



Bin Ren@William & Mary

PERSONAL INFORMATION

1. Name: Bin Ren
Title: Associate Professor@Computer Science
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Date: Oct., 2023
2. Research Interests:
Parallel Computing and High-Performance Computing
Compiler Techniques
Real-time Machine Learning and Machine Learning Systems

EDUCATION

- Ph.D. Computer Science and Engineering, **The Ohio State University**, 9/2008 - 5/2014
M.S. Computer Science and Engineering, **The Ohio State University**, 9/2008 - 8/2013
M.S. Software Engineering, **Beihang University** (China), 9/2006 - 6/2008
B.S. Software Engineering, **Beihang University** (China), 9/2002 - 6/2006

ACADEMIC POSITIONS

- 8/2022- **The College of William & Mary**
present Associate Professor
- 8/2016- **The College of William & Mary**
7/2022 Assistant Professor
- 5/2014- **Pacific Northwest National Laboratory**
7/2016 Postdoctoral Research Associate (Supervisor: Dr. Sriram Krishnamoorthy)
- 9/2008- **The Ohio State University**
5/2014 Graduate Research/Teaching Associate (Ph.D. Advisor: Prof. Gagan Agrawal)
- 5/2013- **NEC Laboratories America**
8/2013 Research Internship (Mentor: Dr. Nishkam Ravi and Dr. Yi Yang)
- 6/2011- **Microsoft Research, Redmond**
9/2011 Research Internship (Mentor: Dr. Todd Mytkowicz)

HONORS, PRIZES AND AWARDS

- NSF CAREER Award, 2021
- Best Paper Award, SC 2020
- Best Student Paper Nomination, SC 2020
- Jeffress Trust Award, 2020
- ISLPED Design Contest First Place, 2020
- Student Cluster Reproducibility Challenge Paper, SC 2019
- Best Paper Award, CGO 2013
- SIGPLAN Research Highlights, 2013
- Student Travel Awards, PACT, 2011, 2012
- University Fellowship, The Ohio State University, 2008-2009
- Outstanding Graduates Award, Beihang University, 2006

COURSES TAUGHT

Instructor

AU23 CS304 Computer Organization
SP23 CS642 Compiler Techniques for High Performance Computing
SP22 CS680 Compiler & Parallel Computing
AU21 CS304 Computer Organization
SP21 CS304 Computer Organization
AU20 CS680 Compiler & Parallel Computing
SP20 CS680 Compiler & Parallel Computing
AU19 CS304 Computer Organization
SP19 CS680 Compiler & Parallel Computing
AU18 CS304 Computer Organization
SP18 CS780 Compiler Optimization for High Performance Computing
AU17 CS304 Computer Organization
SP17 CS304 Computer Organization
AU16 CS680 Compiler Optimization for High Performance Computing

FELLOWSHIPS AND GRANTS

Awarded:

[1] [NIH-R01'23] "SCH: Novel and Interpretable Statistical Learning for Brain Images in AD/ADRDs," **awarded, Co-PI**, 09/2023-08/2027, NIH, \$217,887 (Total \$1.2M).

[2] [NSF-CSR'23] "Collaborative Research: CNS Core: Small: A Compilation System for Mapping Deep Learning Models to Tensorized Instructions (DELITE)," **awarded, leading PI**, 10/2023-09/2026, NSF, \$299,999 (Total \$600,000).

[3] [NSF-SHF'22] "Collaborative Research: SHF: SMALL: Compile-Parallelize-Schedule-Retarget-Repeat (EASER) Paradigm for Dealing with Extreme Heterogeneity," **awarded, PI**, 06/2022-06/2025, NSF, \$250,000 (Total \$500,000).

- [4] [NSF-CAREER'21] "CAREER: Achieving Real-Time Machine Learning with Sparsification-Compilation Co-design," **awarded**, sole **PI**, 10/2021-09/2026, NSF, \$493,685.
- [5] [Jeffress-Memorial-Trust-Award'20] "A General, Real-time DNN Execution Framework on Mobile Devices," **awarded**, sole **PI**, 06/2020-06/2021, Jeffress Memorial Trust, \$104,500.
- [6] [Kwai'20] "Mobile System Analysis and Optimization for Neural Network Execution," **awarded**, sole **PI**, 01/2021-12/2021, Kwai Inc. USA, \$50,000.
- [7] [DoE-ECP/JLab'19/20/21] "Accelerating QCD with GPUs," **graduate student support**, 08/2019-08/2022, DoE, \$85,500.
- [8] [NSF-SBIR'20] "CoCoPIE: Enabling Real-Time AI on End Devices through Compression-Compilation Co-Design," NSF issued to CoCoPIE co-founded by NEU, NCSU, and W&M, \$250,000.
- [9] [NSF-III'20] "III: Small: Combinatorial Algorithms for High-dimensional Learning", **Co-PI**, transferred from Zhenming Liu, 10/2020-09/2023, NSF, \$395,403.
- [10] [NSF-IIS'21] "EAGER: Collaborative Research: On the Theoretical Foundation of Recommendation System Evaluation", **PI**, transferred from Zhenming Liu, 09/2021-02/2023, NSF, \$19,999 (Total: \$100,000).

Internal Awards:

- [1] [WM-Summer'18] "Exploiting Emerging Throughput-oriented Architectural Advances for Irregular Applications," summer grant, May, 2018
- [2] [WM-Summer'17] "Improving Vectorization of Irregular Applications by Unified Static and Dynamic Analyses," summer grant, May, 2017

RESEARCH

Peer-Reviewed Journals

- [1] [ACM Computing Surveys'22] Jou-An Chen, **Wei Niu**, **Bin Ren**, Yanzhi Wang, Xipeng Shen, "Survey: Exploiting Data Redundancy for Optimization of Deep Learning," ACM Computing Surveys, 2022.
- [2] [TACO'22] **Qihan Wang**, **Zhen Peng**, **Bin Ren**, Jie Chen, Robert G. Edwards, "MemHC: An Optimized GPU Memory Management Framework for Accelerating Many-body Correlation," ACM Transactions on Architecture and Code Optimization (ACM TACO), June 2022. (**Original Work, Invited to HiPEAC'23**)
- [3] [TECS'22] Geng Yuan, Mengshu Sun, **Wei Niu**, Zhengang Li, Yuxuan Cai, Yanyu Li, Jun Liu, Weiwen Jiang, Xue Lin, **Bin Ren**, Xulong Tang, Yanzhi Wang, "Mobile or FPGA? A Comprehensive Evaluation on Energy Efficiency and a Unified Optimization Framework," ACM Transactions on Embedded Computing Systems (TECS).
- [4] [TPDS'22] Mert Hidayetoglu, Tekin Bicer, Simon Garcia de Gonzalo, **Bin Ren**, Doga Gursoy, Rajkumar Kettimuthu, Ian T. Foster, Wen-Mei W. Hwu, "MemXCT: Design,

Optimization, Scaling, and Reproducibility of X-Ray Tomography Imaging,” IEEE Transactions on Parallel and Distributed Systems. 33(9): 2014-2031 (2022).

