



Christoforos Kozyrakis

Professor of Electrical Engineering and of Computer Science

CONTACT INFORMATION

- **Administrator**

Eiko Rutherford - Program Manager

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Bio

BIO

Christos Kozyrakis research focuses on making computer system of any size faster, cheaper, and greener. His current work focuses on the hardware architecture, runtime environment, programming models, and security infrastructure for warehouse-scale data centers and many-core chips with thousands of general purpose cores and fixed functions accelerators.

ACADEMIC APPOINTMENTS

- Professor, Electrical Engineering
- Professor, Computer Science

HONORS AND AWARDS

- Maurice Wilkes Award, ACM SIGARCH (2015)
- Fellow, ACM (2016)
- Fellow, IEEE (2014)
- Faculty Award, IBM (2006)
- Career Award, National Science Foundation (2006)
- Research Grant, Okawa Foundation (2005)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Willard R. and Inez Kerr Bell faculty scholar, Stanford University (2009 - 2011)

PROFESSIONAL EDUCATION

- PhD, University of California at Berkeley , Computer Science (2002)

LINKS

- <http://csl.stanford.edu/~christos>: <http://csl.stanford.edu/~christos>

Teaching

COURSES

2019-20

- Computer Systems Architecture: EE 282 (Win)
- Digital Systems Architecture: EE 180 (Spr)

2018-19

- Advanced Multi-Core Systems: CS 316 (Spr)
- Cloud Computing Technology: CS 349D (Aut)

2017-18

- Cloud Computing Technology: CS 349D (Aut)
- Digital Systems Architecture: EE 180 (Win)

2016-17

- Advanced Multi-Core Systems: CS 316 (Aut)
- Computer Systems Architecture: EE 282 (Spr)
- Digital Systems Architecture: EE 180 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Jenya Pergament, Jeff Setter, Travis Skare, Matthew Vilim, Chenzhuo Zhu

Postdoctoral Faculty Sponsor

Neeraja Yadwadkar

Doctoral Dissertation Advisor (AC)

Timothy Chong, Kostis Kaffes, Francisco Romero, Yawen Wang, Mark Zhao

Master's Program Advisor

Andrew Bartolo, Stephen Hughes, Matthew Lee, Jiajia Luo, Kartik Prabhu, Eric Wang

Doctoral (Program)

Timothy Chong, Kathleen Feng, Kostis Kaffes, Qian Li, Qiaoyi(Joey) Liu, Blaine Rister, Francisco Romero, Geet Sethi, Yawen Wang, Mark Zhao

Publications

PUBLICATIONS

- **AsmDB: Understanding and Mitigating Front-End Stalls in Warehouse-Scale Computers** *IEEE MICRO*
Nagendra, N., Ayers, G., August, D. I., Cho, H., Kanev, S., Kozyrakis, C., Krishnamurthy, T., Litz, H., Moseley, T., Ranganathan, P.
2020; 40 (3): 56–63
- **The Hot Chips Renaissance** *IEEE MICRO*
Kozyrakis, C., Bratt, I.
2020; 40 (2): 6–7
- **Interstellar: Using Halide's Scheduling Language to Analyze DNN Accelerators**
Yang, X., Gao, M., Liu, Q., Setter, J., Pu, J., Nayak, A., Bell, S., Cao, K., Ha, H., Raina, P., Kozyrakis, C., Horowitz, M., ACM
ASSOC COMPUTING MACHINERY.2020: 369–83

