems for Electric Vehicles", *IEEE Design & Test Magazine*, 2018
252. Yidong Liu, Yanzhi Wang, Fabrizio Lombardi, Jie Han, "An Energy-Efficient Online-Learning Stochastic Computational Deep Belief Network", *IEEE Journal of Emerging and Selected Topics on Circuits and Systems*, 2018.
253. Amar Shrestha, Khadeer Ahmed, Yanzhi Wang, David P. Widemann, Adam T. Moody, Brian C. Van Essen, Qinru Qiu, "Modular Spiking Neural Circuits for Mapping Long Short-Term Memory on a Neurosynaptic Processor", in *IEEE Journal of Emerging and Selected Topics on Circuits and Systems*, 2018.
254. Hongjia Li, Ruizhe Cai, Ning Liu, Xue Lin, Yanzhi Wang, "Deep reinforcement learning, " Algorithm, applications, and ultra-low-power implementation", in *Nano Commun. Networks*, 2018.
255. Ruizhe Cai, Ao Ren, Sucheta Soundarajan, Yanzhi Wang, "A low-computation-complexity, energy-efficient, and high-performance linear program solver based on primal-dual interior point method using memristor crossbars", in *Nano Commun. Networks*, 2018.
256. Tiansong Cui, Ji Li, Yanzhi Wang, Shahin Nazarian, Massoud Pedram, "An Exploration of Applying Gate-Length-Biasing Techniques to Deeply-Scaled FinFETs Operating in Multiple Voltage Regimes", *IEEE Trans. on Emerging Topics on Computing*, 2018.
257. Jaemin Kim, Donkyu Baek, Caiwen Ding, Sheng Lin, Donghwa Shin, Xue Lin, Yanzhi Wang, Youngjin Cho, Sang Hyun Park, Naehyuck Chang, "Dynamic Reconfiguration of Thermoelectric Generators for Vehicle Radiators Energy Harvesting Under Location-Dependent Temperature Variations", *IEEE Trans. on Very Large Scale Integrated Systems* (T-VLSI), 2018.

Year 2017 Conference:

258. Liang Zhao, Siyu Liao, Yanzhi Wang, Jian Tang, and Bo Yuan, "Theoretical properties for neural networks with weight matrices of low displacement rank," in *Proc. of International Conference on Machine Learning* (ICML), 2017. **(Oral Presentation, Acceptance Rate: 22%)**
259. Yanzhi Wang, Caiwen Ding, Siyu Liao, Zhe Li, Yu Bai, et al., "CirCNN: accelerating and compressing deep neural networks using block-circulant weight matrices", in *IEEE/ACM International Symposium on Microarchitecture* (MICRO), 2017. **(Acceptance Rate: 18.6%)**
260. Ao Ren, Ji Li, Zhe Li, Caiwen Ding, Xuehai Qian, Qinru Qiu, Bo Yuan, and Yanzhi Wang, "SC-DCNN: Highly-scalable deep convolutional neural network using stochastic computing," in *ACM International Conference on Architectural Support for Programming Languages and Operating Systems* (ASPLOS), 2017. **(Acceptance Rate: 17.4%)**
261. Ning Liu, Zhe Li, Zhiyuan Xu, Jielong Xu, Sheng Lin, Qinru Qiu, Jian Tang, and Yanzhi Wang, "A hierarchical framework of cloud resource allocation and power management using deep reinforcement learning," *IEEE International Conference on Distributed Computing* (ICDCS), 2017. **(Acceptance Rate: 16.9%)**
262. Jing Wang, Jian Tang, Zhiyuan Xu, and Yanzhi Wang, "Spatiotemporal modeling and prediction in cellular networks: a big data enabled deep learning approach," *IEEE*

International Conference on Computer Communications (INFOCOM), 2017. **(Acceptance Rate: 17%)**