[5] [TODAES’21] Yifan Gong*, Geng Yuan*, Zheng Zhan, **Wei Niu**, Zhengang Li, Pu Zhao, Yuxuan Cai, Sijia Liu, **Bin Ren**, Xue Lin, Xulong Tang, and Yanzhi Wang, “*Automatic mapping of the best-suited DNN pruning schemes for real-time mobile acceleration,*” ACM Transactions on Design Automation of Embedded Systems.

[6] [CACM’21] Hui Guan, Shaoshan Liu, Xiaolong Ma, **Wei Niu**, **Bin Ren**, Xipeng Shen, Yanzhi Wang, Pu Zhao (**author in alphabet order**), “*CoCoPIE: Making Mobile AI Sweet as PIE - Compression-Compilation Co-Design Goes a Long Way,*” Communications of the ACM (CACM), page 62-68, June 2021 (**flagship journal of ACM, featured with a video report**).

[7] [TPAMI’21] **Wei Niu**, Zhenggang 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”, IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2021 (**impact factor: 17.86**).

[8] [Smart Health’21] Shuangquan Wang, Gang Zhou, **Jiexiong Guan**, Yongsen Ma, Zhenming Liu, **Bin Ren**, Hongyang Zhao, Amanda Watson, and Woosub Jung, “*Inferring Food Types through Sensing and Characterizing Mastication Dynamics,*” Elsevier Smart Health, page 1-15, January 2021.

[9] [Smart Health’20] **Qihan Wang**, Gang Zhou, Zhenming Liu, and **Bin Ren**, “*Building a Skeleton-based 3D Body Model with Angle Sensor Data,*” Elsevier Smart Health, page 1-15, November 2020.

[10][TPDS’20] Soklong Lim, Tyler Coy, Zaixin Lu, **Bin Ren**, and Xuechen Zhang, “*NVGRAPH: Enforcing Crash Consistency of Evolving Network Analytics in NVMM Systems,*” The IEEE Transactions on Parallel and Distributed Systems (TPDS), page 124-137, January, 2020.

[11][TOPC’19] **Bin Ren**, Shruthi Balakrishna, Youngjoon Jo, Sriram Krishnamoorthy, Kunal Agrawal, and Milind Kulkarni, “*Extracting SIMD Parallelism from Recursive Task-Parallel Programs,*” The ACM Transaction on Parallel Computing (TOPC), page 24:1-24:37, December, 2019.

[12][TACO’17] Mehmet Can Kurt, Sriram Krishnamoorthy, Gagan Agrawal, and **Bin Ren**, “*User-Assisted Store Recycling for Dynamic Task Graph Schedulers,*” ACM Transactions on Architecture and Code Optimization (TACO), page 55:1-55:24, December, 2016. (**Original work, invited to HiPEAC’17**).

[13][TACO'14] **Bin Ren**, Todd Mytkowicz, and Gagan Agrawal, “*A Portable Optimization Engine for Accelerating Irregular Data-Traversal Applications on SIMD Architectures*,” ACM Transactions on Architecture and Code Optimization (TACO), page 16:1-16:31, 2014.

Peer-Reviewed Conferences

[1] [ASPLOS'24] **Wei Niu**, Gagan Agrawal, **Bin Ren**, “*SoD²: Statically Optimizing Dynamic Deep Neural Network Execution*,” International Conference on Architectural Support for Programming Languages and Operating Systems, 2024.

[2] [USENIX ATC'23] Hsin-Hsuan Sung, Jou-An Chen, **Wei Niu**, **Jiexiong Guan**, **Bin Ren**, Xipeng Shen, “*Decentralized Application-Level Adaptive Scheduling for Multi-Instance DNNs on Open Mobile Devices*,” USENIX Annual Technical Conference, 2023. (Acceptance rate: 65/353=18.4%)

[3] [CVPR'23-Highlight] Gen Li, Jie Ji, Minghai Qin, **Wei Niu**, **Bin Ren**, Fatemeh Afghah, Linke Guo, Xiaolong Ma, “*Towards High-Quality and Efficient Video Super-Resolution via Spatial-Temporal Data Overfitting*,” in Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR, 2023, Acceptance rate: 25.78%, Highlight: top 2.5%).

[4] [CVPR'23] Changdi Yang, Pu Zhao, Yanyu Li, **Wei Niu**, **Jiexiong Guan**, Hao Tang, Minghai Qin, **Bin Ren**, Xue Lin, Yanzhi Wang, “*Pruning Parameterization with Bi-level Optimization for Efficient Semantic Segmentation on the Edge*,” in Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR, 2023, Acceptance rate: 25.78%).

[5] [PPoPP'23] **Zhen Peng**, Minjia Zhang, Kai Li, Ruoming Jin, **Bin Ren**, “*iQAN: Fast and Accurate Vector Search with Efficient Intra-Query Parallelism on Multi-Core Architectures*,” The 28th ACM SIGPLAN Annual Symposium on Principles and Practice of Parallel Programming, 2023 (Acceptance rate: 23.7% = 31/131)

[6] [AAAI'23] Dong Li, Ruoming Jin, Zhenming Liu, **Bin Ren**, Jing Gao, and Zhi Liu, “*Towards Reliable Item Sampling for Recommendation Evaluation*,” Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI), 2023 (Acceptance Rate: 19.6%)

[7] [AAAI'23] Yanyu Li, Changdi Yang, Pu Zhao, Geng Yuan, **Wei Niu**, **Jiexiong Guan**, Hao Tang, Minghai Qin, **Bin Ren**, Xue Lin, and Yanzhi Wang, “*Towards Real-Time Segmentation on the Edge*,” Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI), 2023 (Acceptance Rate: 19.6%).

