

Kevin Jeffay (Ph.D. '89)

A Real-Time Researcher, Leader and Lauded Teacher



Kevin Jeffay jokes that the digital clock has barely begun the countdown on his tenure as chair of computer science at the University of North Carolina, Chapel Hill. He has four years and five months to tick away, but as the new chair is focusing month by month on the challenges and opportunities. "It's an important service, someone has to do it, and after 26 years on the UNC faculty I'm deeply bonded to this university," he says.

UNC is proud of being the second university in the nation to establish a CS department and celebrated its 50th anniversary in May. "It's an exciting time in computer science, and our department has experienced phenomenal growth with classes bursting at the seams," Jeffay says. "But like many public institutions we are dealing with state budgets that do not keep pace with the growth we're experiencing, and hence we are treading water fast to keep our heads above the rising enrollment tide."

When he returns to the UW in June to accept the Alumni Achievement Award, he can look forward to chair shoptalk with Hank Levy and Ed Lazowska (famed for his countdown clock).

"This award is really truly an honor," Jeffay says. "Nothing in my life has felt more flattering. I owe everything to this department and never miss a chance to get back and connect with old friends."

Jeffay landed at UW via a jolting academic rupture and an opportune connection. After earning a mathematics degree at the University of Illinois, he headed to the University of Toronto for graduate work in computer science. "On my first day of classes I was surprised to see students wearing ties and sports coats with school

crests, and here I was, a loud-mouthed kid from the Illinois corn fields," Jeffay laughs.

By the end of his master's program, he was *persona non grata* with an influential faculty member, "going down in flames and being shown the door." Fortunately, another faculty member liked him, saw his talent, and suggested he apply to the UW doctoral program. A decade or so previously, that faculty member had advised both Ed Lazowska and John Zahorjan during their grad studies at Toronto. "When Ed heard why I was out the door, he immediately understood and said 'I'll take him,'" Jeffay says. "UW CSE was a far younger department and a great fit for me. Toronto did me the favor of my life."

At Toronto he did his master's research in real-time systems. The Washington Technology Center wanted to fund work in the area, and Professor Alan Shaw was interested, too. That became the focus of his doctoral research, with Shaw as his advisor. Along the way Jeffay also worked with David Notkin, who joined the faculty in 1984. Hank Levy became a good friend and skiing buddy, who Jeffay stopped from sliding over a cliff during one skiing adventure.

Jeffay's next transition, to a faculty position at UNC Chapel Hill, was another cross-continent leap of faith. There computer science was housed in the College of Arts and Sciences, while the engineering programs were located at NC State in Raleigh. "My first class at UNC had only three students," says Jeffay. "When one dropped, I had to beg the others to stay so I could keep my job."

He helped build the real-time systems program at UNC and, to attract students, established a multimedia group working on the then radical idea of processing audio-video in real time on a computer. Current high-profile research in the CS department includes a partnership with the physics department in developing the nanoManipulator, a virtual reality interface for scanned-probe microscopes. It can visualize an individual atom or clumps, and measures the mechanical forces required to bend a carbon nanotube. Another current project focuses on a free-space optical airborne communications network that would provide Internet service to homes across the U.S. through equipment installed on commercial aircraft.

Jeffay has held the Gillian T. Cell Distinguished Professorship in Computer Science since 2008 and is heavily engaged in service activities and leadership roles with professional organizations in his specialty fields. Students remain a high focus, too. Since 1994 he has coached the ACM International Undergraduate Programming Contest, taking teams to the World Finals in 2001 and 2006. Jeffay has won three outstanding computer science teaching awards and two favorite faculty awards, a big leap from his two-student start.



In addition to his own return to CSE in June, Jeffay also is responsible for the recent return of a famous photo, lost for 25 years, that had graced the grad student board in Sieg Hall. "CSE graduate student Monkey W. Duncan, ABD '89" now lives digitally on the CSE news blog:

tinyurl.com/CSElostphoto.