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RESEARCH INTERESTS

My research interests include cyber-physical systems and parallel and distributed systems with a particular emphasis on operating systems and system software.

EDUCATION

B.S. Dept. of Information and Computer Science, Keio University, 2004.

M.S. Graduate School of Science and Technology, Keio University, 2006.

Ph.D. Graduate School of Science and Technology, Keio University, 2008.

PROFESSIONAL EXPERIENCE

Associate Professor, Dept. of Information Engineering, Nagoya University. Apr 2012 - Present.

Research Scientist, Dept. of Computer Science, University of California, Santa Cruz. Jul 2011 - Mar 2012.

Visiting Scientist, Dept. of Electrical and Computer Engineering, Carnegie Mellon University, Sep 2009 - Jun 2011.

Research Scientist, Dept. of Computer Science, The University of Tokyo. Apr 2009 - Jun 2011.

Research Scientist, Dept. of Information and Computer Science, Keio University. Apr 2008 - Mar 2009.

SELECTED PUBLICATIONS

1. Y. Abe, H. Sasaki, S. Kato, K. Inoue, M. Edahiro, M. Peres. "Power and Performance Characterization and Modeling of GPU-accelerated Systems", In Proceedings of the 28th IEEE International Parallel and Distributed Processing Symposium (IPDPS'14), 2014.

2. J. Augusto, G. Lima, K. Bletsas, and S. Kato. "Multiprocessor Real-Time Scheduling with a Few Migrating Tasks", In Proceedings of the 34th IEEE Real-Time Systems Symposium (RTSS'13), pp. 170 - 181, 2013.

3. M. Hirabayashi, S. Kato, M. Edahiro, K. Takeda, T. Kawano, and S. Mita. "GPU Implementations of Object Detection using HOG Features and Deformable Models", In Proceedings of the 1st IEEE International Conference on Cyber-Physical Systems, Networks, and Applications (CPSNA'13), 2013.

4. S. Kato, J. Aumiller, and S. Brandt. "Zero-Copy I/O Processing for Low-Latency GPU Computing", In Proc. of the 4th ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS'13), pp. 170-178, 2013.

5. R. Davis and S. Kato. "FPSL, FPCL and FPZL Schedulability Analysis", Real-Time Systems, Vol. 48, No. 6, pp. 750-788, 2012.

6. S. Kato, M. McThrow, C. Maltzahn, and S. Brandt. "Gdev: First-Class GPU Resource Management in the Operating System", In Proc. of the 2012 USENIX Annual Technical Conference (USENIX ATC'12), 2012.

7. D. Skourtis, S. Kato, and S. Brandt. "QBox: Guaranteeing I/O Performance on Black Box Storage Systems", In Proceedings of the 21st ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC'12), pp. 73-84, 2012.

8. S. Kato, K. Lakshmanan, A. Kumar, M. Kelkar, Y. Ishikawa, and R. Rajkumar. "RGEM: A Responsive GPGPU Execution Model for Runtime Engines", In Proceedings of the 32nd IEEE Real-Time Systems Symposium (RTSS'11), pp. 57-66, 2011.

9. S. Kato, K. Lakshmanan, R. Rajkumar, and Y. Ishikawa. "TimeGraph: GPU Scheduling for Real-Time Multi-Tasking Environments", In Proceedings of the 2011 USENIX Annual Technical Conference (USENIX ATC'11), 2011.

10. S. Kato, Y. Ishikawa, and R. Rajkumar. "CPU Scheduling and Memory Management for Interactive Real-Time Applications", Real-Time Systems, Vol. 47, No. 5, pp. 454 - 488, 2011.