**Approved by the Regents**
**May 16, 2013**

PROMOTION RECOMMENDATION
The University of Michigan
College of Engineering

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

Academic Degrees:

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

Professional Record:

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| 2011 – present | Morris Wellman Faculty Development Assistant Professor of Electrical Engineering and Computer Science, University of Michigan |
| 2007 – present | Assistant Professor, Department of Electrical Engineering and Computer Science, University of Michigan |
| 2006 | Security Consultant, AuthenTec Inc., Pittsburgh, PA |
| 2000 - 2006 | Software Developer, American Power Conversion, Pittsburgh, PA |

Summary of Evaluation:

Teaching: Professor Wenisch has done an outstanding job of teaching, including classroom instruction of several key undergraduate and graduate courses, curriculum development, and student mentorship. Student comments indicate that he has the reputation as an effective and popular teacher. At the University of Michigan, Professor Wenisch has taught two core undergraduate courses and two graduate courses. His substantial redesign of one undergraduate course was well received by students and other faculty who teach the course and have adopted his new material. Student evaluations range from above average to excellent. He has supervised and graduated one Ph.D. student. He currently supervises six Ph.D. students. In addition, Professor Wenisch has advised three M.S. students and directed three undergraduate major projects.

Research: Professor Wenisch is a highly-regarded researcher in the area of computer architecture, and a pioneering researcher in the area of power-efficient data centers. Professor Wenisch has an excellent publication record with a number of high-impact articles at the most prestigious conferences in computer architecture. Among other significant contributions, his accomplishments include 25 refereed conference proceedings papers and seven journal papers. According to Google Scholar, these papers have garnered a total of 1566 citations, with 367 and 276 citations for his top two papers. Professor Wenisch has won two Best Paper awards and two Top Picks in the most prestigious computer architecture conferences. Moreover, he has an impressive funding record, including $2.1 million in research, four funded projects from the National Science Foundation (three as the PI, including the prestigious CAREER Award), and five industry grants (Google, Intel, Hewlett Packard, Oracle and ARM). The external letters from prominent researchers in the field are unanimous in their assessment of the quality, novelty, and impact of his work and of his long-term research promise.

Recent and Significant Publications:


Q. Deng, D. Meisner, L. Ramos, T. F. Wenisch and R. Bianchini, "Active Low-Power Modes for Main Memory with MemScale," *IEEE MICRO Special Issue on Top Picks in Computer Architecture 2011*, vol. 32, no. 3, May/June 2012.

D. Meisner and T. F. Wenisch, "DreamWeaver: Architectural Support for Deep Sleep," *Proceedings of the 16th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, March 2012.

A. Raghavan, Y. Luo, A. Chandawalla, M. Papaefthymiou, K. Pipe, T. F. Wenisch and M. M. K. Martin, "Computational Sprinting," *Proceedings of the 18th International Symposium on High Performance Computer Architecture (HPCA)*, February 2012, Best Paper Award.

D. Meisner and T. F. Wenisch, "Does Low-power Design Imply Energy Efficiency for Data Centers?" *Proceedings of the International Conference on Low Power Electronic Design (ISLPED)*, August 2011.

D. Meisner, C. Sadler, L. Barroso, W-D. Weber and T. F. Wenisch, "Power Management of On-line Data Intensive Services," *Proceedings of the 38th International Symposium on Computer Architecture (ISCA)*, June 2011.

S. Pelley, D. Meisner, P. Zandevakili, T. F. Wenisch and J. Underwood, "Power Routing: Dynamic Power Provisioning in the Data Center," *Proceedings of the 15th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, March 2010.

T. F. Wenisch, M. Ferdman, A. Ailamaki, B. Falsafi and A Moshovos, "Making Address Correlated Prefetching Practical," *IEEE MICRO Special Issue on Top Picks in Computer Architecture 2009*, vol. 30, no. 1, January/February 2010.

C. Blundell, M. M. K. Martin and T. F. Wenisch, "InvisiFence: Performance-Transparent Memory Ordering in Conventional Multiprocessors, " *Proceedings of the 36th International Symposium on Computer Architecture (ISCA)*, June 2009.

K. Lim, J. Chang, T. Mudge, P. Ranganathan, S. K. Reinhardt and T. F. Wenisch, "Disaggregated Memory for Expansion and Sharing in Blade Servers," *Proceedings of the 36th International Symposium on Computer Architecture (ISCA)*, June 2009.

D. Meisner, B. T. Gold and T. F. Wenisch, "PowerNap: Eliminating Server Idle Power," *Proceedings of the 14th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, March 2009.


Service: Professor Wenisch has excelled in his service contributions to the University of Michigan and the professional community. Both his internal and external service records are exemplary. Internally, he has served on five committees relating to the graduate program, including as co-chair of one of those committees, the Ad Hoc Committee on Graduate Program and Recruiting Practices. Additionally, he has served as faculty advisor for Eta Kappa Nu, participated in the Undergraduate Advising for Computer Engineering Committee, and on the Computer Science and Engineering Division Chair Search Advisory Committee. He has presented two talks to senior graduate students and post-doctoral researchers at the department level on how to prepare for the academic job market, with tips in preparing and presenting an interview seminar. At the college level, he served on the College of Engineering Entrepreneur Task Force and a CRLT panel to help junior faculty prepare an NSF CAREER Award proposal. His external service may exceed his noteworthy internal service record. From 2008 to 2011, Professor Wenisch served as chair or co-chair of seven committees or workshops that were a part of national and international conferences and served as an invited delegate at another NSF workshop. He has served on 24 program committees since 2008 and is currently guest editor of an IEEE Micro Special Issue on Power, Program Chair for the 2012 IEEE International Symposium on Workload Characterization, and co-chair of HotPower 2012. His external service record is a clear indication of his stature in the computer architecture community.

External Reviewers:
Reviewer A: "...I would place him in the very top tier of computer architects [of his cohort], quite possibly the top one coming up for tenure this year. I would not be at all surprised to see him receive the SIGARCH Maurice Wilkes Award, which is given annually to the top computer architecture researcher [of his cohort]."

Reviewer B: "Wenisch has become computer architecture's most successful and pioneering researcher in the area of power-efficient data centers."

Reviewer C: "Dr. Wenisch is a rising star in the computer hardware system area who has done all of the right things to gain promotion and tenure at a leading computer science department such as the one at the University of Michigan."

Reviewer D: "He has an excellent publication record of top-class scholarly work given his level of seniority."

Reviewer E: "Prof. Wenisch is now a recognized international leader in the area of power efficient systems. His work is highly cited and has influence on industry and academic researchers...he fully deserves being promoted to Associate Professor with tenure at the University of Michigan. If he was at [my institution], I would strongly recommend his promotion here."

Summary of Recommendation: Professor Wenisch has established a successful record of teaching, scholarly research and service at the University of Michigan. His teaching record is superb at both the undergraduate and graduate levels, and his students consider him a dedicated and enthusiastic teacher and mentor. He has made impressive research contributions in the area of computer architecture. Through his service, he has made significant contributions to the University and the broader professional computer architecture community. It is with the unanimous support of the College of Engineering Executive Committee that I recommend Thomas F. Wenisch for promotion to associate professor of electrical engineering and computer science, with tenure, Department of Electrical Engineering and Computer Science, College of Engineering.

David C. Munson Jr.

David C. Munson, Jr.
Robert J. Vlasic Dean of Engineering
College of Engineering

May 2013