MEMORIAL RESOLUTION OF THE FACULTY
OF THE UNIVERSITY OF WISCONSIN-MADISON
ON THE DEATH OF PROFESSOR EMERITA SUSAN B. HORWITZ

Professor Emerita of Computer Sciences Susan Beth Horwitz, a devoted educator and researcher noted for service to her discipline on both university and national levels, died June 11, 2014. Dr. Horwitz, who was 59, had been battling stomach cancer and passed away at Agrace HospiceCare in Fitchburg, Wisconsin.

An expert in programming languages and software engineering, Horwitz served as a member of the UW-Madison faculty for nearly thirty years. Among many professional accomplishments, she championed the encouragement of students who might otherwise overlook opportunities in computing.

Particularly during the last decade of her career, Horwitz strove to attract underrepresented students, particularly women and targeted minorities, to computer science and ensure their success. She was a founding member of the Academic Alliance of the National Center for Women and IT, based in Boulder, Colorado.

On the UW-Madison campus, Horwitz launched Wisconsin Emerging Scholars-Computer Sciences (WES-CS) in 2004. The WES-CS program centers on small, student-led meetings in which beginning students work on problems that deepen their understanding of topics from the introductory programming course. Between 2004 and 2014, roughly 900 students participated in WES-CS, and many of them advanced to top graduate programs or careers in private industry.

Said Martha Ferris, a 2013 graduate who double-majored in computer sciences and mathematics, "WES-CS provides a wonderful oasis for discussion, exploration and community for beginning computer sciences students, especially for those who might find the field intimidating, as I did when I began… This [program] would not have happened without the incredible vision, dedication and leadership of Susan Horwitz."

A special fund at the Wisconsin Foundation and Alumni Association, the Susan B. Horwitz WES-CS Endowment, has been established to help further this work and expand the WES-CS program.

Horwitz also promoted the involvement of women in scientific and technical fields through Women in Science and Engineering (WISE), a residential learning community of about sixty female freshmen based in Sellery Hall. She served as WISE faculty director from 2012 to 2014.

As a researcher, Horwitz's particular emphasis was on software-development environments, program slicing, dataflow analysis and pointer analysis. Her work impacted private industry; among other contributions, her work helped make the Windows operating system much more stable beginning around 2004. An algorithm for interprocedural dataflow analysis that Horwitz and collaborators developed in 1995 was a key component of a Microsoft tool to reduce crashes caused by bugs in Windows device drivers.

Horwitz published widely in journals and refereed conferences and workshops. She received a Presidential Young Investigator Award in 1989 from the National Science Foundation. She also held four separate, year-long visiting appointments at major research institutes and universities abroad, including in France, Denmark and Italy.

Outside of her professional life, Horwitz pursued a broad range of interests. Her bachelor's degree, earned *magna cum laude* at Wesleyan University, was in ethnomusicology. Among other pursuits, she enjoyed bicycling, horseback riding and the arts, including playing the piano and serving on the board of Bach Dancing & Dynamite Society, an inventive chamber music ensemble in Madison.

Horwitz earned master's and doctoral degrees in computer science from Cornell University. After completing her Ph.D. in 1985, she joined the UW-Madison faculty as an assistant professor, advancing to associate professor in 1991 and full professor in 1996. From 2004-07, she served as associate chair of the department. She became a professor emerita in April 2014.

In the classroom, Horwitz was a creative instructor who sometimes used props and songs to explain key concepts. She won numerous teaching awards, including a 2011 Distinguished Honors Faculty Award from the Honors program in the College of Letters & Science. She was nominated by a student who wrote, in part, "Dr. Horwitz is essential to my growth in college. She is a dedicated, methodical, capable and generous educator… whom I will always hold in highest esteem."

Other teaching awards include two from the computer sciences department (1987 and 1997) and two from the university's student chapter of the Association for Computing Machinery (1989 and 1993), the field's leading professional organization.

Other teaching awards include the University of Wisconsin William H. Kiekhofer Excellence in Teaching Award (1993), the University of Wisconsin College of Letters and Sciences Teaching Excellence Award (1992), two computer sciences departmental awards (1987 and 1997) and two from the university's student chapter of the Association for Computing Machinery (1989 and 1993).

Susan Horwitz will be greatly missed by colleagues and students alike. She is survived by her husband, Thomas Reps, also a computer sciences professor, as well as her mother, siblings, nieces and nephew.

Respectfully submitted by:
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