

Dimitrios

Assistant Professor, Computer Science Department
Carnegie Mellon University
CMU CAOS Group

Education

Master Technical University of Crete, Electronic and Computer Engineering
PhD University of Illinois at Urbana-Champaign, Computer Science, 2020

Employment

The head of CAOS group in CMU
Assistant Professor in CMU

Research

Uncovering security vulnerabilities and building defenses at the boundary between hardware and OS
Re-designing abstractions and interfaces between the two layers to improve performance and scalability

Award

David J. Kuck Outstanding Ph.D. Thesis Award
ACM SIGARCH & IEEE CS TCCA Outstanding Dissertation Award

Selected Publications

[MICRO] Memento: Architectural Support for Ephemeral Memory Management.
Ziqi Wang, Kaiyang Zhao, Pei Li, Andrew Jacob, Michael Kozuch, Todd Mowry, Dimitrios Skarlatos. Proceedings of the 56rd Intl. Symposium on Microarchitecture, Toronto, Canada, October 2023.

[SOSP] Siloz: Leveraging DRAM Isolation Domains to Prevent Inter-VM Rowhammer.
Kevin Loughlin, Jonah Rosenblum, Stefan Saroiu, Alec Wolman, Dimitrios Skarlatos, Baris Kasikci. Proceedings of the 29th Symposium on Operating System Principles, Germany, October 2023.

[SOSP] XFaaS: Hyperscale and Frugal Function-as-a-Service in Private Cloud
Ali Sahraei, Soteris Demetriou, Amirali Sobhgol, Neeraj Pathak, Girish Joshi, Carla Souza, Bo Huang, Wyatt Cook, Andrii Golovei, Pradeep Venkat, Andrew McFague, Dimitrios Skarlatos, Vipul Patel, Ravinder Thind, Ernesto Gonzalez, Yun Jin, Chunqiang Tang. Proceedings of the 29th Symposium on Operating System Principles, Germany, October 2023.

[OSDI] ServiceRouter: Hyperscale and Minimal Cost Service Mesh at Meta. Harshit Saakar, Soteris Demetriou, Nick Magerko, Max Kontorovich, Josh Kirstein, Margot

Leibold, Dimitrios Skarlatos, Hitesh Khandelwal, Chunqiang Tang. Proceedings of the 17th USENIX Symposium on Operating Systems Design and Implementation, Boston, USA, July 2023.

[ISCA] Contiguitas: The Pursuit of Physical Memory Contiguity in Datacenters. Kaiyang Zhao, Kaiwen Xue, Ziqi Wang, Dan Schatzberg, Leon Yang, Antonis Manousis, Johannes Weiner, Rik van Riel, Bikash Sharma, Chunqiang Tang, Dimitrios Skarlatos. Proceedings of the 50th Intl. Symposium on Computer Architecture, Orlando, USA, June 2023.

[MICRO Top Picks] IOCost: Block IO Control for Containers in Datacenters. Tejun Heo, Dan Schatzberg, Andrew Newell, Song Liu, Saravanan Dhakshinamurthy, Iyswarya Narayanan, Josef Bacik, Chris Mason, Chunqiang Tang, Dimitrios Skarlatos. IEEE MICRO Magazine, Top Picks Special Issue, May-June 2023.

[HPCA] Memory-Efficient Hashed Page Tables. Jovan Stojkovic, Namrata Mantri, Dimitrios Skarlatos, Tianyin Xu, Josep Torrellas. Proceedings of the 29th Intl. Symposium on High-Performance Computer Architecture, Montreal, CA, February 2023.