- **Classifying Memory Access Patterns for Prefetching**
Ayers, G., Litz, H., Kozyrakis, C., Ranganathan, P., ACM
ASSOC COMPUTING MACHINERY.2020: 513–26
- **A Case for Managed and Model-less Inference Serving**
Yadwadkar, N. J., Romero, F., Li, Q., Kozyrakis, C., ACM
ASSOC COMPUTING MACHINERY.2019: 184–91
- **AsmDB: Understanding and Mitigating Front-End Stalls in Warehouse-Scale Computers**
Ayers, G., Nagendra, N., August, D., Cho, H., Kanev, S., Kozyrakis, C., Krishnamurthy, T., Litz, H., Moseley, T., Ranganathan, P., ACM
ASSOC COMPUTING MACHINERY.2019: 462–73
- **From Laptop to Lambda: Outsourcing Everyday Jobs to Thousands of Transient Functional Containers**
Fouladi, S., Romero, F., Iter, D., Li, Q., Chatterjee, S., Kozyrakis, C., Zaharia, M., Winstein, K., USENIX Assoc
USENIX ASSOC.2019: 475–88
- **Shinjuku: Preemptive Scheduling for mu second-scale Tail Latency**
Kaffes, K., Chong, T., Humphries, J., Belay, A., Mazieres, D., Kozyrakis, C., USENIX Assoc
USENIX ASSOC.2019: 345–59
- **QuMan: Profile-based Improvement of Cluster Utilization** *ACM TRANSACTIONS ON ARCHITECTURE AND CODE OPTIMIZATION*
Sfakianakis, Y., Kozanitis, C., Kozyrakis, C., Bilas, A.
2018; 15 (3)
- **Amdahl's Law for Tail Latency** *COMMUNICATIONS OF THE ACM*
Delimitrou, C., Kozyrakis, C.
2018; 61 (8): 65–72
- **Uncovering the Security Implications of Cloud Multi-Tenancy with Bolt** *IEEE MICRO*
Delimitrou, C., Kozyrakis, C.
2018; 38 (3): 86–97
- **Plasticine: A Reconfigurable Accelerator for Parallel Patterns** *IEEE MICRO*
Prabhakar, R., Zhang, Y., Koeplinger, D., Feldman, M., Zhao, T., Hadjis, S., Pedram, A., Kozyrakis, C., Olukotun, K.
2018; 38 (3): 20–31
- **GraphP: Reducing Communication for PIM-based Graph Processing with Efficient Data Partition**
Zhang, M., Zhuo, Y., Wang, C., Gao, M., Wu, Y., Chen, K., Kozyrakis, C., Qian, X., IEEE
IEEE.2018: 544–57
- **Making Pull-Based Graph Processing Performant**
Grossman, S., Litz, H., Kozyrakis, C.
ASSOC COMPUTING MACHINERY.2018: 246–60
- **Memory Hierarchy for Web Search**
Ayers, G., Ahn, J., Kozyrakis, C., Ranganathan, P., IEEE
IEEE.2018: 643–56
- **The IX Operating System: Combining Low Latency, High Throughput and Efficiency in a Protected Dataplane (vol 34, pg 11, 2017)** *ACM TRANSACTIONS ON COMPUTER SYSTEMS*
Belay, A., Prekas, G., Primorac, M., Klimovic, A., Grossman, S., Kozyrakis, C., Bugnion, E.
2017; 35 (3)
- **TETRIS: Scalable and Efficient Neural Network Acceleration with 3D Memory** *ACM SIGPLAN NOTICES*
Gao, M., Pu, J., Yang, X., Horowitz, M., Kozyrakis, C.
2017; 52 (4): 751-764
- **Bolt: I Know What You Did Last Summer... In the Cloud** *ACM SIGPLAN NOTICES*
Delimitrou, C., Kozyrakis, C.
2017; 52 (4): 599-613