263. Sijia Liu, Ao Ren, Yanzhi Wang, and Pramod K.Varshney, "Ultra-fast robust compressive sensing based on memristor crossbars," in *IEEE International Conference on Acoustics, Speech, and Signal Processing* (ICASSP), 2017. **(Best paper award, Best Student Presentation Award) (Rank top 3 in more than 2,000 submissions)**
264. Siyu Liao, Zhe Li, Xue Lin, Qinru Qiu, Yanzhi Wang, and Bo Yuan, "Energy-efficient high-performance highly-compressed deep neural network design using block-circulant matrices," in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2017. **(Acceptance Rate: 24%)**
265. Ahmed Shrestha, Khadeer Ahmed, Yanzhi Wang, and Qinru Qiu, "A spike-based long short-term memory on a neurosynaptic processor," in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2017. **(Acceptance Rate: 24%)**
266. Hongjia Li, Tianshu Wei, Ruizhe Cai, Qi Zhu, and Yanzhi Wang, "Deep reinforcement learning meets cyber-physical systems: applications and embedded implementations," in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2017. **(Invited Paper, Acceptance Rate of Conference: 24%)**
267. Tianshu Wei, Yanzhi Wang, and Qi Zhu, "Deep reinforcement learning for HVAC control in smart buildings," in *ACM/IEEE Design Automation Conference* (DAC), 2017. **(Acceptance Rate: 22%)**
268. Chen Pan, Mimi Xie, Yongpan Liu, Yanzhi Wang, et al., "A lightweight progress maximization scheduler for non-volatile processor under unstable energy harvesting" in *Proc. of ACM SIGPLAN/SIGBED Conference on Languages, Compilers, Tools, and Theory for Embedded Systems* (LCTES), 2017. **(Acceptance Rate: 23%)**
269. Ji Li, Ao Ren, Zhe Li, Caiwen Ding, Bo Yuan, Qinru Qiu, Yanzhi Wang, "Towards acceleration of deep convolutional neural networks using stochastic computing", in *Proc. of Asia and South Pacific Design Automation Conference* (ASP-DAC), 2017
270. Caiwen Ding, Ji Li, Weiwei Zheng, Naehyuck Chang, Xue Lin, Yanzhi Wang, "Algorithm accelerations for luminescent solar concentrator-enhanced reconfigurable onboard photovoltaic system", in *Proc. of Asia and South Pacific Design Automation Conference* (ASP-DAC), 2017
271. Ao Ren, Sijia Liu, Ruizhe Cai, Wujie Wen, Pramod K. Varshney, Yanzhi Wang, "Algorithm-hardware co-optimization of the memristor-based framework for solving SOCP and homogeneous QCQP problems", in *Proc. of Asia and South Pacific Design Automation Conference* (ASP-DAC), 2017.
272. Zhe Li, Ao Ren, Ji Li, Qinru Qiu, Bo Yuan, Jeffrey Draper, Yanzhi Wang, "Structural design optimization for deep convolutional neural networks using stochastic computing", in *Proc. of Design Automation and Test in Europe* (DATE), 2017.
273. Zhiyuan Xu, Yanzhi Wang, Jian Tang, Jing Wang, Mustafa Cenk Gursoy, "A deep reinforcement learning based framework for power-efficient resource allocation in cloud RANs", in *IEEE International Conference on Communications* (ICC), 2017.
274. Ji Li, Zihao Yuan, Zhe Li, Caiwen Ding, Ao Ren, Qinru Qiu, Jeffrey Draper, Yanzhi Wang, "Hardware-driven nonlinear activation for stochastic computing based deep convolutional neural networks", in *International Joint Conference on Neural Networks* (IJCNN), 2017.
275. Amar Shrestha, Khadeer Ahmed, Yanzhi Wang, Qinru Qiu, "Stable spike-timing dependent plasticity rule for multilayer unsupervised and supervised learning", in *International Joint Conference on Neural Networks* (IJCNN), 2017.

276. Donkyu Baek, Caiwen Ding, Sheng Lin, Donghwa Shin, Jaemin Kim, Xue Lin, Yanzhi Wang, Naehyuck Chang, “Reconfigurable thermoelectric generators for vehicle radiators energy harvesting“, in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2017.

Year 2017 Journal:

277. Caiwen Ding, Ning Liu, Yanzhi Wang, Ji Li, Soroush Heidari, Jingtong Hu, Yongpan Liu, "Multisource Indoor Energy Harvesting for Nonvolatile Processors", *IEEE Design and Test Magazine*, 2017.
278. Tiansong Cui, Shuang Chen, Yanzhi Wang, Qi Zhu, Shahin Nazarian, Massoud Pedram, "An optimal energy co-scheduling framework for smart buildings", *Elsevier Journal of VLSI Integration*, 2017.
279. Yi Xie, Siyu Liao, Bo Yuan, Yanzhi Wang, Zhongfeng Wang, "Fully-Parallel Area-Efficient Deep Neural Network Design Using Stochastic Computing", *IEEE Trans. Circuits Syst. II*, 2017.
280. Tiansong Cui, Shuang Chen, Yanzhi Wang, Shahin Nazarian, Massoud Pedram, "Optimal Control of PEVs with a Charging Aggregator Considering Regulation Service Provisioning", *ACM Trans. on Cyber Physical Systems*, 2017.
281. Woojoo Lee, Kyuseung Han, Yanzhi Wang, Tiansong Cui, Shahin Nazarian, Massoud Pedram, "TEI-power, " Temperature Effect Inversion-Aware Dynamic Thermal Management", *ACM Trans. Design Automation of Electronic Systems* (TODAES), 2017.