[8] [MICRO'22] **Wei Niu, Jiexiong Guan**, Xipeng Shen, Yanzhi Wang, Gagan Agrawal, **Bin Ren**, “*GCD²: A Globally Optimizing Compiler for Mapping DNNs to Mobile DSPs*,” 55th IEEE/ACM International Symposium on Microarchitecture (MICRO), 2022. (Acceptance rate: $83/369 = 22\%$)

[9] [NeurIPS'22] Zifeng Wang, Zheng Zhan, Yifan Gong, Geng Yuan, **Wei Niu**, Tong Jian, **Bin Ren**, Stratis Ioannidis, Yanzhi Wang, Jennifer Dy, “*SparCL: Sparse Continual Learning on the Edge*,” Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS), December 2022. (Acceptance rate: 25.6%)

[10] [ECCV'22] 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. (Acceptance rate: 25%)

[11] [ECCV'22] Zhenglun Kong, Peiyan Dong, Xiaolong Ma, Xin Meng, **Wei Niu**, Mengshu Sun, Xuan Shen, Geng Yuan, **Bin Ren**, Hao Tang, Minghai Qin, and Yanzhi Wang, “*SPViT: Enabling Faster Vision Transformers via Soft Token Pruning*,” in Proc. of European Conference on Computer Vision (ECCV), 2022. (Acceptance rate: 25%)

[12] [MSN'22] **Junjie Wang, Jiexiong Guan**, Y.Alicia Hong, Hong Xue, Shuangquan Wang, Zhenming Liu, **Bin Ren** and Gang Zhou, “*Towards socially acceptable food type recognition*,” The 18th International Conference on Mobility, Sensing and Networking (MSN), 2022.

[13] [IPDPS'22] **Qihan Wang, Bin Ren**, Jie Chen, Robert G. Edwards, “*MICCO: An Enhanced Multi-GPU Scheduling Framework for Many-Body Correlation Functions*,” The 36th IEEE International Parallel & Distributed Processing Symposium (IPDPS), June 2022. (Acceptance rate of the 1st round: $9.7\% = 46/474$).

[14][ISQED'22–invited] Xiaolong Ma, Geng Yuan, Zhengang Li, **Wei Niu**, Yifan Gong, Tianyun Zhang, Zheng Zhan, Pu Zhao, Jian Tang, Xue Lin, **Bin Ren**, Yanzhi Wang, “*A General Pruning Framework Enabling Real-Time Inference on Resource-Limited Mobile Devices*,” in Proceedings of the 23rd International Symposium on Quality Electronic Design (ISQED), April 2022.

[15][NeurIPS'21 Spotlight: Top 3%] Geng Yuan, Xiaolong Ma, **Wei Niu**, Zhengang Li, Zhenglun Kong, Ning Liu, Yifan Gong, Zheng Zhan, Chaoyang He, Qing Jin, Siyue Wang, Minghai Qin, **Bin Ren**, Yanzhi Wang, Sijia Liu, Xue Lin, “*MEST: Accurate and Fast Memory-Economic Sparse Training Framework on the Edge*,” Thirty-fifth Conference on Neural Information Processing Systems (NeurIPS), December 2021. (Acceptance rate: $2344/9122 = 26\%$, Spotlight 3%)

[16][HiPC'21] Qihan Wang, Wei Niu, Li Chen, Ruoming Jin, **Bin Ren**, “HEALS: A Parallel eALS Recommendation System on CPU/GPU Heterogeneous Platforms,” The 28th IEEE International Conference on High Performance Computing, Data, & Analytics (HiPC), December 2021. (Acceptance rate: 23%)

[17][ICCV'21] Zheng Zhan, Yifan Gong, Pu Zhao, Geng Yuan, **Wei Niu**, Yushu Wu, Tianyun Zhang, Malith Jayaweera, David Kaeli, **Bin Ren**, Xue Lin, Yanzhi Wang, “Achieving On-Mobile Real-Time Super-Resolution With Neural Architecture and Pruning Search,” International Conference on Computer Vision (ICCV), October 2021. (Acceptance rate: 25.9%)

[18][PLDI'21] **Wei Niu**, Jiexiong Guan, Yanzhi Wang, Gagan Agrawal, and **Bin Ren**, “DNNFusion: Accelerating Deep Neural Networks Execution with Advanced Operator Fusion,” 42nd ACM SIGPLAN Conference on Programming Language Design and Implementation, page 883-898, June 2021. (Acceptance rate: 87/320 = 27%)

[19][ESEC/FSE'21] Jialiang Tan*, **Yu Chen***, Zhenming Liu, **Bin Ren**, Shuaiwen Leon Song, Xipeng Shen, and Xu Liu (*equal contribution), “Toward Efficient Interactions between Python and Native Libraries,” 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, August 2021. (Acceptance rate: 97/396 = 24.5%)

[20][ICS'21] 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”, 35th ACM International Conference on Supercomputing, page 266-278, June 2021. (Acceptance Rate: 38/157 = 24%)

[21][CVPR'21 Oral Paper: top 5%] Zhengang Li*, Geng Yuan*, **Wei Niu***, Pu Zhao*, Yanyu Li, Yuxuan Cai, Xuan Shen, Zheng Zhan, Zhenglun Kong, Qing Jin, Zhiyu Chen, Sijia Liu, Kaiyuan Yang, Yanzhi Wang, **Bin Ren**, and Xue Lin (*equal contribution), “NPAS: A compiler-aware framework of unified network pruning and architecture search for beyond real-time mobile acceleration,” IEEE Conference on Computer Vision and Pattern Recognition, page 14255-14266, June 2021. (Acceptance rate: 1593/7500 = 21.2%)

[22][DAC'21] 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,” 57th Annual Design Automation Conference (DAC), December 2021. (Acceptance rate: TBA, around 20%)

[23][ASP-DAC'21] Hongjia Li, Geng Yuan, **Wei Niu**, Yuxuan Cai, Mengshu Sun, Zhengang Li, **Bin Ren**, Xue Lin, and Yanzhi Wang, “Real-Time Mobile Acceleration of DNNs: From Computer Vision to Medical Applications,” in Proceeding of Asia and South Pacific Design Automation Conference (ASP-DAC), page 581-586, January 2021.