- **ReFlex: Remote Flash approximate to Local Flash** *ACM SIGPLAN NOTICES*
Klimovic, A., Litz, H., Kozyrakis, C.
2017; 52 (4): 345-359
- **The IX Operating System: Combining Low Latency, High Throughput, and Efficiency in a Protected Dataplane** *ACM TRANSACTIONS ON COMPUTER SYSTEMS*
Belay, A., Prekas, G., Primorac, M., Klimovic, A., Grossman, S., Kozyrakis, C., Bugnion, E.
2017; 34 (4)
- **Persona: A High-Performance Bioinformatics Framework**
Byma, S., Whitlock, S., Flueratoru, L., Tseng, E., Kozyrakis, C., Bugnion, E., Larus, J., USENIX Assoc
USENIX ASSOC.2017: 153–65
- **Special Session Paper 3D Nanosystems Enable Embedded Abundant-Data Computing**
Hwang, W., Aly, M., Malviya, Y. H., Gao, M., Wu, T. F., Kozyrakis, C., Wong, H., Mitra, S., IEEE
IEEE.2017
- **Plasticine: A Reconfigurable Architecture For Parallel Patterns** *ISCA '17: 44th International Symposium on Computer Architecture, June 2017*
Prabhakar, R., Zhang, Y., Koeplinger, D., Feldman, M., Zhao, T., Hadjis, S., Pedram, A., Kozyrakis, C., Olukotun, K.
2017
- **Security Implications of Data Mining in Cloud Scheduling** *IEEE COMPUTER ARCHITECTURE LETTERS*
Delimitrou, C., Kozyrakis, C.
2016; 15 (2): 109-112
- **Improving Resource Efficiency at Scale with Heracles** *ACM TRANSACTIONS ON COMPUTER SYSTEMS*
Lo, D., Cheng, L., Govindaraju, R., Ranganathan, P., Kozyrakis, C.
2016; 34 (2)
- **Generating Configurable Hardware from Parallel Patterns** *ACM SIGPLAN NOTICES*
Prabhakar, R., Koeplinger, D., Brown, K. J., Lee, H., De Sa, C., Kozyrakis, C., Olukotun, K.
2016; 51 (4): 651-665
- **HCloud: Resource-Efficient Provisioning in Shared Cloud Systems** *ACM SIGPLAN NOTICES*
Delimitrou, C., Kozyrakis, C.
2016; 51 (4): 473-488
- **Energy-Efficient Abundant-Data Computing: The N3XT 1,000x** *COMPUTER*
Aly, M. M., Gao, M., Hills, G., Lee, C., Pitner, G., Shulaker, M. M., Wu, T. F., Asheghi, M., Bokor, J., Franchetti, F., Goodson, K. E., Kozyrakis, C., Markov, et al
2015; 48 (12): 24-33
- **Convolution Engine: Balancing Efficiency and Flexibility in Specialized Computing** *COMMUNICATIONS OF THE ACM*
Qadeer, W., Hameed, R., Shacham, O., Venkatesan, P., Kozyrakis, C., Horowitz, M.
2015; 58 (4): 85-93
- **QUALITY-OF-SERVICE-AWARE SCHEDULING IN HETEROGENEOUS DATACENTERS WITH PARAGON** *IEEE MICRO*
Delimitrou, C., Kozyrakis, C.
2014; 34 (3): 17-30
- **Quasar: Resource-Efficient and QoS-Aware Cluster Management** *ACM SIGPLAN NOTICES*
Delimitrou, C., Kozyrakis, C.
2014; 49 (4): 127-143
- **Dynamic Management of TurboMode in Modern Multi-core Chips**
Patterson, D., Kozyrakis, C.
2014
- **Quasar: Resource-Efficient and QoS-Aware Cluster Management**
Delimitrou, C., Kozyrakis, C.
2014

- **QoS-Aware Scheduling in Heterogeneous Datacenters with Paragon** *ACM TRANSACTIONS ON COMPUTER SYSTEMS*
Delimitrou, C., Kozyrakis, C.
2013; 31 (4)
- **Measuring and analyzing the energy use of enterprise computing systems** *SUSTAINABLE COMPUTING-INFORMATICS & SYSTEMS*
Kazandjieva, M., Heller, B., Gnawali, O., Levis, P., Kozyrakis, C.
2013; 3 (3): 218-229
- **Paragon: QoS-Aware Scheduling for Heterogeneous Datacenters** *ACM SIGPLAN NOTICES*
Delimitrou, C., Kozyrakis, C.
2013; 48 (4): 77-88
- **Guest Editors' Introduction SELECTED RESEARCH FROM HOT CHIPS 24** *IEEE MICRO*
Kozyrakis, C., Zahir, R.
2013; 33 (2): 6-7
- **The Netflix Challenge: Datacenter Edition** *IEEE COMPUTER ARCHITECTURE LETTERS*
Delimitrou, C., Kozyrakis, C.
2013; 12 (1): 29-32
- **iBench: Quantifying Interference for Datacenter Applications** *IEEE International Symposium on Workload Characterization (IISWC)*
Delimitrou, C., Kozyrakis, C.
IEEE.2013: 23-33
- **ZSim: Fast and Accurate Microarchitectural Simulation of Thousand-Core Systems**
Sanchez, D., Kozyrakis, C.
2013
- **iBench: Quantifying Interference for Datacenter Workloads**
Delimitrou, C., Kozyrakis, C.
2013
- **Convolution Engine: Balancing Efficiency and Flexibility in Specialized Computing**
Qadeer, W., Hameed, R., Shacham, O., Venkatesan, P., Kozyrakis, C., Horowitz, M.
2013
- **Measuring and analyzing the energy use of enterprise computing systems** *Sustainable Computing: Informatics and Systems*
Kazandjieva, M., Heller, B., Gnawali, O., Levis, P., Kozyrakis, C.
2013
- **Resource Efficient Computing for Warehouse-scale Datacenters**
Kozyrakis, C.
2013
- **QoS-Aware Admission Control in Heterogeneous Datacenters**
Delimitrou, C., Bambos, N., Kozyrakis, C.
2013
- **Enhanced Concurrency Control with Transactional NACKs**
Baek, W., Yoo, R., Kozyrakis, C.
2013
- **Locality-Aware Task Management for Unstructured Parallelism: A Quantitative Limit Study**
Yoo, R., Hughes, C., Kim, C., Chen, Y., Kozyrakis, C.
2013
- **QoS-Aware Scheduling in Heterogeneous Datacenters with Paragon** *ACM Transactions on Computer Systems (TOCS)*
Delimitrou, C., Kozyrakis, C.
2013; 31 (4)

