

NIKOS HARDAVELLAS

Professor
Computer Science & Electrical and Computer Engineering
McCormick School of Engineering, Northwestern University
Director, PARAG@N (Parallel Architecture Group @ Northwestern)

Seeley Mudd, Room 3517
2233 Tech Dr, Evanston, IL 60208, USA
nikos@northwestern.edu, +1-847-491-2970
<https://www.cs.northwestern.edu/~hardav>
<http://paragon.northwestern.edu/>

RESEARCH INTERESTS

Parallel systems, computer architecture, microarchitecture, nanophotonics-based computer architectures, memory systems, design for dark silicon, memory-oriented system design, and quantum computer systems.

APPOINTMENTS

Professor, Northwestern University, Computer Science & Electrical and Computer Engineering, 2009–present
Independent Expert, Hellenic Foundation for Research & Innovation (HFRI), Greece, 2021–present
Research Assistant, Carnegie Mellon University, Computer Science Department, 2003–2009
Senior System/Software Engineer, Hewlett-Packard, High Performance Servers Division, 2002–2003
Senior System/Software Engineer, Compaq, Business Critical Systems, 1999–2002
Senior System/Software Engineer, Digital Equipment Corp., AlphaServer Product Development, 1998–1999
Research Intern, Digital Equipment Corp., Cambridge Research Lab, 1997

EDUCATION

Carnegie Mellon University, Pittsburgh, PA. Ph.D. in Computer Science, July 2009
Carnegie Mellon University, Pittsburgh, PA. M.S. in Computer Science, May 2006
University of Rochester, Rochester, NY. M.S. in Computer Science, May 1997
University of Crete, Heraklion, Crete, Greece. B.S. in Computer Science, September 1995

SELECTED AWARDS AND HONORS

Future CRA Leader, Computing Research Association, 2024
IEEE Micro Top Picks Honorable Mention, 2023
Associated Student Government Faculty & Administrator Honor Roll, 2021–2022
Faculty Service Award, Department of Computer Science, Northwestern University, 2022
Best Paper Award, IEEE Int'l Symposium on High-Performance Computer Architecture (HPCA), 2022
Best Paper Award Nomination, ACM/IEEE Int'l Symposium on Low Power Electronics and Design (ISLPED), 2021
Test-of-Time Award, International Conference on Extending Database Technology (EDBT), 2019
Best Ph.D. Dissertation Award in Computer Engineering, *Yigit Demir* (adv. Nikos Hardavellas), Northwestern University, 2016
NSF CAREER Award, 2015
Fellow, Searle Center for Teaching Excellence, Northwestern University, 2012
IEEE Micro Spotlight Paper, 2012
June and Donald Brewer Chair, Northwestern University, 2009–2011
Keynote Talk, Intl. Symposium on Parallel and Distributed Computing (ISPDC), Istanbul, Turkey, 2010
IEEE Micro Top Picks, 2010
Best Demonstration Award, IEEE International Conference on Data Engineering (ICDE), 2006
Technical Award for Contributions to the Alpha Microprocessor, Compaq Computer Corp., 2000
FORTH Fellowship, Foundation for Research and Technology-Hellas (FORTH), Greece, 1993–1995

PUBLICATIONS SUMMARY

88 peer-reviewed publications, 2 U.S. patents. 4484 citations. H-index=27.

RESEARCH FUNDING SUMMARY

Across institutions: \$7.4M; Northwestern portion: \$4.8M; Personal share: \$2.2M

Research supported by grants and material donations from NSF, Argonne National Laboratories, AMD, Intel, Alinea, Synopsys, Cadence, Mentor Graphics, WindRiver, Institute for Sustainability and Energy at Northwestern, McCormick School of Engineering at Northwestern University, the Computer Science Department at Northwestern University, and the Office for Undergraduate Research at Northwestern University.

TEACHING SUMMARY

10 courses in systems, parallel programming, architecture, DBMS, compilers, digital design; avg. CTECs 5.04/6.00

SELECTED SCIENTIFIC COMMUNITY SERVICE

Steering Committee, IEEE/ACM International Symposium on Microarchitecture (MICRO), 2023–
Program/External Committees: MICRO 2024, HPCA 2024, ISCA 2023, ISCA 2022, IEEE Micro Top Picks 2022
General Co-chair, 55th Annual IEEE/ACM International Symposium on Microarchitecture (MICRO), 2022
Steering Committee, Greater Chicago Area Systems Research Workshop (GCASR), 2013–2020
Grant Award Panelist/Reviewer in U.S. (NSF, SRC), Europe (HFRI), Canada (NSERC), Qatar (Q NRF, NSRF)

SELECTED DEPARTMENTAL and UNIVERSITY SERVICE

Served on 78 departmental committees at Northwestern—service counted separately per academic year

Chair, Faculty Search Committee, Joint CS & ECE, Northwestern University, 2024–2025

Chair, Faculty Search Committee (2x), Computer Science, Northwestern University, 2021–2023

Chair, Reappointment, Tenure and Promotion Committee (2x), Computer Science, Northwestern University, 2020, 2022

Director of Graduate Studies (2x), ECE – Computer Engineering, Northwestern University, 2018–2020

Director of Graduate Admissions (2x), ECE – Computer Engineering, Northwestern University, 2018–2020

Faculty Search Committee (2x), Computer Engineering, Northwestern University, 2016–2017, 2023–2024

Faculty Search Committee, Division of Solid State, Photonic, and Quantum Technologies, ECE, Northwestern University, 2021–2022

Faculty Search Committees (9x), Computer Science, Northwestern University, 2011–2020

Faculty Search Committee, CS and the Segal Design Institute, Northwestern University, 2011–2012

Strategy & Planning Committee (2x), Computer Science, Northwestern University, 2021–2023

Member, Reappointment, Tenure and Promotion Committee (3x), Computer Science, Northwestern University, 2019, 2024, 2025

Committee Member in 31 Ph.D. Thesis, Proposal and Qualifying Exam Committees

Committee Member in 15 M.S. Thesis and Project Committees

MENTORING SUMMARY

Currently advising 3 Ph.D. students, 3 M.S. students, 2 undergraduate students

Graduated 6 Ph.D. and 11 M.S. Thesis/Project students (placed at Princeton University, Nvidia, Intel, AMD, Google, Apple, Oracle, Cerebras, Qualcomm, Argonne National Laboratory, Northwestern University, University of Missouri, Silicon Micro Display, Cornelis Networks)

Mentored/collaborated with 8 undergraduate students (placed at CMU, Georgia Tech, Google, Peddinghaus)