Year 2016 Conference:

282. Tiansong Cui, Shuang Chen, Yanzhi Wang, Qi Zhu, Shahin Nazarian, and Massoud Pedram. “Optimal Co-Scheduling of HVAC Control and Battery Management for Energy-Efficient Buildings Considering State-of-Health Degradation,” in *Proc. of Asia and South Pacific Design Automation Conf.* (ASP-DAC), Jan. 2016. **(Best Paper Nomination) (Acceptance Rate: 33%)**
283. Xue Lin, Massoud Pedram, Jian Tang, Yanzhi Wang, “A Profit Optimization Framework of Energy Storage Devices in Data Centers: Hierarchical Structure and Hybrid Types“, in *Proc. of IEEE Cloud Computing Conference* (IEEE Cloud), 2016. **(Research Track Acceptance Rate: 18%)**
284. Sijia Liu, Yanzhi Wang, Makan Fardad, Pramod K. Varshney, “Optimal energy allocation and storage control for distributed estimation with sensor collaboration“, in Annual Conference on Information Science and Systems (CISS), 2016.
285. Xue Lin, Yuankun Xue, Paul Bogdan, Yanzhi Wang, Siddharth Garg, Massoud Pedram,, “Power-aware virtual machine mapping in the data-center-on-a-chip paradigm“, in *IEEE International Conference on Computer Design* (ICCD), 2016.
286. Caiwen Ding, Hongjia Li, Jingtong Hu, Yongpan Liu, Yanzhi Wang, “Dynamic converter reconfiguration for near-threshold non-volatile processors using in-door energy harvesting“, in *IEEE International Conference on Computer Design* (ICCD), 2016.
287. Zhe Li, Ao Ren, Ji Li, Qinru Qiu, Yanzhi Wang, Bo Yuan, “DSCNN: Hardware-oriented optimization for Stochastic Computing based Deep Convolutional Neural Networks“, in *IEEE International Conference on Computer Design* (ICCD), 2016.

Year 2016 Journal:

288. Yanzhi Wang and Massoud Pedram, “Model-free reinforcement learning and Bayesian classification in system-level power management,” *IEEE Trans. on Computers*, 2016.

289. Xue Lin, Yanzhi Wang, Naehyuck Chang, Massoud Pedram, "Concurrent Task Scheduling and Dynamic Voltage and Frequency Scaling in a Real-Time Embedded System With Energy Harvesting", *IEEE Trans. on Computer Aided Design* (TCAD), 2016.
290. Bo Yuan, Yanzhi Wang, Zhongfeng Wang, "Area-Efficient Scaling-Free DFT/FFT Design Using Stochastic Computing", *IEEE Trans. Circuits Syst. II*, 2016.
291. Yanzhi Wang, Xue Lin, and Massoud Pedram. "A Near-Optimal Model-Based Control Algorithm for Households Equipped with Residential Photovoltaic Power Generation and Energy Storage Systems," in *IEEE Trans. on Sustainable Energy*, 2016. **(Impact Factor: 3.73)**

Year 2015 Conference:

292. Yanzhi Wang, Xue Lin, Naehyuck Chang, and Massoud Pedram, "Joint automatic control of power train and auxiliary systems in an intelligent HEV for enhancing electromobility," in *Proc. of Design Automation Conference* (DAC), 2015. **(Acceptance Rate: 22%)**
293. Tiansong Cui, Yanzhi Wang, Shuang Chen, Qi Zhu, Shahin Nazarian, Massoud Pedram, "Optimal control of PEVs for energy cost minimization and frequency regulation in the smart grid accounting for battery state-of-health degradation", in *ACM/IEEE Design Automation Conference* (DAC), 2015. **(Acceptance Rate: 22%)**
294. Shuang Chen, Yanzhi Wang, Massoud Pedram, "A Joint Optimization Framework for Request Scheduling and Energy Storage Management in a Data Center", in *Proc. of IEEE Cloud Computing Conference* (IEEE Cloud), 2015. **(Research Track Acceptance Rate: 18%)**
295. Shuo Wang, Yanzhi Wang, Xue Lin, Massoud Pedram, "Hierarchical Deployment and Control of Energy Storage Devices in Data Centers", in *Proc. of IEEE Cloud Computing Conference* (IEEE Cloud), 2015. **(Research Track Acceptance Rate: 18%)**
296. Xue Lin, Yanzhi Wang, Massoud Pedram, Jaemin Kim, Naehyuck Chang, "Event-driven and sensorless photovoltaic system reconfiguration for electric vehicles", in *Proc. of Design Automation and Test in Europe* (DATE), 2015.
297. Ji Li, Qing Xie, Yanzhi Wang, Shahin Nazarian, Massoud Pedram, "Leakage power reduction for deeply-scaled FinFET circuits operating in multiple voltage regimes using fine-grained gate-length biasing technique", in *Proc. of Design Automation and Test in Europe* (DATE), 2015.
298. Qing Xie, Younghyun Kim, Donkyu Baek, Yanzhi Wang, Massoud Pedram, Naehyuck Chang, "Efficiency-driven design time optimization of a hybrid energy storage system with networked charge transfer interconnect", in *Proc. of Design Automation and Test in Europe* (DATE), 2015.
299. Woojoo Lee, Yanzhi Wang, Donghwa Shin, Shahin Nazarian, Massoud Pedram, "Design and optimization of a reconfigurable power delivery network for large-area, DVS-enabled OLED displays", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2015.
300. Donghwa Shin, Naehyuck Chang, Yanzhi Wang, Massoud Pedram, "Reconfigurable three dimensional photovoltaic panel architecture for solar-powered time extension", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2015.