- **Decoupling Datacenter Storage Studies from Access to Large-Scale Applications** *IEEE COMPUTER ARCHITECTURE LETTERS*
Delimitrou, C., Sankar, S., Vaid, K., Kozyrakis, C.
2012; 11 (2): 53-56
- **SCALABLE AND EFFICIENT FINE-GRAINED CACHE PARTITIONING WITH VANTAGE** *IEEE MICRO*
Sanchez, D., Kozyrakis, C.
2012; 32 (3): 26-37
- **Hardware Acceleration of Transactional Memory on Commodity Systems** *ACM SIGPLAN NOTICES*
Casper, J., Oguntebi, T., Hong, S., Bronson, N. G., Kozyrakis, C., Olukotun, K.
2012; 47 (4): 27-38
- **Improving System Energy Efficiency with Memory Rank Subsetting** *ACM TRANSACTIONS ON ARCHITECTURE AND CODE OPTIMIZATION*
Ahn, J. H., Jouppi, N. P., Kozyrakis, C., Leverich, J., Schreiber, R. S.
2012; 9 (1)
- **Green Enterprise Computing Data: Assumptions and Realities** *3rd International Green Computing Conference (IGCC)*
Kazandjieva, M., Heller, B., Gnawali, O., Levis, P., Kozyrakis, C.
IEEE.2012
- **Dune: Safe User-level Access to Privileged CPU Features**
Belay, A., Bittau, A., Mashtizadeh, A., Terei, D., Mazieres, D., Kozyrakis, C.
2012
- **ECHO: Recreating Network Traffic Maps for Datacenters of Tens of Thousands of Servers**
Delimitrou, C., Sanka, S., Kansal, A., Kozyrakis, C.
2012
- **A Case of System-level Hardware/Software Co-design and Co-verification of a Commodity Multi-Processor System with Custom Hardware** *10th ACM International Conference on Hardware/Software-Codesign and System Synthesis*
Hong, S., Oguntebi, T., Casper, J., Bronson, N., Kozyrakis, C., Olukotun, K.
ASSOC COMPUTING MACHINERY.2012: 513-519
- **Towards Energy-Proportional Datacenter Memory with Mobile DRAM** *39th Annual International Symposium on Computer Architecture (ISCA)*
Malladi, K. T., Nothaft, F. A., Periyathambi, K., Lee, B. C., Kozyrakis, C., Horowitz, M.
IEEE.2012: 37-48
- **SCD: A Scalable Coherence Directory with Flexible Sharer Set Encoding** *18th IEEE International Symposium on High-Performance Computer Architecture (HPCA)*
Sanchez, D., Kozyrakis, C.
IEEE.2012: 129-140
- **Understanding Sources of Inefficiency in General-Purpose Chips** *COMMUNICATIONS OF THE ACM*
Hameed, R., Qadeer, W., Wachs, M., Azizi, O., Solomatnikov, A., Lee, B. C., Richardson, S., Kozyrakis, C., Horowitz, M.
2011; 54 (10): 85-93
- **The Case for RAMCloud** *COMMUNICATIONS OF THE ACM*
Ousterhout, J., Agrawal, P., Erickson, D., Kozyrakis, C., Leverich, J., Mazieres, D., Mitra, S., Narayanan, A., Ongaro, D., Parulkar, G., Rosenblum, M., Rumble, S. M., Stratmann, et al
2011; 54 (7): 121-130
- **Hardware Acceleration of Transactional Memory on Commodity Systems** *ACM SIGPLAN NOTICES*
Casper, J., Oguntebi, T., Hong, S., Bronson, N. G., Kozyrakis, C., Olukotun, K.
2011; 46 (3): 27-38
- **Decoupling Datacenter Studies from Access to Large-Scale Applications: A Modeling Approach for Storage Workloads** *IEEE International Symposium on Workload Characterization (IISWC)*
Delimitrou, C., Sankar, S., Vaid, K., Kozyrakis, C.
IEEE.2011: 51-60