[24][AAAI'21] **Wei Niu***, Mengshu Sun*, Zhengang Li*, Jou-An Chen, Jiexiong Guan, Xipeng Shen, Yanzhi Wang, Xue Lin, and **Bin Ren**, “*Achieving Real-Time Execution of 3D Convolutional Neural Networks on Mobile Devices*,” Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI), February 2021 (Acceptance Rate: 20.9%).

[25][AAAI'21] 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*,” Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI), February 2021 (Acceptance Rate: 20.9%).

[26] [SC'20] Mert Hidayetoglu, Tekin Bicer, Simon Garcia de Gonzalo, **Bin Ren**, Vincent De Andrade, Doga Gursoy, Rajkumar Kettimuthu, Ian Foster, and Wen-mei Hwu, “*Petascale XCT: 3D Image Reconstruction with Hierarchical Communications on Multi-GPU Nodes*,” The 2020 ACM International Conference for High Performance Computing, Networking, Storage and Analysis (SC), November, 2020 (**Best Paper Award and Best Student Paper Finalist**). (Acceptance Rate: TBA, around 20%).

[27][ASE'20] Hongyu Liu*, **Ruiqin Tian***, **Bin Ren**, and Tongping Liu (*equal contribution), “*Prober: Practically Defending Overflows with Page Protection*,” The 35th IEEE/ACM International Conference on Automated Software Engineering (ASE), page 1116-1128, September, 2020. (Acceptance Rate: $93/414 = 22.5\%$).

[28][ECCV'20] Xiaolong Ma*, **Wei Niu***, Tianyun Zhang, Sijia Liu, Sheng Lin, Hongjia Li, Xiang Chen, Jian Tang, Kaisheng Ma, **Bin Ren**, and Yanzhi Wang (*equal contribution), “*An Image Enhancing Pattern-based Sparsity for Real-Time Inference on Mobile Devices*,” The 16th European Conference on Computer Vision (ECCV), page 1-16, August, 2020. (Acceptance Rate: $1360/5150 = 26\%$).

[29][GLSVLSI'20] Yifan Gong, Zheng Zhan, Zhengang Li, **Wei Niu**, Xiaolong Ma, Wenhao Wang, **Bin Ren**, Caiwen Ding, Xue Lin, Xiaolin Xu, and Yanzhi Wang, “*A Privacy-Preserving-Oriented DNN Pruning and Mobile Acceleration Framework*,” in Proceedings of the 2020 on Great Lakes Symposium on VLSI (Special Session Paper), September. 2020.

[30][ICML'20] **Yu Chen**, Zhenming Liu, **Bin Ren**, and Xin Jin, “*On Efficient Constructions of Checkpoints*,” The 37th International Conference on Machine Learning (ICML), July, 2020. (Acceptance Rate: $1,088/4,990 = 21.8\%$).

[31][ICS'20] Ruoming Jin*, **Zhen Peng***, Wendell Wu, Feodor Dragan, Gagan Agrawal, and **Bin Ren** (*equal contribution), “*Parallelizing Pruned Landmark Labeling: Dealing with Dependencies in Graph Algorithms*,” The 34th ACM International Conference on Supercomputing (ICS), June, 2020. (Acceptance rate: $40/132 = 30\%$).

[32][ICS'20] Tyler Coy, Shuibing He, **Bin Ren**, and Xuechen Zhang, “*Compiler Aided Checkpointing using Crash-Consistent Data Structures in NVMM Systems*,” The 34th ACM International Conference on Supercomputing (ICS), June, 2020. (Acceptance rate: 40/132 = 30%).

[33][DAC'20] Peiyan Dong, Siyue Wang, **Wei Niu**, Chengming Zhang, Sheng Lin, Zhengang Li, Yifan Gong, **Bin Ren**, Xue Lin, and Dingwen Tao, “*RTMobile: Beyond Real-Time Mobile Acceleration of RNNs for Speech Recognition*,” The 57th Annual Design Automation Conference (DAC), July, 2020. (Acceptance rate: TBA, around 20%).

[34][ASPLOS'20] **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*,” The 25th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS), page 907-922, March, 2020 (Acceptance Rate: 86/476 = 18%).

[35][CGO'20] Yu Chen, Ivy B. Peng, Zhen Peng, Xu Liu, and **Bin Ren**, “*ATMem: Adaptive Data Placement in Graph Applications on Heterogeneous Memories*,” The 2020 International Symposium on Code Generation and Optimization (CGO), page 293-304, February, 2020 (Acceptance Rate: 26/95 = 27%).

[36][AAAI'20] 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*,” The 34th AAAI Conference on Artificial Intelligence (AAAI), February, 2020 (Acceptance Rate: 1,591/7,737 = 20.6%).

[37][SC'19] Mert Hidayetoglu, Tekin Bicer, Simon Garcia de Gonzalo, **Bin Ren**, Doga Gursoy, Rajkumar Kettimuthu, Ian T. Foster, and Wen-Mei W. Hwu, “*MemXCT: Memory-Centric X-Ray CT Reconstruction with Massive Parallelization*,” The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC), November, 2019 (**SC20 Student Cluster Reproducibility Challenge Paper**). (Acceptance Rate: 87/344 = 25%).

[38][PACT'19] Soklong Lim, Zaixin Lu, **Bin Ren**, and Xuechen Zhang, “*Enforcing Crash Consistency of Evolving Network Analytics in Non-Volatile Main Memory Systems*,” The 28th International Conference on Parallel Architecture and Compilation Techniques (PACT), page 124-137, September, 2019. (Acceptance Rate: 26/126 = 21%).

[39][CLOUD'19] Jared Polonitza, David Chiu, and **Bin Ren**, “*A Transactional Framework for Broadening Access to Geo-Diversification*,” The 12th IEEE International Conference on Cloud Computing (CLOUD), page 229-233, July, 2019. (Short Paper).

[40][CGO'19] **Ruiqin Tian**, Junqiao Qiu, Zhijia Zhao, Xu Liu, and **Bin Ren**, “*Transforming Query Sequences for High-Throughput B+ Tree Processing on Many-core Processors*,” The 2019 International Symposium on Code Generation and Optimization (CGO), page 2-14, February, 2019. (Acceptance Rate: 21/69 = 31%).