Year 2015 Journal:

301. Yanzhi Wang, Xue Lin, and Massoud Pedram, "A model-based control algorithm for households equipped with residential photovoltaic power generation and energy storage systems," in *IEEE Trans. on Sustainable Energy*, 2015. **(Impact Factor: 3.73)**
302. Xue Lin, Yanzhi Wang, Qing Xie, and Massoud Pedram, "An energy and performance-aware task scheduling framework in the mobile cloud computing environment," in *IEEE Transactions on Service Computing*, 2015. **(Invited Paper)**

Prior Conference Publications:

303. Shuang Chen, Yanzhi Wang, and Massoud Pedram, "Optimal offloading control for a mobile device based on a realistic battery model and semi-Markov decision process," in *Proc. of International Conference on Computer Aided Design* (ICCAD), Nov. 2014. **(Acceptance Rate: 24%)**
304. Xue Lin, Yanzhi Wang, Paul Bogdan, Naehyuck Chang, and Massoud Pedram, "Reinforcement learning based power management for hybrid electric vehicles," in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2014. **(Acceptance Rate: 24%)**
305. Xue Lin, Yanzhi Wang, Qing Xie, and Massoud Pedram, "Energy and performance-aware task scheduling framework in the mobile cloud computing environment," in *Proc. of IEEE Cloud Computing Conference* (IEEE Cloud), 2014. **(Top Paper Award) (Research Track Acceptance Rate: 18%)**
306. Alireza Shafaei, Yanzhi Wang, Xue Lin, and Massoud Pedram, "FinCACTI: Architectural analysis and modeling of caches with deeply-scaled FinFET devices," in *Proc. of IEEE Computer Society Annual Symposium on VLSI* (ISVLSI), 2014. **(Best paper award) (Full Paper Acceptance Rate: 28%)**
307. Jaemin Kim, Yanzhi Wang, Massoud Pedram, and Naehyuck Chang, "Fast photovoltaic array reconfiguration for partial solar powered vehicles," in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2014. **(Best paper award) (Full Paper Acceptance Rate: 24%)**
308. Woojoo Lee, Yanzhi Wang, Tiansong Cui, Shahin Nazarian, Massoud Pedram, "Dynamic thermal management for FinFET-based circuits exploiting the temperature effect inversion phenomenon", in *International Symposium on Low Power Electronics and Design* (ISLPED), 2014.
309. Xue Lin, Yanzhi Wang, Shahin Nazarian, Massoud Pedram, "An improved logical effort model and framework applied to optimal sizing of circuits operating in multiple supply voltage regimes", in *International Symposium on Low Power Electronics and Design* (ISLPED), 2014.
310. Xue Lin, Yanzhi Wang, Massoud Pedram, "Stack sizing analysis and optimization for FinFET logic cells and circuits operating in the sub/near-threshold regime", in *International Symposium on Low Power Electronics and Design* (ISLPED), 2014.
311. Tiansong Cui, Shuang Chen, Yanzhi Wang, Shahin Nazarian, Massoud Pedram, "An efficient semi-analytical current source model for FinFET devices in near/sub-threshold regime considering multiple input switching and stack effect", in *International Symposium on Low Power Electronics and Design* (ISLPED), 2014.
312. Mahboobeh Ghorbani, Yanzhi Wang, Yuankun Xue, Massoud Pedram, Paul Bogdan, "Prediction and control of bursty cloud workloads: A fractal framework", in *International Conference on Hardware/Software Codesign and System Synthesis* (CODES+ISSS), 2014 **(Acceptance Rate: 24%)**