- **Storage I/O Generation and Replay for Datacenter Applications**
Delimitrou, C., Sankar, S., Vaid, K., Kozyrakis, C.
2011
- **Time and Cost-Efficient Modeling and Generation of Large-Scale TPCC/TPCE/TPCH**
Delimitrou, C., Sankar, S., Khessib, B., Vaid, K., Kozyrakis, C.
2011
- **Phoenix++: Modular MapReduce for Shared-Memory Systems**
Talbot, J., Yoo, R., Kozyrakis, C.
2011
- **Dynamic Fine-Grain Scheduling of Pipeline Parallelism**
Sanchez, D., Lo, D., Yoo, R., Sugerman, J., Kozyrakis, C.
2011
- **Accurate Modeling and Generation of Storage I/O for Datacenter Workloads**
Delimitrou, C., Sankar, S., Vaid, K., Kozyrakis, C.
2011
- **Understanding Sources of Inefficiency in General-Purpose Chips** *Communications of the ACM (CACM)*
Hameed, R., Qadeer, W., Wachs, M., Azizi, O., Solomatnikov, A., Lee, Benjamin, C., Kozyrakis, C.
2011; 54 (10)
- **Vantage: Scalable and Efficient Fine-Grain Cache Partitioning** *38th Annual International Symposium on Computer Architecture*
Sanchez, D., Kozyrakis, C.
ASSOC COMPUTING MACHINERY.2011: 57–68
- **SERVER ENGINEERING INSIGHTS FOR LARGE-SCALE ONLINE SERVICES** *IEEE MICRO*
Kozyrakis, C., Kansal, A., Sankar, S., Vaid, K.
2010; 30 (4): 8-19
- **An Analysis of On-Chip Interconnection Networks for Large-Scale Chip Multiprocessors** *ACM TRANSACTIONS ON ARCHITECTURE AND CODE OPTIMIZATION*
Sanchez, D., Michelogiannakis, G., Kozyrakis, C.
2010; 7 (1)
- **Flexible Architectural Support for Fine-Grain Scheduling** *ACM SIGPLAN NOTICES*
Sanchez, D., Yoo, R. M., Kozyrakis, C.
2010; 45 (3): 311-322
- **Understanding Sources of Inefficiency in General-Purpose Chips** *37th International Symposium on Computer Architecture*
Hameed, R., Qadeer, W., Wachs, M., Azizi, O., Solomatnikov, A., Lee, B. C., Richardson, S., Kozyrakis, C., Horowitz, M.
ASSOC COMPUTING MACHINERY.2010: 37–47
- **FARM: A Prototyping Environment for Tightly-Coupled, Heterogeneous Architectures**
Oguntebi, T., Hong, S., Casper, J., Bronson, N., Kozyrakis, C., Olukotun, K.
2010
- **Tainting is Not Pointless** *ACM SIGOPS Operating Systems Review*
Dalton, M., Kannan, H., Kozyrakis, C.
2010; 44 (2)
- **Making Nested Parallel Transactions Practical using Lightweight Hardware Support**
Baek, W., Bronson, N., Kozyrakis, C., Olukotun, K.
2010
- **EigenBench: A Simple Exploration Tool for Orthogonal TM Characteristics**
Hong, S., Oguntebi, T., Casper, J., Bronson, N., Kozyrakis, C., Olukotun, K.
2010

