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Education and Training

2017	PhD	Computer Engineering	Purdue University, IN, USA
2011	MSc	Computer Science	University of California, San Diego, CA, USA
2008	BEng	Computer Engineering	Kasetsart University, Thailand

Research and Professional Experience

2017 – Present	Researcher, NSTDA Supercomputer Center, National Electronics and Computer Technology Center (NECTEC), Thailand
2016 – 2017	Research Assistant, Purdue University
2013, 2014	Advance Short Term Research Opportunity Program, Oak Ridge Associated Universities
2010 – 2011	Graduate Assistant, University of California, San Diego (UCSD)

Publications:

1. *Quantum Dynamics at Scale: Ultrafast Control of Emergent Functional Materials*, S. Tiwari, A. Krishnamoorthy, P. Rajak, P. Sakdhnagool, M. Kunaseth, F. Shimojo, S. Fukushima, A. Nakano, Y. Luo, R. Kalia, K. Nomura, P. Vashishta, In Proceedings of the International Conference on High Performance Computing in Asia-Pacific Region (HPCAsia2020), 2020. DOI:https://doi.org/10.1145/3368474.3368489. ***Best Paper Award***.

2. *Pagoda: A GPU Runtime System for Narrow Tasks*, T. Yeh, A. Sabne, P. Sakdhnagool, R. Eigenmann, and T. Rogers, ACM Trans. Parallel Comput. 2019. DOI:https://doi.org/10.1145/3365657

3. *RegDem: Increasing GPU Performance via Shared Memory Register Spilling*, P. Sakdhnagool, A. Sabne, R Eigenmann, ArXiv, 2019, abs/1907.02894.

4. *Comparative analysis of coprocessors*. P. Sakdhnagool, A. Sabne, R. Eigenmann, Concurrency and Computation: Practice and Experience, 2018. https://doi.org/10.1002/cpe.4756

5. *Massively parallel 3D image reconstruction*, X. Wang, A. Sabne, P. Sakdhnagool, S. J. Kisner, C. A. Bouman, S. P. Midkiff, Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis (SC), 2017. ***ACM Gordon Bell finalists.***

6. *Pagoda: fine-grained GPU resource virtualization for narrow tasks,* T. Yeh, A. Sabne, P. Sakdhnagool, R. Eigenmann, T. Rogers, ACM Symposium on Principles and Practice of Parallel Programming (PPoPP), 2017. ***Best Paper Award Nominee.***

7. *Formalizing Structured Control Flow Graphs,* A. Sabne, P. Sakdhnagool, R. Eigenmann, International Workshop on Languages and Compilers for Parallel Computing (LCPC), 2016

8. *HYDRA: extending shared address programming for accelerator clusters,* P. Sakdhnagool, A. Sabne, R. Eigenmann, International Workshop on Languages and Compilers for Parallel Computing (LCPC), 2015

9. *Understanding portability of a high-level programming model on contemporary heterogeneous architectures,* A. Sabne, P. Sakdhnagool, S. Lee, J. S. Vetter, IEEE Micro Magazine, July-August, 2015

10. *HeteroDoop: a MapReduce programming system for accelerator clusters,* A. Sabne, P. Sakdhnagool, R. Eigenmann, ACM International Symposium on High-Performance Parallel and Distributed Computing (HPDC), 2015

11. *Evaluating performance portability of OpenACC,* A. Sabne, P. Sakdhnagool, S. Lee, J. S. Vetter, International Workshop on Languages and Compilers for Parallel Computing (LCPC), 2014

12. *Scaling large-data computations on multi-GPU accelerators,* A. Sabne, P. Sakdhnagool, R. Eigenmann, Proceedings of the 27th international ACM conference on International conference on supercomputing (ICS), 2013

13. *Effect of compiler optimizations in OpenMP to CUDA translation,* A. Sabne, P. Sakdhnagool, R. Eigenmann, International Workshop on OpenMP (IWOMP), 2012

Teaching Experience

2018, 2019   ITCS443 Parallel and Distributed Systems (international course), Faculty of Information and Communication Technology, Mahidol University, Thailand.

Work Experience

2010   Intern Software Engineer, Microsoft Corporation, Redmond, WA
2008-2009   **Co-founder**, Software Developer, Extend Interactive Co., Ltd., Bangkok Thailand