313. Di Zhu, Siyu Yue, Sangyoung Park, Yanzhi Wang, Naehyuck Chang, Massoud Pedram, "Cost-effective design of a hybrid electrical energy storage system for electric vehicles", in *International Conference on Hardware/Software Codesign and System Synthesis* (CODES+ISSS), 2014. **(Acceptance Rate: 24%)**
314. Shuang Chen, Yanzhi Wang, Massoud Pedram, "Concurrent placement, capacity provisioning, and request flow control for a distributed cloud infrastructure", in *Proc. of Design Automation and Test in Europe* (DATE), 2014.
315. Yue Gao, Sandeep K. Gupta, Yanzhi Wang, Massoud Pedram, "An energy-aware fault tolerant scheduling framework for soft error resilient cloud computing systems", in *Proc. of Design Automation and Test in Europe* (DATE), 2014.
316. Kitae Kim, Donghwa Shin, Qing Xie, Yanzhi Wang, Massoud Pedram, Naehyuck Chang, "FEPMA: Fine-grained event-driven power meter for android smartphones based on device driver layer event monitoring", in *Proc. of Design Automation and Test in Europe* (DATE), 2014.
317. Woojoo Lee, Yanzhi Wang, Massoud Pedram, "VRCon: Dynamic reconfiguration of voltage regulators in a multicore platform", in *Proc. of Design Automation and Test in Europe* (DATE), 2014.
318. Yanzhi Wang, Xue Lin, Qing Xie, Naehyuck Chang, Massoud Pedram, "Minimizing state-of-health degradation in hybrid electrical energy storage systems with arbitrary source and load profiles", in *Proc. of Design Automation and Test in Europe* (DATE), 2014.
319. Di Zhu, Yanzhi Wang, Naehyuck Chang, Massoud Pedram, "Optimal design and management of a smart residential PV and energy storage system", in *Proc. of Design Automation and Test in Europe* (DATE), 2014.
320. Xue Lin, Yanzhi Wang, and Massoud Pedram, "Joint sizing and adaptive independent gate control for FinFET circuits operating in multiple voltage regimes using logical effort method," in *Proc. of International Conference on Computer-Aided Design* (ICCAD), Nov. 2013. **(Acceptance Rate: 24%)**
321. Qing Xie, Jaemin Kim, Yanzhi Wang, Donghwa Shin, Naehyuck Chang, and Massoud Pedram, "Dynamic thermal management in mobile devices considering the thermal coupling between battery and application processor," in *Proc. of International Conference on Computer-Aided Design* (ICCAD), Nov. 2013. **(Acceptance Rate: 24%)**
322. Qing Xie, Tiansong Cui, Yanzhi Wang, Shahin Nazarian, Massoud Pedram, "Semi-analytical current source modeling of near-threshold operating logic cells considering process variations", in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2013. **(Acceptance Rate: 24%)**
323. Qing Xie, Yanzhi Wang, and Massoud Pedram, "Variability-aware design of energy-delay optimal linear pipelines operating in the near-threshold regime and above," in *Proc. of ACM Great Lakes Symposium on VLSI* (GLSVLSI), 2013. **(Best paper nomination) (Oral Presentation Paper Acceptance Rate: 24%)**
324. Yue Gao, Yanzhi Wang, Sandeep K. Gupta, Massoud Pedram, "An energy and deadline aware resource provisioning, scheduling and optimization framework for cloud systems", in *International Conference on Hardware/Software Codesign and System Synthesis* (CODES+ISSS), 2013.
325. Di Zhu, Siyu Yue, Yanzhi Wang, Younghyun Kim, Naehyuck Chang, Massoud Pedram, "Designing a residential hybrid electrical energy storage system based on the energy buffering strategy", in *International Conference on Hardware/Software Codesign and System Synthesis* (CODES+ISSS), 2013.

