In Memoriam—David Notkin (1953-2013)

Over the 20 years that I knew David Notkin, our relationship evolved and grew. I first met him at ICSE 1993 in Baltimore at a co-located workshop on software design. I was a PhD student then. I say I met him, but actually, I mostly watched him pace back and forth across the back of the room, stroking his considerable beard, pausing now and again to ask questions of the speaker or making insightful remarks, as he often did, to bring a discussion that had drifted back on track. Each year since then, we met at least once, typically at ICSE, and each year I learned something new about software engineering and about David. And so it was with David, a brilliant software engineering researcher, but also the most personable of human beings with whom conversation about engineering and life mixed easily. As the years went by, I felt more and more comfortable confiding in him about all sorts of matters—personal and professional. We did co-author a short workshop paper together two years ago, but it is the professional and personal interactions that I will cherish most. As my counterpart as Editor in Chief of the ACM Transactions on Software Engineering and Methodology (TOSEM) for the last three years, we shared experiences and many discussions about the future of software engineering and the nature of research publications in our field. But to be honest, it is the strangest and most personal interactions that I will remember most—his grabbing hold of my arm and guiding me around the streets of Nagoya in 1996 on my first ever trip to Japan in search of a cough medicine, and the “BIG HUG” he emailed me 6 weeks ago, which turned out to be his last message to me before he died. I will miss him terribly.

In 1995, I was introduced by Will Tracz to Kevin Sullivan, one of David Notkin’s early PhD students, at an “ICSE baseball game” in Seattle. I am grateful to Kevin for agreeing to write the thoughtful obituary of David below. David would have been so proud to see Kevin and the many “Notkinites” kicking into action at ICSE in San Francisco this week, ensuring that the conference for which David was General Chair is a great success, and the fitting memorial to David Notkin that it deserves to be.

Bashar Nuseibeh
20 May 2013

David Samuel Notkin, whose technical, educational, and social contributions to computer science and software engineering research made him a major figure in the field, died on 22 April 2013, at his home in Seattle, Washington. He was 58 years old. The cause of his death was cancer.

David is best known for his research, with his many graduate students, on software evolution. He asked why software is often so hard and expensive to change, and he worked to reduce the difficulty of software evolution to an essential minimum. This focus came from his belief that the ability to change software—its softness—is where its true but under-realized potential resides. He asked questions such as whether we can identify and close the gap between Brooks’ notions of accidental and essential software complexity? How much should rather than does it cost to develop, test, and evolve software? Can we make the cost of change proportionate rather than disproportionate to the apparent complexity of changes to be made? Can we design software analysis methods that realize the best properties of both static and dynamic analysis techniques?

Beyond technical contributions, David is widely recognized and admired for his exceptional skill as a research mentor for graduate students and as a powerful and unwavering advocate for improving gender diversity in computer science. He had a remarkable ability to induce his students to confidently assume intellectual leadership in their research collaborations with him. He guided them humbly and wisely into their own positions of leadership in the field. He was also deeply committed to the proposition that computer science as a field and our society more broadly will be profoundly improved when both men and women can work in the computer science field without having to struggle against conscious, unconscious, structural, or other biases. He worked diligently and effectively to understand and address the root causes of gender imbalances in the field and to improve the quality of life and participation of women in computer science and engineering.

David’s academic career was distinguished. He received the ScB degree from Brown University in 1977 and the PhD degree from Carnegie-Mellon University in 1984 under the supervision of Professor Nico Habermann (a student of Edsger Dijkstra). David subsequently joined the faculty in computer science at the University of Washington, where he remained throughout his career. He ultimately served as Professor and Bradley Chair of Computer Science and Engineering. He also served as the department chair from 2001 to 2006, and continued to serve as Associate Dean of Research and Graduate Studies in the University of Washington School of Engineering.

David received many awards for his outstanding technical, educational, and social achievements. His awards included a US National Science Foundation Presidential Young Investigator Award in 1988; being named an ACM...
fellow in 1998 and an IEEE fellow in 2008; the University of Washington Distinguished Graduate Mentor Award in 2000; the ACM SIGSOFT Distinguished Service Award in 2007; the ACM SIGSOFT Influential Educator Award in 2012; and posthumously he is to receive both the ACM SIGSOFT Research Award and the Nico Habermann Award for his work on diversity in computer science. David was the founding chair of the ACM SIGSOFT Symposium on the Foundations of Software Engineering. He also served as general chair of the 2013 International Conference on Software Engineering, and continued to serve even as his condition worsened in 2013. He was Editor in Chief of the ACM Transactions on Software Engineering and Methodology from 2007 to 2012, and until his passing continued to serve as a member of the Boards of the Computing Research Association (CRA) and of the National Center for Women and Information Technology (NCWIT).

David genuinely loved people and life. His dedication to the growth and success of his many graduate students was profound. His ACM SIGSOFT Influential Educator Award in 2012 recognized him for mentoring 19 PhD students, 18 master’s students, and innumerable undergraduate students. By his hearty laugh, loquacious fluency on matters ranging from specification inference to baseball, and for his political savvy, tie-dyed T-shirts, and giant beard, among many other unique traits, he was instantly recognized by thousands of friends and colleagues around the world. He spent his sabbaticals at IBM’s Haifa Research Lab, at Osaka University, the Tokyo Institute of Technology, and Lund University. He only half-jokingly bragged that his travelogues received more web hits than his technical publications.

David Notkin is survived by his spouse, Cathy Tuttle, by his lovely children, Emma and Akiva, and by his sister, Debbie Notkin. A hero to his research colleagues, admired for his combination intellect, humor, and humanity, and as a loving husband, father, and brother, David Notkin will be warmly remembered and terribly missed.