- **The ZCache: Decoupling Ways and Associativity**
Sanchez, D., Kozyrakis, C.
2010
- **Implementing and Evaluating a Model Checker for Transactional Memory Systems**
Baek, W., Bronson, N., Kozyrakis, C., Olukotun, K.
2010
- **Evaluating Bufferless Flow Control for On-Chip Networks**
Michelogiannakis, G., Sanchez, D., Dally, William, J., Kozyrakis, C.
2010
- **Implementing and Evaluating Nested Parallel Transactions in Software Transactional Memory** *22nd ACM Symposium on Parallelism in Algorithms and Architectures*
Baek, W., Bronson, N., Kozyrakis, C., Olukotun, K.
ASSOC COMPUTING MACHINERY.2010: 253–262
- **Power Management of Datacenter Workloads Using Per-Core Power Gating** *IEEE COMPUTER ARCHITECTURE LETTERS*
Leverich, J., Monchiero, M., Talwar, V., Ranganathan, P., Kozyrakis, C.
2009; 8 (2): 48-51
- **HOT CHIPS TURNS 20** *IEEE MICRO*
Kozyrakis, C., van de Waerd, J.
2009; 29 (2): 4-5
- **Phoenix Rebirth: Scalable MapReduce on a Large-Scale Shared-Memory System** *IEEE International Symposium on Workload Characterization*
Yoo, R. M., Romano, A., Kozyrakis, C.
IEEE COMPUTER SOC.2009: 198–207
- **On the Energy (In)Efficiency of Hadoop Clusters**
Leverich, J., Kozyrakis, C.
2009
- **On the Energy (In)Efficiency of Hadoop Clusters**
Leverich, J., Kozyrakis, C.
2009
- **The Stanford Pervasive Parallelism Lab**
Kozyrakis, C., Olukotun, K.
2009
- **Energy Dumpster Diving**
Kazandjieva, M., Heller, B., Levis, P., Kozyrakis, C.
2009
- **Energy Dumpster Diving**
Kazandjieva, M., Heller, B., Levis, P., Kozyrakis, C.
2009
- **Nemesis: Preventing Authentication & Access Control Vulnerabilities in Web Applications**
Dalton, M., Kozyrakis, C., Zeldovich, N.
2009
- **The case for RAMClouds: scalable high-performance storage entirely in DRAM** *ACM SIGOPS Operating Systems Review*
Ousterhout, J., Agrawal, P., Erickson, D., Kozyrakis, C., Leverich, J., Mazières, D.
2009; 43 (4)
- **Future Scaling of Processor-Memory Interfaces** *Conference on High Performance Computing Networking, Storage and Analysis*
Ahn, J. H., Jouppi, N. P., Kozyrakis, C., Leverich, J., Schreiber, R. S.
IEEE.2009