326. Yanzhi Wang, Xue Lin, Massoud Pedram, Sangyoung Park, Naehyuck Chang, "Optimal control of a grid-connected hybrid electrical energy storage system for homes", in *Proc. of Design Automation and Test in Europe* (DATE), 2013.
327. Yanzhi Wang, Xue Lin, Massoud Pedram, Jaemin Kim, Naehyuck Chang, "Capital cost-aware design and partial shading-aware architecture optimization of a reconfigurable photovoltaic system", in *Proc. of Design Automation and Test in Europe* (DATE), 2013.
328. Yue Gao, Melvin Breuer, Yanzhi Wang, "A new paradigm for trading off yield, area and performance to enhance performance per wafer", in *Proc. of Design Automation and Test in Europe* (DATE), 2013.
329. Shuang Chen, Yanzhi Wang, Massoud Pedram, "A semi-Markovian decision process based control method for offloading tasks from mobile devices to the cloud", in IEEE Global Communications Conference (GLOBECOM), 2013.
330. Siyu Yue, Di Zhu, Yanzhi Wang, Massoud Pedram, Younghyun Kim, Naehyuck Chang, "SIMES, " A simulator for hybrid electrical energy storage systems", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2013.
331. Xue Lin, Yanzhi Wang, Siyu Yue, Naehyuck Chang, Massoud Pedram, "A framework of concurrent task scheduling and dynamic voltage and frequency scaling in real-time embedded systems with energy harvesting", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2013.
332. Sangyoung Park, Bumkyu Koh, Yanzhi Wang, Jaemin Kim, Younghyun Kim, Massoud Pedram, Naehyuck Chang, "Maximum power transfer tracking in a solar USB charger for smartphones", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2013.
333. Xue Lin, Yanzhi Wang, Di Zhu, Naehyuck Chang, and Massoud Pedram, "Online fault detection and tolerance in photovoltaic energy harvesting systems," in *Proc. of International Conference on Computer-Aided Design* (ICCAD), Nov. 2012. **(Acceptance Rate: 24%)**
334. Yanzhi Wang, Xue Lin, Naehyuck Chang, and Massoud Pedram, "Dynamic reconfiguration of photovoltaic energy harvesting system in hybrid electric vehicles," in *Proc. of the International Symposium on Low Power Electronics and Design* (ISLPED), 2012. **(Full Paper Acceptance Rate: 24%)**
335. Xue Lin, Yanzhi Wang, Siyu Yue, Donghwa Shin, Naehyuck Chang, and Massoud Pedram, "Near-optimal, dynamic module reconfiguration in a photovoltaic system to combat partial shading effects," in *Proc. of Design Automation Conference* (DAC), June 2012. **(Acceptance Rate: 22%)**
336. Younghyun Kim, Sangyoung Park, Naehyuck Chang, Qing Xie, Yanzhi Wang, Massoud Pedram, "Networked architecture for hybrid electrical energy storage systems", in *ACM/IEEE Design Automation Conference* (DAC), 2012. **(Acceptance Rate: 22%)**
337. Yanzhi Wang, Qing Xie, Massoud Pedram, Younghyun Kim, Naehyuck Chang, Massimo Poncino, "Multiple-source and multiple-destination charge migration in hybrid electrical energy storage systems", in *Proc. of Design Automation and Test in Europe* (DATE), 2012.
338. Qing Xie, Xue Lin, Yanzhi Wang, Massoud Pedram, Donghwa Shin, Naehyuck Chang, "State of health aware charge management in hybrid electrical energy storage systems", in *Proc. of Design Automation and Test in Europe* (DATE), 2012.
339. Woojoo Lee, Yanzhi Wang, Donghwa Shin, Naehyuck Chang, Massoud Pedram, "Power conversion efficiency characterization and optimization for smartphones", in *Proc. of*

IEEE/ACM International Symposium on Low Power Electronics and Design (ISLPED), 2012.

340. Sangyoung Park, Yanzhi Wang, Younghyun Kim, Naehyuck Chang, Massoud Pedram, "Battery management for grid-connected PV systems with a battery", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2012.
341. Younghyun Kim, Sangyoung Park, Yanzhi Wang, Qing Xie, Naehyuck Chang, Massimo Poncino, Massoud Pedram, "Balanced reconfiguration of storage banks in a hybrid electrical energy storage system", in *Proc. of International Conference on Computer Aided Design* (ICCAD), 2011. **(Acceptance Rate: 24%)**
342. Yanzhi Wang, Qing Xie, Ahmed Ammari, and Massoud Pedram, "Deriving a near-optimal power management policy using model-free reinforcement learning and Bayesian classification," *Proc. of Design Automation Conference* (DAC), Jun. 2011. **(Acceptance Rate: 22%)**
343. Woojoo Lee, Younghyun Kim, Yanzhi Wang, Naehyuck Chang, Massoud Pedram, Soohee Han, "Versatile high-fidelity photovoltaic module emulation system", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2011.
344. Yanzhi Wang, Younghyun Kim, Qing Xie, Naehyuck Chang, Massoud Pedram, "Charge migration efficiency optimization in hybrid electrical energy storage (HEES) systems", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2011.
345. Qing Xie, Yanzhi Wang, Younghyun Kim, Naehyuck Chang, Massoud Pedram, "Charge allocation for hybrid electrical energy storage systems", in *International Conference on Hardware/Software Codesign and System Synthesis* (CODES+ISSS), 2011. **(Acceptance Rate: 24%)**
346. Donghwa Shin, Younghyun Kim, Jaeam Seo, Naehyuck Chang, Yanzhi Wang, Massoud Pedram, "Battery-supercapacitor hybrid system for high-rate pulsed load applications", in *Proc. of Design Automation and Test in Europe* (DATE), 2011.
347. Younghyun Kim, Naehyuck Chang, Yanzhi Wang, Massoud Pedram, "Maximum power transfer tracking for a photovoltaic-supercapacitor energy system", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2010.
348. Massoud Pedram, Naehyuck Chang, Younghyun Kim, Yanzhi Wang, "Hybrid electrical energy storage systems", in *Proc. of IEEE/ACM International Symposium on Low Power Electronics and Design* (ISLPED), 2010.