[41][PACT'18] **Zhen Peng**, **Alexander Powell**, Bo Wu, Tekin Bicer, and **Bin Ren**, “*GraphPhi: Efficient Parallel Graph Processing on Emerging Throughput-oriented Architectures*,” The 27th International Conference on Parallel Architecture and Compilation Techniques (PACT), page 1-14, November, 2018. (Acceptance Rate: 36/126 = 29%).

[42][eScience'17] Tekin Bicer, Doga Gursoy, Rajkumar Kettimuthu, Ian T. Foster, **Bin Ren**, Vincent De Andrede, and Francesco De Carlo, “*Real-Time Data Analysis and Autonomous Steering of Synchrotron Light Source Experiments*,” The 13th IEEE International Conference on e-Science (eScience), page 59-68, October, 2017.

[43][PPoPP'17] **Bin Ren**, Sriram Krishnamoorthy, Kunal Agrawal, and Milind Kulkarni, “*Exploiting Vector and Multicore Parallelism for Recursive, Task-Parallel Programs*,” The 22nd ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP), page 117-130, February, 2017. (Acceptance Rate: 29/132 = 22%).

[44][PACT'16] Junqiao Qiu, Zhijia Zhao, and **Bin Ren**, “*MicroSpec: Fine-Grained Speculative Parallelization for FSM Computations*,” The 25th International Conference on Parallel Architecture and Compilation Techniques (PACT), page 221-233, September, 2016. (Acceptance Rate: 31/119 = 26%).

[45][ICPP'16] Jeff Daily, Sriram Krishnamoorthy, Ananth Kalyanaraman, and **Bin Ren**, “*On the Impact of Widening Vector Registers on Sequence Alignment*,” The 45th International Conference on Parallel Processing (ICPP), page 506-515, August, 2016. (Acceptance Rate: 53/251 = 21.1%).

[46][PLDI'15] **Bin Ren**, Youngjoon Jo, Sriram Krishnamoorthy, Kunal Agrawal, and Milind Kulkarni, “*Efficient Execution of Recursive Programs on Commodity Vector Hardware*,” The 36th annual ACM SIGPLAN conference on Programming Language Design and Implementation (PLDI), page 509-520, June, 2015. (Acceptance Rate: 58/303 = 19%).

[47][IPDPS'15] Linchuan Chen, Xin Huo, **Bin Ren**, Surabhi Jain, and Gagan Agrawal, “*Efficient and Simplified Parallel Graph Processing over CPU and MIC*,” The 29th IEEE International Parallel & Distributed Processing Symposium (IPDPS), page 819-828, May, 2015. (Acceptance Rate: 108/496 = 21%).

[48][ICS'14] Xin Huo, **Bin Ren**, and Gagan Agrawal, “*A Programming System for Xeon Phis with Runtime SIMD Parallelization*,” The 28th ACM International Conference on Supercomputing (ICS), page 283-292, June, 2014. (Acceptance Rate: 34/162 = 21%).

[49][CGO'13] **Bin Ren**, Gagan Agrawal, James R. Larus, Todd Mytkowicz, Tomi Poutanen, and Wolfram Schulte, “SIMD Parallelization of Applications that Traverse Irregular Data Structures,” The 2013 International Symposium on Code Generation and Optimization (CGO), February, 2013 (**Best Paper Award, SIGPLAN Research Highlight, Nominated for CACM Research Highlight**). (Acceptance Rate: 33/117 = 28%).

[50][PACT'11] **Bin Ren**, and Gagan Agrawal, “Compiling Dynamic Data Structure in Python to Enable the Use of Multi-core and Many-core Libraries,” The 20th International Conference on Parallel Architectures and Compilation Techniques (PACT), page 68-77, October, 2011. (Acceptance Rate: 36/221 = 16%).

Peer-Reviewed Demo-track Papers

[1] [AAAI'21 Demo track] 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 AAI (Demonstration Paper), 2021.

[2] [IJCAI'20 Demo track] **Wei Niu***, Pu Zhao*, Zheng Zhan, Xue Lin, Yanzhi Wang, and **Bin Ren** (*equal contribution), “Towards Real-Time DNN Inference on Mobile Platforms with Model Pruning and Compiler Optimization,” in Proc. of IJCAI, 2020. (Acceptance Rate: 15.8%).

[3] [ECCV'20 Demo track] **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.

[4] [ECCV'20 Demo track] 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.

Peer-Reviewed Workshops and Posters

[1] [IPDPS'23 Workshop] Daniel T Chen, Ethan H Hansen, Xinpeng Li, Vinooth Kulkarni, Vipin Chaudhary, **Bin Ren**, Qiang Guan, Sanmukh Kuppannagari, Ji Liu, and Shuai Xu, “Efficient quantum circuit cutting by neglecting basis elements,” arXiv preprint arXiv:2304.04093, 2023.

[2] [NIPS'20 Workshop] Yuxuan Cai, Hongjia Li, Geng Yuan, **Wei Niu**, Yanyu Li, Xulong Tang, **Bin Ren**, and Yanzhi Wang, “YOLOmobile: Real-Time Object Detection on Mobile Devices via Compression-Compilation Co-Design,” in NeurIPS 2020 Workshop on Machine Learning for Autonomous Driving.

