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RESEARCH INTEREST	Computer architecture and computer systems, with an emphasis on massively parallel accelerators. Recent work focuses on efficient processing of emerging graph algorithms (data mining and machine learning on real-world graphs).	
POSITIONS & EXPERIENCES	Visiting Scholar Computer Science & Artificial Intelligence Laboratory, Massachusetts Institute of Technology Advisor: Professor Arvind Research Area: Computer Architecture Jan. 2020 - now	
	Research Fellow Institute for Computational Engineering and Sciences, The University of Texas at Austin Advisor: Professor Keshav Pingali Research Area: Parallel Computing Jan. 2019 - Aug. 2020	
	Assistant Research Scientist College of Computer National University of Defense Technology (NUDT) Research Area: Computer Architecture Jan. 2015 - May. 2018	
	Visiting Student Electrical and Computer Engineering University of Illinois at Urbana-Champaign Advisor: Professor Wen-Mei Hwu Research Area: Computer Architecture Oct. 2012 - Oct. 2014	
EDUCATION	Ph.D. in Computer Science National University of Defense Technology Advisor: Professor Zhiying Wang Thesis Title: Cache Management for Manycore Accelerators Sep. 2009 - Dec. 2014	
	B.S. in Computer Science National University of Defense Technology Rank: 1/144 Sep. 2005 - Jun. 2009	
HONORS AND AWARDS	<ul style="list-style-type: none"> • The CCF Distinguished PhD Dissertation Award Nominee, 2015 • The Ci Yun-Gui Computer Technology Scholarship for Graduates, NUDT, 2010 • Mathematical Contest In Modeling (MCM), Meritorious Winner, COMAP, USA, 2009 • Distinguished Graduate of NUDT, NUDT, 2009 • The Ci Yun-Gui Computer Technology Scholarship for Undergraduates, NUDT, 2008 • China Undergraduate Mathematical Contest in Modeling, First-rank Prize, 2007 	
PUBLICATIONS	[1] Xuhao Chen , Roshan Dathathri, Gurbinder Gill, Keshav Pingali, <i>Pangolin: An Efficient and Flexible Graph Pattern Mining System on CPU and GPU</i> , PVLDB , 13(8): 1190-1205, 2020	

- [2] **Xuhao Chen**, *Escort: Efficient Sparse Convolutional Neural Networks on GPUs*, CoRR, <https://arxiv.org/abs/1802.10280>
- [3] Zhen Xu, **Xuhao Chen**, Jie Shen, Yang Zhang, Cheng Chen, Canqun Yang, GARDE-NIA: A Domain-specific Benchmark Suite for Next-generation Accelerators, CoRR, <https://arxiv.org/abs/1708.04567>
- [4] **Xuhao Chen**, Cheng Chen, Jie Shen, Jianbin Fang, Tao Tang, Canqun Yang, Zhiying Wang, *Orchestrating Parallel Detection of Strongly Connected Components on GPUs*, **Parallel Computing**, Vol 78, Pages 101–114, 2018
- [5] Pingfan Li, **Xuhao Chen**, Jie Shen, Jianbin Fang, Tao Tang, Canqun Yang, *High Performance Detection of Strongly Connected Components in Sparse Graphs on GPUs*, In the Proceedings of the International Workshop on Programming Models and Applications for Multicores and Manycores, in conjunction with PPOPP-22, 2017
- [6] **Xuhao Chen**, Pingfan Li, Jianbin Fang, Tao Tang, Zhiying Wang, Canqun Yang, *Efficient and High-quality Sparse Graph Coloring on the GPU*, Concurrency and Computation: Practice and Experience, Volume 29, Issue 10, 2017
- [7] Jianbin Fang, Peng Zhang, Zhaokui Li, Tao Tang, **Xuhao Chen**, Cheng Chen, Canqun Yang, *Evaluating Multiple Streams on Heterogeneous Platforms*, Parallel Processing Letters, Volume 26, Issue 4, 2016
- [8] Hang Zhang, **Xuhao Chen**, Nong Xiao, Lei Wang, Fang Liu, Wei Chen, Zhiguang Chen, *Shielding STT-RAM Based Register files on GPUs Against Read Disturbance*, ACM Journal on Emerging Technologies in Computing Systems, Volume 10, Issue 5, 2016
- [9] Hang Zhang, **Xuhao Chen**, Nong Xiao, Fang Liu, *Optimizing STT-RAM Based Register File Energy Consumption on GPGPU with Delta Compression*, In Proceeding of the 53rd Design Automation Conference (**DAC-53**), 2016
- [10] Pingfan Li, **Xuhao Chen**, Zhe Quan, Jianbin Fang, Huayou Su, Tao Tang, Canqun Yang, *High Performance Parallel Graph Coloring on GPGPUs*, In Proceeding of the 30th IEEE International Parallel & Distributed Processing Symposium Workshop (IPDPSW), 2016
- [11] Hang Zhang, **Xuhao Chen**, Nong Xiao, Fang Liu, *Red-Shield: Shielding Read Disturbance for STT-RAM Based Register files on GPUs*, In Proceeding of the 26th Great Lakes Symposium on VLSI (GLSVLSI-26), 2016
- [12] **Xuhao Chen**, Li-Wen Chang, Christopher I. Rodrigues, Jie Lv, Zhiying Wang, Wen-Mei W. Hwu. *Adaptive Cache Management for Energy-efficient GPU Computing*, In Proceeding of the 47th Annual IEEE/ACM International Symposium on Microarchitecture (**MICRO-47**), 2014
- [13] **Xuhao Chen**, Shengzhao Wu, Li-Wen Chang, Wei-Sheng Huang, Carl Pearson, Zhiying Wang, Wen-Mei W. Hwu. *Adaptive Cache Bypass and Insertion for Many-core Accelerators*, In Proceeding of the Second ACM International Workshop on Many-core embedded systems (MES'14) in conjunction with ISCA-41, 2014

SERVICES

- Invited reviewer for ACM Transactions on Modeling and Performance Evaluation of Computing Systems
- Invited reviewer for Microprocessors and Microsystems: Embedded Hardware Design
- Invited reviewer for Journal of Supercomputing

LANGUAGES

- English: IELTS score is 7 (Reading 8, Writing 6.5, Listening 6.5, Speaking 7.5)
- Chinese: Native language