Prior Journal Publications:

349. Yanzhi Wang, Xue Lin, and Massoud Pedram, "Adaptive control for energy storage systems in households with photovoltaic modules", *IEEE Transactions on Smart Grid*, 2014. **(Impact Factor: 3.19)**
350. Yanzhi Wang, Xue Lin, Younghyun Kim, Naehyuck Chang, and Massoud Pedram, "Architecture and control algorithms for combating partial shading in photovoltaic systems," *IEEE Transactions on Computer Aided Design of Integrated Circuits and Systems*, 2014. **(TCAD popular paper)**
351. Woojoo Lee, Yanzhi Wang, Donghwa Shin, Naehyuck Chang, and Massoud Pedram, "Optimizing the power delivery network in a smartphone platform," *IEEE Transactions on Computer Aided Design of Integrated Circuits and Systems*, 2014. **(TCAD popular paper)**

352. Younghyun Kim, Yanzhi Wang, Massoud Pedram, and Naehyuck Chang, "Computer-aided design and optimization of hybrid energy storage systems," *Foundations and Trends in Electronic Design Automation*, 2013.

353. Sangyoung Park, Jaehyun Park, Donghwa Shin, Yanzhi Wang, Qing Xie, Naehyuck Chang, and Massoud Pedram, "Accurate modeling of the delay and energy overhead of dynamic voltage and frequency scaling in modern microprocessors," in *IEEE Transactions on Computer Aided Design of Integrated Circuits and Systems*, 2013. **(Best paper nomination)**

SUPERVISED STUDENTS

Current Ph.D. Students:

1. Arash Akbari: 2024 – 2029 (expected)
2. Arman Akbari: 2024 – 2029 (expected, co-advised with Prof. Silvia Zhang)
3. Yixiao Chen: 2026 – 2030 (expected)
4. Rahul Chowdhury: 2021 – 2026 (expected)
5. Juyi Lin: 2024 – 2029 (expected)
6. Lei Lu: 2022 – 2026 (expected)
7. Enfu Nan: 2024 – 2029 (expected)
8. Omid Poordashtban: 2024 – 2029 (expected, co-advised with Prof. Hossein Mosallaei)
9. Amir Taherin: 2022 – 2026 (expected, co-advised with Prof. David Kaeli)
10. Yushu Wu: 2020 – 2026 (expected)
11. Changdi Yang: 2021 – 2026 (expected)
12. Xiaomeng Yang: 2024 – 2029 (expected, co-advised with Prof. Silvia Zhang)
13. Lin Zhao: 2024 – 2029 (expected)

Research Assistant Professor:

1. Dr. Pu Zhao: Formally start from Fall 2021

Research Manager:

1. Haochen Zeng: From 2025: M.S. from University of Washington
2. Yifan Cao: From 2026: M.S. from University of Texas Dallas

Ph.D. and Postdoc Alumni:

1. Caiwen Ding
   Graduation Year: 2019, Current Employment: Associate Professor in Dept. of CSE, University of Minnesota
2. Ao Ren
   Graduation Year: 2020, Current Employment: Full Professor in School of CS, Chongqing University.
   Previous Employment: Assistant Professor in Dept. of ECE, Clemson University
3. Xiaolong Ma
   Graduation Year: 2022, Assistant Professor in Dept. of ECE, University of Arizona.
4. Ruizhe Cai
   Graduation Year: 2020, Current Employment: Facebook Inc.
5. Ning Liu
   Graduation Year: 2021, Current Employment: Beijing Humanoid Research Center (founding researcher)
6. Sheng Lin

Graduation Year: 2021, Current Employment: Research Scientist, Tencent U.S.

7. Hongjia Li
   Graduation Year: 2021, Current Employment: Research Scientist, Amazon
8. Geng Yuan
   Graduation Year: 2023, Current Employment: Assistant Professor in Dept. of CSE, University of Georgia
9. Qing Jin
   Graduation Year: 2023, Current Employment: Research Scientist, Snap Inc.
10. Zhenglun Kong
    Graduation Year: 2024, Current Employment: Postdoc Researcher, Harvard University
11. Zhengang Li
    Graduation Year: 2024, Current Employment: Research Scientist, Adobe Research
12. Peiyan Dong
    Graduation Year: 2024, Current Employment: Postdoc Researcher, MIT
13. Malith Jayaweera
    Graduation Year: 2024, Current Employment: Amazon Research
14. Yifan Gong
    Graduation Year: 2024, Current Employment: Adobe Research (incoming Assistant Professor of University of Massachusetts Amherst)
15. Xuan Shen
    Graduation Year: 2025, Current Employment: Associate Professor, Zhejiang University in China
16. Zheng Zhang
    Graduation Year: 2024, Current Employment: Microsoft Research
17. Sung-en Chang
    Graduation Year: 2024, Current Employment: Research Scientist, Bose Inc.
18. Yanyue Xie
    Graduation Year: 2025, Current Employment: Research Scientist, Bytedance Seeds
19. Jun Liu
    Graduation Year: 2025, Current Employment: Research Scientist, CMU
20. Timothy Rupprecht
    Graduation Year: 2025, Current Employment (part time): Research Scientist, EmbodyX Inc.
21. Chao Wu
    Postdoc researcher 2022 – 2023, Current Employment: Associate Professor, University of Science and Technology in China
22. Masoud Zabihi
    Postdoc researcher 2022 – 2023, Current Employment: IBM Research
23. Cheng Lyu
    Postdoc researcher 2023 – 2025
24. Fangzheng Sun (Primary Advisor: Prof. Hao Sun and Prof. Ryan Wang)
    Graduation Year: 2021, Current Employment: Research Scientist, Amazon
25. Chen Pan
    Visiting student/postdoc, Current Employment: Assistant Professor in Dept. of CSE, University of Texas San Antonio
26. Tianyun Zhang (Primary Advisor: Prof. Makan Fardad)