- [3] [WHPC'20 Poster] **Ruiqin Tian**, Jiajia Li, **Bin Ren**, and Gokcen Kestor. “*High-Performance Sparse Tensor Algebra Compiler*,” The 11th International Women in High Performance Computing Workshop (WHPC), in conjunction with ACM/IEEE International Conference for High-Performance Computing, Networking, Storage, and Analysis (SC). 2020.
- [4] [LCPC'20] Erdal Mutlu, **Ruiqin Tian**, **Bin Ren**, Sriram Krishnamoorthy, Roberto Gioiosa, Jacques Pienaar, and Gokcen Kestor. “*COMET: A Domain-Specific Compilation of High-Performance Computational Chemistry*,” The 33rd Workshop on Languages and Compilers for Parallel Computing (LCPC), October, 2020.
- [5] [ICML-Workshop'19] **Wei Niu**, Xiaolong Ma, Yanzhi Wang, and **Bin Ren**, “*26ms Inference Time for ResNet-50: Towards Real-Time Execution of all DNNs on Smartphone*,” The 36th International Conference on Machine Learning (Joint Workshop on On-Device Machine Learning and Compact Deep Neural Network Representations), June, 2019.
- [6] [PPoPP'16 Poster] Mehmet Can Kurt, **Bin Ren**, Sriram Krishnamoorthy, and Gagan Agrawal, “*An Automated Store Recycling Approach for Dynamic Task Graph Schedulers*,” The 21st ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming, March, 2016.
- [7] [LCPC'15] **Bin Ren**, Nishkam Ravi, Yi Yang, Min Feng, Gagan Agrawal, and Srimat Chakradhar, “*Automatic and Efficient Data Host-Device Communication for Many- Core Coprocessors*,” The 28th International Workshop on Languages and Compilers for Parallel Computing, September, 2015.
- [8] [LCPC'15] Mehmet Can Kurt, **Bin Ren**, and Gagan Agrawal, “*Low-Overhead Fault-Tolerance Support using DISC Programming Model*,” The 28th International Workshop on Languages and Compilers for Parallel Computing, September, 2015.
- [9] [ICS'14 Poster] **Bin Ren**, Nishkam Ravi, Yi Yang, Min Feng, Gagan Agrawal, and Srimat Chakradhar, “*Automating and Optimizing Data Transfers for Many-core Coprocessors*,” The 28th ACM International Conference on Supercomputing, June, 2014..
- [10] [PACT'12 Poster] **Bin Ren**, Gagan Agrawal, James R. Larus, Todd Mytkowicz, Tomi Poutanen, and Wolfram Schulte, “*Fine-Grained Parallel Traversals of Irregular Data Structures*,” The 21th International Conference on Parallel Architectures and Compilation Techniques, October, 2012.
- [11][IPDPSW'11] **Bin Ren**, Gagan Agrawal, Brad Chamberlain, Steve Deitz, “*Translating Chapel to Use FREERIDE: A Case Study in Using an HPC language for Data- intensive Computing*,” The 16th International Workshop on High-Level Parallel Programming Models and Supportive Environments(HIPS) held in conjunction with IPDPS, May, 2011.

Invited Talks

- “*Real-Time DNN Execution on Mobile Devices with Compiler Optimizations*”,

Keynote Speak, PMAM@PPoPP, 2022
IEEE MIPR Panel, 2022
University of California Merced, 2022
University of Massachusetts Amherst, 2021
Rutgers University, 2021

- “*PatDNN: Achieving Real-Time DNN Execution on Mobile Devices with Pattern-based Weight Pruning*”,

ROAD4NN Workshop@DAC, 2020
ASPLOS, Lausanne, Switzerland March, 2020
Northeastern University, Real-Time Machine Learning Colloquium, December, 2019

- “*ATMem: Adaptive Data Placement in Graph Applications on Heterogeneous Memories*”,
CGO, San Diego, USA, February, 2020

- “*Transforming Query Sequences for High-Throughput B+ Tree Processing on Many-core Processors*”,
CGO, Washington DC, USA, February, 2019

- “*GraphPhi: Efficient Parallel Graph Processing on Emerging Throughput-oriented Architectures*”,
PACT, Limassol, Cyprus, November, 2018

- “*Exploiting Vector and Multicore Parallelism for Recursive, Task-Parallel Programs*”,
PPoPP, Austin, Texas, USA, February, 2017

- “*Challenging the Irregularity: Unleashing the Power of Modern SIMD Architectures*”,
 - 1) Computer Science Department at Missouri University of Science and Technology, Rolla, Missouri, USA, January, 2016;
 - 2) Department of Computer Science and Software Engineering at Auburn University, Auburn, Alabama, USA, February, 2016;
 - 3) Department of Electrical and Computer Engineering at University of Delaware, Newark, Delaware, USA, February, 2016;
 - 4) Computer Science Department at The College of William & Mary, Williamsburg, Virginia, USA, February, 2016;
 - 5) Department of Electrical, Computer & Biomedical Engineering at University of Rhode Island, Kingston, Rhode Island, USA, March, 2016;
 - 6) Department of Computer Science at Illinois Institute of Technology, Chicago, Illinois, USA, March, 2016;

- 7) Computer Science Department at Rensselaer Polytechnic Institute, Troy, New York, USA, March, 2016;
- 8) Pacific Northwest National Laboratory, Richland, Washington, USA, April, 2016;
- 9) Kent State University, Kent, Ohio, December, 2017;
- 10) Jefferson Lab, Newport News, Virginia, October, 2018

- “*Low-Overhead Fault-Tolerance Support using DISC Programming Model*”,
LCPC, Raleigh, North Carolina, USA, September, 2015
- “*Automatic and Efficient Data Host-Device Communication for Many-Core Coprocessors*”
LCPC, Raleigh, North Carolina, USA, September, 2015
- “*Efficient Execution of Recursive Programs on Commodity Vector Hardware*”,
 - 1) PNNL, Richland, Washington, USA, June, 2015
 - 2) PLDI, Portland, Oregon, USA, June, 2015
- “*Automatic and Efficient Data Host-Device Communication for Many-Core Coprocessors*”,
NEC Lab, Princeton, New Jersey, USA, August, 2013
- “*SIMD Parallelization of Applications that Traverse Irregular Data Structures*”,
MSR, Redmond, Washington, USA, September, 2011
- “*Compiling Dynamic Data Structure in Python to Enable the Use of Multi-core and Many-core Libraries*”,
 - 1) MSR, Redmond, Washington, USA, August, 2011,
 - 2) PACT, Galveston Island, Texas, USA, October, 2011

Software Release

- [1] CoCoPIE demo for ASPLOS’20 is publicly available at:
<https://www.youtube.com/channel/UCCKVDtg2eherTEuqIJ5cD8A>
- [2] The code “QTrans” for CGO’19 is publicly available at:
<https://zenodo.org/record/1486393>
- [3] The code “GraphPhi” for PACT’18 is publicly available at:
<https://zenodo.org/record/1318418>
- [4] The code “VectorCilk” for PLDI’15 is publicly available at:
<https://engineering.purdue.edu/plcl/vectorcilk/index.php>

Patent

[US20150067225 A1] Automatic Communication and Optimization of Multi-dimensional Arrays for Many-core Coprocessor using Static Compiler Analysis

[No.: 62/965,275] RTMobile: A mobile acceleration framework of RNNs for beyond real-time speech recognition

[No.: 62/976,595] PatDNN: Achieving real-time DNN execution on mobile devices with pattern-based weight pruning.

