

# NIKOS HARDAVELLAS

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

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## 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

Associate Professor, Northwestern University, Computer Science & Electrical and Computer Engineering, 2017–  
Independent Expert, Hellenic Foundation for Research & Innovation (HFRI), Greece, 2021–  
Assistant Professor, Northwestern University, Electrical Engineering and Computer Science, 2009–2017  
Research Assistant, Carnegie Mellon University, Computer Science Department, 2003–2009  
Senior System/Software Engineer, Digital Equipment Corp./Compaq/Hewlett-Packard, AlphaServers, 1998–2003  
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

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

86 peer-reviewed publications, 2 U.S. patents. 4347 citations. H-index=26.

## **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**

11 courses in systems, parallel programming, architecture, DBMS, compilers, digital design; avg. CTECs 5.08/6.00

## **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, 55<sup>th</sup> 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 (QNRF, NSRF)

## **SELECTED DEPARTMENTAL and UNIVERSITY SERVICE**

Served on 74 departmental committees at Northwestern and 1 at CMU—service counted separately per academic year

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

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

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

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

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

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

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

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 7 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 6 undergraduate students (placed at CMU, Georgia Tech, Google, Peddinghaus)