Graduation Year: 2021, Current Employment: Assistant Professor in Dept. of ECE, Cleveland State University

27. Mengshu Sun (Primary Advisor: Prof. Xue Lin)
    Graduation Year: 2022, Current Employment: Associate Professor in Dept. of ECE, Beijing University of Science and Technology
28. Cihan Ruan
    Visiting student/postdoc, Current Employment: Incoming Associate Professor in Dept. of Mathematics, Nankai University
29. Zhe Li (Primary Advisor: Prof. Qinru Qiu)
    Graduation Year: 2018, Current Employment: Staff Researcher, Google DeepMind

Visiting Scholar and Students:

1. Prof. Olivia Chen (2019, 2022, Associate Professor, Yokohama National University, Japan)
2. Hao Tang, currently Assistant Professor at Peking University
3. Yuxi Hong (2022, Ph.D. student at KAUST, Saudi Arabia, currently Assistant Professor at Indiana University)
4. Wei Niu (2019, Ph.D. student at College of William and Mary, currently Assistant Professor in Dept. of CSE, University of Georgia)
5. Runbin Shi (2019, Ph.D. student at University of Hong Kong, currently at AMD Research)

M.S. Alumni (selected):

1. Shaokai Ye (graduation 2018, researcher at Apple)
2. Shuo Wang (graduation 2015, currently founder and CEO of Leap.IO)

TEACHING ACTIVITIES

At Northeastern University:

Received Martin Essigmann Outstanding Teaching Award

1. EECE 7398: Deep Learning Embedded Systems — Spring 2026
2. EECE 2140: Computing Fundamentals for Engineering — Fall 2025
3. EECE 3324: Computer Architecture & Organization — Fall 2024
4. Data Science 5220: Supervised Machine Learning — Spring 2024
   68 graduate students
5. EECE 7398: Advances in Deep Learning — Fall 2023 (4.1 out of 5.0)
   50 graduate students
6. Data Science 5220: Supervised Machine Learning — Spring 2023 (4.2 out of 5.0)
   70 graduate students
7. EECE 7398: Advances in Deep Learning — Fall 2022 (4.9 out of 5.0)
   45 graduate students
8. Data Science 5220: Supervised Machine Learning — Spring 2022 (4.3 out of 5.0)
   70 graduate students
9. EECE 7398: Advances in Deep Learning — Fall 2021 (4.7 out of 5.0)
   45 graduate students
10. EECE 3324 Computer Architecture and Organization — Summer I 2021 (4.9 out of 5.0)
    18 undergraduate students
11. EECE 7398: Advances in Deep Learning — Spring 2021 (4.5 out of 5.0)
    53 graduate students

12. EECE 4524: VLSI Design — Spring 2020 (4.0 out of 5.0)
    5 undergraduate students
13. EECE 7398: Deep Learning Embedded Systems — Spring 2020 (4.8 out of 5.0)
    46 graduate students
14. EECE 7398: Advances in Deep Learning — Spring 2019 (4.6 out of 5.0)
    43 graduate students
15. EECE 7398: Advances in Deep Learning — Fall 2018 (4.7 out of 5.0)
    45 graduate students

At Syracuse University:

16. CSE/CIS 700: Advances in Deep Learning — Spring 2018 (4.7 out of 5.0)
    50 graduate students
17. CSE 381: Computer Architecture — Fall 2017 (4.1 out of 5.0)
    28 undergraduate students
18. ELE/CSE 664: VLSI Design Methods — Fall 2017 (4.4 out of 5.0)
    29 graduate students
19. ELE/CSE 664: VLSI Design Methods — Fall 2016 (4.86 out of 5.0)
    27 graduate students
20. CSE/CSE 655/611: Advanced Computer Architecture — Spring 2016 (4.27 out of 5.0)
    44 graduate students
21. ELE/CSE 664: VLSI Design Methods — Fall 2015 (4.67 out of 5.0)
    16 graduate and undergraduate students

At University of Southern California (as postdoc and lecturer):

22. EE 680: Computer Aided Design I — Spring 2015 (4.8 out of 5.0)
    33 graduate students
23. EE 577A: Advanced VLSI Designs — Fall 2014 (4.73 out of 5.0)
    105 graduate students