[No.: 62/976,577] BPDNN: A general, real-time DNN execution framework on mobile devices with block-based column-row pruning

[US-2022-0413862-A1] DNNFusion: Accelerating Deep Neural Networks Execution with Advanced Operator Fusion

PROFESSIONAL SERVICE

a) College committee service

- 2023-2024 Personnel Committee, Computer Science, William & Mary
- 2023-2024 Faculty Recruiting Committee, Computer Science, William & Mary
- 2023-2024 Graduate Admissions, Computer Science, William & Mary
- 2023-2024 Quantum Computing, Computer Science, William & Mary
- 2023-2024 Undergraduate Pre-Major Advisor, William & Mary
- 2021-2022 Faculty Recruiting Committee, Computer Science, William & Mary
- 2021-2022 Diversity, Equity, and Inclusion Committee, Computer Science, William & Mary
- 2021-2022 Graduate Curriculum Committee, Computer Science, William & Mary
- 2021-2022 System Committee, Computer Science, William & Mary
- 2021-2022 Undergraduate Pre-Major Advisor, William & Mary
- 2020-2021 Graduate Admissions, Computer Science, William & Mary
- 2020-2021 Colloquium Chair, Computer Science, William & Mary
- 2020-2021 Thomas Jefferson Prize in Natural Philosophy Committee, William & Mary

- 2020-2021 Undergraduate Pre-Major Advisor, William & Mary
- 2019-2020 Colloquium Chair, Computer Science, William & Mary
- 2019-2020 Undergraduate Pre-Major Advisor, William & Mary
- 2018-2019 Zable Recruitment Fellowship, William & Mary
- 2018-2019 Awards and Prizes, Computer Science, William & Mary
- 2018-2019 Colloquium, Computer Science, William & Mary
- 2018-2019 Graduate Curriculum, Computer Science, William & Mary
- 2018-2019 Undergraduate Pre-Major Advisor, William & Mary
- 2017-2018 Awards and Prizes, Computer Science, William & Mary
- 2017-2018 Undergraduate Pre-Major Advisor, William & Mary
- 2016-2017 Graduate Admissions, Computer Science, William & Mary
- 2016-2017 Zable Recruitment Fellowship, William & Mary
- 2016-2017 Awards and Prizes, Computer Science, William & Mary

b) Other professional service

- Ph.D. Thesis Committee Member:
 - Qing Yang
 - Bin Nie
 - Shasha Wen
 - Probir Roy
 - Qingsen Wang
 - Yongsen Ma
 - Haonan Wang
 - Mohamed Ibrahim
 - Hao Xu
 - Xiaodan Zhu
 - Du Shen
 - Gurunath Kadam
 - Heather Switzer
 - Pengfei Su
 - Qiong Wu
 - Zheng Zhang
 - Wei Han (Colorado Mines)

Zeyi Tao
David Chris Thames
Tao Zhang
Yidong Gong
Yiyang Lu
Jialiang Tan

- Undergraduate Honor Thesis Committee Member:
 - Yanxin Xu
 - Xinzhi (Lulu) Zhang
- Program Committee Member:
 - The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC), 2023
 - ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP), 2024, 2023 (AE Chair), 2022 (PC & Session Chair)
 - The International Symposium on Computer Architecture (ISCA), 2022 (ERC)
 - The ACM SIGPLAN International Conference on Compiler Construction (CC), 2024, 2023, 2022
 - ACM International Conference on Supercomputing (ICS), 2021 (PC & Publication Chair), 2018 (Submission Chair)
 - IEEE International Conference on Distributed Computing Systems (ICDCS), 2021
 - IEEE Languages, Compilers, Tools and Theory of Embedded Systems (LCTES), 2021, 2020
 - International Workshop on High-Level Parallel Programming Models and Supportive Environments (HIPS), 2021 (Workshop Co-Chair)
 - IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2024, 2023 (Track Co-Chair), 2022, 2021
 - IEEE International Symposium on Workload Characterization (IISWC), 2020 (Registration Chair)
 - IEEE International Conference on Computer Design (ICCD), 2023, 2022, 2021, 2020
 - ACM International Symposium on High-Performance Parallel and Distributed Computing (HPDC), 2019
 - ACM/IEEE International Conference on Parallel Architectures and Compilation Techniques (PACT), 2019, 2018
 - International Conference on Parallel Processing (ICPP), 2020 (PC & Session Chair), 2015
 - IEEE International Conference on High Performance Computing, Data, and Analytics (HiPC), 2023, 2022, 2021, 2019, 2018, 2017, 2015
 - ACM Asia-Pacific Workshop on Systems (APSys), 2022 (PC & Session Chair)
 - Annual IFIP International Conference on Network and Parallel Computing (NPC), 2020, 2019, 2018

- IEEE International Conference on Computer Communications and Networks (ICCCN), 2018
 - IEEE International Conference on Future Internet of Things and Cloud (FiCloud), 2018
 - International Symposium on Benchmarking, Measuring and Optimizing (Bench), 2023, 2022, 2021, 2020, 2018
 - IEEE International Conferences on High Performance Computing and Communications (HPCC), 2016, 2015
 - IEEE International Conference on Parallel and Distributed Systems (ICPADS), 2016
 - International Workshop on High-level Parallel Programming Models and Supportive Environments (HIPS), 2020, 2019, 2016, 2015
 - Workshop on General Purpose Processing Using GPU (GPGPU), 2020, 2019
 - International Workshop on Domain-Specific Languages and High-Level Frameworks for High Performance Computing (WOLFHPC), 2017, 2016
 - Annual Workshop on Emerging Parallel and Distributed Runtime Systems and Middleware (IPDRM), 2020, 2017
- Journal Reviewer:
 - Topic Editor of Frontiers in High Performance Computing with the topic of “Real-Time Machine Learning on Edge Devices with HPC Support”, 2023
 - IEEE Transactions on Computers (TC), 2020, 2019
 - IEEE Transactions on Parallel and Distributed Systems (TPDS), 2021, 2020, 2019, 2017
 - ACM Transactions on Architecture and Code Optimization (TACO), 2023, 2017
 - ACM Computing Surveys (CSUR), 2017
 - IEEE Transactions on Smart Grid (SmartGrid), 2017
 - International Journal of Parallel Programming (IJPP), 2019, 2017, 2016
 - Journal of Parallel and Distributed Computing (JPDC), 2018, 2017, 2016, 15, 14, 13
 - IEEE Transactions on Knowledge and Data Engineering (TKDE), 2014
- Conference Reviewer:
 - The International Conference on Machine Learning (ICML), 2023, 2022
 - Conference on Neural Information Processing Systems (NeurIPS), 2023
 - International Conference on Learning Representations (ICLR), 2024
 - International Conference on Computer Vision (ICCV), 2023, 2022, 2021
 - IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2023, 2021
 - AAAI Conference on Artificial Intelligence (AAAI), 2024, 2022, 2021
 - International Conference on Parallel Processing (ICPP), 2016
 - IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2016, 15
 - ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP), 2015
 - International Conference on Parallel Architectures and Compilation Techniques

