Theano Stavrinos

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Education

Princeton University — Princeton, NJ
PhD in Computer Science, advised by Dr. Wyatt Lloyd & Dr. Ethan Katz-Bassett (Columbia) — 2017–2023
Dissertation: "Nabu: Unlocking Better Cache Performance at Lower Cost with Expiration Time-based Flash Caching".

University of Southern California — Los Angeles, CA
PhD in Computer Science, advised by Dr. Wyatt Lloyd & Dr. Ethan Katz-Bassett (Columbia). — 2016–2017
Completed at Princeton University.

University of California, Los Angeles — Los Angeles, CA
MS in Computer Science, advised by Dr. Miodrag Potkonjak — 2014–2016
MS Thesis: "Evaluating 802.11p in Software-Defined Radio using Realistic Channel Parameters". Supervised by Dr. Miodrag Potkonjak and Dr. Bastian Bloessl (then at U. Paderborn).

University of Chicago — Chicago, IL
BA with Honors in Linguistics — 2005–2009
BA Thesis: "Predictability and Motivation for the Genitive/Dative Alternation in Modern German Constructions for Attributive Nominal Relations". Supervised by Dr. Steven Clancy.

Publications

- Lim K, Giordano M, **Stavrinos T**, Nelson J, Zhang I, Kasikci B, Anderson T. "Beehive: A Flexible Network Stack for Direct-Attached Accelerators." To appear in *MICRO* 2024.
- Park J, **Stavrinos T**, Peter S, Anderson T. "EMPower: The Case for a Cloud Power Control Plane." In *HotCarbon* 2024.
- Xie D, **Stavrinos T**, Zhu K, Peter S, Kasikci B, Anderson T. "Can Storage Devices be Power Adaptive?" In *HotStorage* 2024.
- Mwotil A, Anderson T, Kanagwa B, **Stavrinos T**, Bainomugisha E. "LowPaxos: State Machine Replication for Low Resource Settings." In *IEEE Access* 2024.
- **Stavrinos T**. "Nabu: Unlocking Better Cache Performance at Lower Cost With Expiration Time-Based Flash Caching." PhD Thesis 2023.
- Hodsdon C, **Stavrinos T**, Katz-Bassett E, Lloyd W. "MASON: Scalable, Contiguous Sequencing for Building Consistent Services." In *Journal of Systems Research (JSys)* 2023.
- **Stavrinos T**, Berger D, Katz-Bassett E, Lloyd W. "Don't Be a Blockhead: Zoned Namespaces Make Work on Conventional SSDs Obsolete." In *HotOS* 2021.
- Pan S, **Stavrinos T**, Zhang Y, Sikaria A, Zakharov P, Sharma A, Shankar P S, Shuey M, Wareing R, Gangapuram M, Cao G, Preseau C, Singh P, Patiejunas K, Tipton JR, Katz-Bassett E, Lloyd W. "Facebook's Tectonic Filesystem: Efficiency from Exascale." In *FAST* 2021.
- Guo J, Xu T, **Stavrinos T**, Potkonjak M. "Enabling Environmentally-Powered Indoor Sensor Networks with Dynamic Routing and Operation." In *PATMOS* 2016.
- Pannetier N, **Stavrinos T**, Ng P, Herbst M, Zaitsev M, Young K, Matson G, Schuff N. "Quantitative Framework for Prospective Motion Correction Evaluation." In *Magnetic Resonance in Medicine* 2016.

Academic & Departmental Service

- **USENIX ATC 2024 Reviewer** 2024
- **NSDI 2024 Reviewer and Scribe** 2024
- **OSDI 2023 External Reviewer** 2023
- **Princeton CS Department Climate & Inclusion Committee PhD student representative** 2020–2022
- **Internet Measurement Conference (IMC) 2022 External Reviewer** 2022
- **OSDI 2021 External Reviewer** 2021
- **OSDI 2018 Topic Preview Sessions Organizer** 2018
- **OSDI 2018 External Reviewer** 2018
- **NSDI 2018 External Reviewer** 2018
- **Internet Measurement Conference (IMC) 2017 Shadow PC Member** 2017
- **SIGCOMM 2017 Topic Preview Sessions Co-Organizer** 2017
- **NSDI 2017 External Reviewer** 2017

Scholarships and Awards

- **Chris Edmondson-Yurkanan Travel Grant** 2018
  Grant awarded for service to SIG to support travel to SIGCOMM
- **Open Science Data Cloud PIRE Fellow** 2015
  NSF-sponsored fellowship awarded to fund research internship at the University of Amsterdam
- **Graduate Opportunity Fellowship Recipient** 2014–2015
  Fellowship awarded to cover full tuition and living expenses for first year of Master's degree
- **Benjamin A. Gilman International Scholarship** 2007
  Scholarship awarded to fund Civilization Studies Semester Abroad in Athens, Greece

Work Experience

University of Washington Seattle, WA
Postdoctoral Researcher, Paul G. Allen School of Computer Science and Engineering Summer 2023–present

- Researches power- and carbon-aware systems within the Future of Cloud Infrastructure (FOCI) project.
- Advises graduate and undergraduate students on projects.

Microsoft Research Cambridge, UK
Research Intern, Holographic Storage Team Fall 2022

- Built simulator to evaluate performance and endurance impact of caching on flash-based SSDs (C++, Python)
- Evaluated feasibility of caching IO-heavy workloads on flash

Facebook Menlo Park, CA
Software Engineering Intern, Storage Team Winter 2020

- Explored performance versus cost tradeoffs for flash-based SSDs in Facebook's distributed filesystem (C++)
- Collaborated with storage team to publish experience paper about Facebook's storage infrastructure

Google San Francisco, CA
Software Engineering Intern, Traffic Team Summer 2016

- Integrated regression detection service into binary rollout framework to automate evaluation of updates (Python)
- Applied integrated framework to automate rollouts for API management service (Python, C)

3Scan, Inc. San Francisco, CA
Software Development Intern Summer 2015

- Implemented Firmata protocol for sensor-to-microscope communication (Python, C)
- Built interactive shell for testing sensor system (Python)

3Scan, Inc. San Francisco, CA
Software Development Intern Summer 2014

- Integrated microscope sensors and focus mechanism into Arduino microcontroller (C, C++)
- Built browser dashboard for monitoring system status (JavaScript, HTML, MongoDB, d3)

Center for Imaging of Neurodegenerative Diseases San Francisco, CA
Research Associate June 2012–May 2014

- Carried out texture analysis experiments to quantify MRI motion artifacts (Python)
- Implemented fMRI network analysis pipeline with NetworkX (Python) and Circos visualization software

Teaching

- **Teaching Assistant** at Princeton University Spring 2019
  Introduction to Computer Science (COS 126)
- **Teaching Assistant** at Princeton University Fall 2018
  Advanced Distributed Systems (COS 418)
- **Teaching Assistant** at University of California, Los Angeles Winter & Spring 2016
  Introduction to Operating Systems (CS 111)

Languages & Frameworks

- **Computer Languages:** C, C++, Python
- **Software:** SPDK, DPDK, QEMU
- **Natural Languages:** advanced German, conversational Spanish, beginner Greek