

PROMOTION RECOMMENDATION
The University of Michigan
College of Engineering
Department of Electrical Engineering and Computer Science

Thomas F. Wenisch, associate professor of electrical engineering and computer science, with tenure, Department of Electrical Engineering and Computer Science, College of Engineering, is recommended for promotion to professor of electrical engineering and computer science, with tenure, Department of Electrical Engineering and Computer Science, College of Engineering.

Academic Degrees:

- Ph.D. 2007 Carnegie Mellon University, Electrical and Computer Engineering, Pittsburgh, PA
M.S. 2003 Carnegie Mellon University, Electrical Engineering and Computer Engineering, Pittsburgh, PA
B.A. 2000 University of Rhode Island, German, Kingston, RI
B.S. 2000 University of Rhode Island, Computer Engineering, Kingston, RI

Professional Record:

- 2013-present Associate Professor (with tenure), Department of Electrical Engineering and Computer Science, University of Michigan
2007-2013 Assistant Professor, Department of Electrical Engineering and Computer Science, University of Michigan

Summary of Evaluation:

Teaching: Professor Wenisch has an outstanding record as an instructor in several key courses in the Computer Science and Engineering Division (CSE). His average ratings for Q1 and Q2 are 4.62 and 4.78 respectively. His student letters consistently paint him as an engaging, enthusiastic, and effective lecturer, and emphasize his accessibility and care shown for students. He has introduced a new course in Enterprise Systems, and has made significant contributions to the modernization of core courses in computer architecture, while also scaling them to meet the enormous increase in student demand. He is a dedicated and successful mentor of graduate student research, supervising seven Ph.D. students to completion. He currently advises or co-advises another eight Ph.D. students.

Research: Professor Wenisch's research is in the broad area of computer architecture, with a particular focus on power – how to manage its usage, and how its constraints influence the computer design in the small and large. His research program is highly impactful and visible, especially his widely known work on computational sprinting and memory persistency. Professor Wenisch has over 60 refereed papers in highly selective conference proceedings and over 20 journal papers. His research is funded by a diverse set of government and industry sources. These include NSF and NIH as well as Google, Intel, Hewlett Packard, and Oracle. His share of funding for which he is a PI or co-PI is in excess of \$5.8 million. Professor Wenisch has

been recognized with a University of Michigan Computer Science and Engineering Outstanding Achievement Award (2016) for “extraordinary accomplishments in scholarly research, classroom teaching, and student mentoring, and for leadership in service.” He has also won a number of Best Paper Awards.

Recent and Significant Publications:

- Akshitha Sriraman, Thomas F. Wenisch, “μTune: Auto-tuned Threading for OLDI Microservices,” USENIX Symposium on Operating Systems Design and Implementation (OSDI), 10/2018, in press.
- T. F. Wenisch, “Top Picks from the 2017 Computer Architecture Conferences,” (Guest Editor’s Introduction), *IEEE Micro*, 06/2018; 38(3).
- A. Kolli, V. Gogte, A. Saidi, S. Diestelhorst, P. M. Chen, S. Narayanasamy, T. F. Wenisch, “Language-Level Persistency,” *Proc. International Symposium on Computer Architecture (ISCA)*, 06/2017.
- N. Agarwal, T. F. Wenisch, “Thermostat: Application-transparent Page Management for Two-tiered Main Memory,” *Proc. International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, 04/2017.
- S. Pelley, P. M. Chen, T. F. Wenisch, “Memory Persistency: Semantics for Byte-Addressable NVRAM,” *IEEE MICRO* (Special Issue on Top Picks in Computer Architecture 2014), 05/2015; 35(3).

Service: Professor Wenisch has played a key role on the faculty recruiting committee, the CSE Division executive committee, and currently serves in CSE leadership as the associate chair for external affairs. Externally, he has served as a program chair or co-chair for four conferences, general chair or co-chair for two conferences. He currently serves as the associate editor for *ACM Transactions on Architecture and Code Optimization*, and *ACM Transactions on Design and Automation of Electronic Systems*, and associate editor-in-chief for the *IEEE Computer Architecture Letters*.

External Reviewers:

Reviewer A: “Tom is a star in the architecture community with a trajectory that keeps rising with an increasing slope. ... Tom is a jewel of your department. Please promote him! I have no doubt that my department would.”

Reviewer B: “...Professor Wenisch has spearheaded several highly influential new research directions—notably his computational sprinting, memory persistency, and medical imaging work. ... Professor Wenisch is a strong asset to Michigan, and frankly, we’d love to have him here as a colleague.”

Reviewer C: “Dr. Wenisch’s research agility is exceptional as he works across many areas of technical expertise. ... Dr. Wenisch is one of the top computer architects of his generation. He is constantly moving the field forward through the breadth and depth of his research contribution. He is also one of the most well respected members of our ...”

Reviewer D: “I am confident that he will continue [to] be a leader of the field for years to come. ... His impact on the field of computer architecture is consistent with the contributions expected of top researchers, and I am confident that he will continue to innovate and drive the field in the years to come.”

Reviewer E: “I consider Prof. Wenisch to be one of the leading researchers in the field of computer architecture. He is a very well respected member of our community.”

Reviewer F: “...Thomas is already operating at the level of and with the behaviors one expects from a full professor, and his promotion should just be the University of Michigan formally acknowledging what the broader computer architecture community already recognizes.”

Reviewer G: “...Tom is better at full-systems research than nearly any architect I know. ... I can say with great confidence that if he were on our faculty at [my institute], his promotion to full professor would succeed quite easily.”

Summary of Recommendation: Professor Wenisch has established a high-impact record of teaching, scholarly research, and service at the University of Michigan. It is with the support of the College of Engineering Executive Committee that I recommend Thomas F. Wenisch for promotion to professor of electrical engineering and computer science, with tenure, Department of Electrical Engineering and Computer Science, College of Engineering.



Alec D. Gallimore, Ph.D.
Robert J. Vlasic Dean of Engineering
College of Engineering

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