- (PACT), 2015
- IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid), 2015
- International Conference on Network and Parallel Computing (NPC), 2014, 2015
- ACM SRC Reviewer/Judger:
 - ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS), 2018 (Judger)
 - International Symposium on Code Generation and Optimization (CGO), 2020
 - ACM/IEEE International Conference on Parallel Architectures and Compilation Techniques (PACT), 2021, 2020
- Proposal Reviewer:
 - NSF Panel, 2023, 2021, 2020, 2017
 - DoE Advanced Scientific Computing Research (ASCR), 2015
- Outreach Activities:
 - Guest Speaker, W&M Chapter of the Association of Computing Machinery
 - Judge, W&M Hackathon 2019
 - Presenter, The Annual Focusing on the Future Conference (for high-ability middle and high school students and their parents and counselors), The The College of William & Mary's Center for Gifted Education, 2021, 2020, 2019, 2018

STUDENTS ADVISED:

a) Ph.D. students:

Ruiqin Tian (2015-2021, Graduated, First Job: Post-doc@PNNL)
 Zhen Peng (2016-2023, Graduated, First Job: Post-doc@PNNL)
 Qihan Wang (2017-present, Graduating soon, First Job: SE@Cruise LLC)
 Wei Niu (2018-2023, Graduated, First Job: Assistant Professor@UGA)
 Yu Chen (2018-2023, co-advised with Zhenming Liu and Andreas Stathopoulos,
 Graduated, First job: Senior SE@Citadel LLC)
 Junjie Wang (2020-2023, co-advised with Gang Zhou)
 Jiexiong Guan (2020-present)
 Sam Ma (2021-present)
 Zhenqing Hu (2021-present)
 Jiaze E (2022-present)

b) M.S. students:

Alexander Powell (graduated in Spring 2017)
 Eunyong Cho (graduated in Spring 2017)
 Shuxin Zou (graduated in Spring 2019)
 Xiaoying Zhai (graduated in Spring 2019)

c) Undergraduate students:

Major advisees:

Hanqiu Peng (2017-2020)
Zihan Yang (2017-2020)
Kristine A. Tseng (2018-2020)
Sejin Park (2018-2020)
Aaron M. Klein (2018-2021)
Frank Ding (2019-2020)
Kaitlyn N. Huynh (2019-2021)
Dieu Thy L. Ngo (2019-2021)
Junzhao Sun (2019-2021)
Charles J. Wang (2019-2022)
Anneliese Brei (2020-2022)
Jiaying Chen (2020-2022)
Caitlyn P. Marat (2020-2022)
Xianglu Peng (2020-2022)
Sarah Wang (2020-present)
Shuhong Wang (2020-present)
Steven Z. Jia (2021-present)
Taylor Liegel (2021-present)
Gabriella K. Shelton (2021-present)
Kyle L. Chen (2021-present)
Jacob C. Feldman (2021-present)
Abdimalik M. Hassan (2021-present)
Stephen D. Hoag (2021-present)
Daniel C. Lee (2021-present)
Alex Mui (2021-present)
Melody Vu (2021-present)
Yichan Zhang (2021-present)
Yifei Zhang (2021-present)
Samuel P. Borak (2022-present)
Dillon P. Buyrn (2022-present)
Connor D. MacKinnon (2022-present)
Rhea Malhotra (2022-present)
David N. Montenegro (2022-present)
Sayyed Hadi Razmjo (2022-present)
Quanhan Zhou (2021-2022)
Jiarui Qi (2023-present)
Huizhi Zhao (2023-present)

Pre-major advisees:

Michael G. Fairbanks (2017-2019)
Stephen D. Hoag (2017-2021)

Ashley R. Robinson (2017-2019)
Anneliese D. Brei (2018-2020)
Kaitlyn N. Huynh (2018-2019)
Maheen Khan (2018-2020)
Mariano A. Leyva Merino (2018-2020)
Charles J. Wang (2018-2019)
Bat-Enkh Baatarkhuu (2019-present)
Grayson Hoy (2019-2020)
Guanyu Jiang (2019-2020)
Blake Brown (2019-2020)
Sarah Wang (2019-2020)
Julia Butler (2019-2020)
Megan Sierzega (2020-2020)
Ryan T. Gainor (2020-2021)
Steven Z. Jia (2020-2021)
Taylor Liegel (2020-2021)
Gabriella K. Shelton (2020-2021)
Jonathon B. West (2020-2021)
Dillon P. Buyrn (2021-2022)
Francis Lorenzo G. Dayan (2021-present)
Manel Leong (2021-present)
Connor D. MacKinnon (2021-2022)
Rhea Malhotra (2021-2022)
Kenneth F. Begasse (2023-present)
Owen C. Chang (2023-present)
Zaid M. Dib (2023-present)
Bracen J. Hart (2023-present)
Kristina Knauss (2023-present)
Zachery E. LeMay (2023-present)
Abilasha Suri (2023-present)

d) Undergraduate research students:

Hanqiu Peng (2019, Graduated, PhD@National University of Singapore)
Ruoyu Li (2019)
Anneliese D. Brei (2019, Monroe Scholar, Graduated, PhD@UNC Chapel Hill)
John Svoboda (2020)
Charles J. Wang (2020-2022, Honor Thesis, Graduated, MS@UC Berkeley)
Amanda Michel (2022 Summer, Monroe Scholar)