- **Fast Memory Snapshot for Concurrent Programming without Synchronization** *ACM SIGARCH International Conference on Supercomputing*
Chung, J., Baek, W., Kozyrakis, C.
ASSOC COMPUTING MACHINERY.2009: 117–125
- **A Memory System Design Framework: Creating Smart Memories** *36th Annual International Symposium on Computer Architecture*
Firoozshahian, A., Solomatnikov, A., Shacham, O., Asgar, Z., Richardson, S., Kozyrakis, C., Horowitz, M.
ASSOC COMPUTING MACHINERY.2009: 406–417
- **Decoupling Dynamic Information Flow Tracking with a Dedicated Coprocessor** *39th Annual IEEE/IFIP International Conference on Dependable Systems and Networks*
Kannan, H., Dalton, M., Kozyrakis, C.
IEEE.2009: 105–114
- **Feedback-Directed Barrier Optimization in a Strongly Isolated STM** *ACM SIGPLAN NOTICES*
Bronson, N. G., Kozyrakis, C., Olukotun, K.
2009; 44 (1): 213-225
- **Comparative Evaluation of Memory Models for Chip Multiprocessors** *ACM TRANSACTIONS ON ARCHITECTURE AND CODE OPTIMIZATION*
Leverich, J., Arakida, H., Solomatnikov, A., Firoozshahian, A., Horowitz, M., Kozyrakis, C.
2008; 5 (3)
- **Transactional memory** *COMMUNICATIONS OF THE ACM*
Larus, J., Kozyrakis, C.
2008; 51 (7): 80-88
- **Improving Software Concurrency with Hardware-assisted Memory Snapshot** *20th ACM Symposium on Parallelism in Algorithms and Architectures*
Chung, J., Seo, J., Baek, W., Minh, C. C., McDonald, A., Kozyrakis, C., Olukotun, K.
ASSOC COMPUTING MACHINERY.2008: 363–363
- **Hardware Enforcement of Application Security Policies**
Zeldovich, N., Kannan, H., Dalton, M., Kozyrakis, C.
2008
- **A Comparison of High-Level Full-System Power Models**
Rivoire, S., Ranganathan, P., Kozyrakis, C.
2008
- **Real-World Buffer Overflow Protection for Userspace and Kernel-space**
Dalton, M., Kannan, H., Kozyrakis, C.
2008
- **ASeD: Availability, Security, and Debugging Support using Transactional Memory** *20th ACM Symposium on Parallelism in Algorithms and Architectures*
Chung, J., Baek, W., Bronson, N. G., Seo, J., Kozyrakis, C., Olukotun, K.
ASSOC COMPUTING MACHINERY.2008: 366–366
- **STAMP: Stanford Transactional Applications for Multi-Processing** *IEEE International Symposium on Workload Characterization*
Minh, C. C., Chung, J., Kozyrakis, C., Olukotun, K.
IEEE.2008: 31–42
- **Thread-Safe Dynamic Binary Translation using Transactional Memory** *14th International Symposium on High-Performance Computer Architecture*
Chung, J., Dalton, M., Kannan, H., Kozyrakis, C.
IEEE.2008: 256–266
- **Models and metrics to enable energy-efficiency optimizations** *COMPUTER*
Rivoire, S., Shah, M. A., Ranganathan, P., Kozyrakis, C., Meza, J.
2007; 40 (12): 39-?
- **RAMP: Research accelerator for multiple processors** *Hot Chips 18 Conference*
Wawrzynek, J., Patterson, D., Oskin, M., Lu, S., Kozyrakis, C., Hoe, J. C., Chiou, D., Asanovic, K.
IEEE COMPUTER SOC.2007: 46–57

- **Towards Soft Optimization Techniques for Parallel Cognitive Applications** *19th Annual Symposium on Parallelism in Algorithms and Architectures*
Baek, W., Chung, J., Minh, C. C., Kozyrakis, C., Olukotun, K.
ASSOC COMPUTING MACHINERY.2007: 59–60
- **The OpenTM Transactional Application Programming Interface**
Baek, W., Minh, C. C., Trautmann, M., Kozyrakis, C., Olukotun, K.
2007
- **RAMP: Research Accelerator for Multiple Processors** *IEEE Micro*
Wawrzyniek, J., Patterson, D., Oskin, M., Lu, S., Kozyrakis, C., Hoe, J.
2007; 27 (2)
- **A Low Power Front-end for Embedded Processors using a Block-aware Instruction Set**
Zmily, A., Kozyrakis, C.
2007
- **JouleSort: A Balanced Energy-Efficiency Benchmark**
Rivoire, S., Shah, Mehul, A., Ranganathan, P., Kozyrakis, C.
2007
- **Raksha: A Flexible Architecture for Software Security**
Kannan, H., Dalton, M., Kozyrakis, C.
2007
- **Raksha: A Flexible Information Flow Architecture for Software Security** *34th Annual International Symposium on Computer Architecture*
Dalton, M., Kannan, H., Kozyrakis, C.
ASSOC COMPUTING MACHINERY.2007: 482–493
- **A Practical FPGA-based Framework for Novel CMP Research** *15th ACM/SIGDA International Symposium on Field-Programmable Gate Arrays*
Wee, S., Casper, J., Njoroge, N., Teslyar, Y., Ge, D., Kozyrakis, C., Olukotun, K.
ASSOC COMPUTING MACHINERY.2007: 116–125
- **Transactional Collection Classes** *ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming*
Carlstrom, B. D., McDonald, A., Carbin, M., Kozyrakis, C., Olukotun, K.
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