Distinguished Graduate
Mentor Award Recipients

Thomas Daniel

Judith Howard

David Notkin

Noel Weiss

David Notkin

**Professor of Computer
Science and Engineering**

Comments from Students and Peers

Meeting David has been an awesome experience for me. Here I was with a prominent leader of the software engineering research community, and he and I were talking about my research and my ideas about how software should be written. I was stunned by how seriously he took my work.

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[A] challenge that we face in computer science is a gender imbalance… I could easily have been part of this shrinking pipeline. But, with David's support and encouragement, getting a Ph.D. and now being a role model for other women just seemed easy and natural.

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He is an enthusiastic facilitator, not a boss. Indeed, David kiddingly called me "Boss" as a student, having a subtle but pronounced effect over time in letting me know that it was my research. It's no surprise, then, that David's students not only originate first-rate results, but they learn research skills that last a lifetime.

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He offered my family a room in his house until we could find a house. And he helped us find a house, too.

David is not just a fine research mentor and advisor, he is also a friend. He expresses this by inviting me to his house for Thanksgiving dinner and other occasions, by taking his collaborators out for a beer when we pass a milestone, by offers of assistance when I am sick, and in innumerable other ways from the large to the small….His array of friends, on campus, in the city, and around the world, is a testament to his worth as a person.

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I learned to anticipate that teaching can and should be joyful and that moments of excitement can occur in the classroom as well as in the pursuit of research results.

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*I unequivocally believe that David has **the best track record in the nation today** in advising students in software engineering.*

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David's most unusual and valuable talent is to cause his students to rise up beyond reasonable expectations. His track record of producing so many successful Ph.D. students is evidence of that.

David Notkin
Professor of Science and Engineering

"What is it about designing or evolving software that makes you angry?" That is the question that I ask every graduate student who expresses interest in becoming my advisee.

I ask this question for several reasons. First, getting the student engaged immediately is a critical step in developing the give-and-take relationship that I find best for graduate advising. Second, over time—sometimes a few weeks, but often over many months or even a year or two—the students' answers to this question lead to a dissertation project in which they have genuine personal interest; that is, it becomes a problem that they want to solve, rather than one I want them to solve. Finally, it works: I've been able to recruit first-rate students, they've written terrific dissertations and gone on to successful careers, and it has led to the best research I've been involved in.

Of course, mentoring my graduate students goes far beyond attention to their dissertations *per se*. They need to learn a lot about themselves: What problems attract them? What kinds of solutions are they most able and apt to find? What are their strengths and their weaknesses? How do they improve in their weak areas while simultaneously playing to their strengths? What do they want to do after graduation? And what do they need to learn about the discipline of computer science (and the subdiscipline of software engineering)? What problems, when solved, will fundamentally advance the field? What kind of dissertations will be best received by the kinds of organization that they want to work for after graduation? Who are the key people and what are the key organiza-

tions in the field? How do they meet these people and get visibility in these organizations? How does one most effectively convey research to the community? This list is by no means exhaustive, but it captures the kinds of topics I cover with my students during their graduate years.

I've developed a set of techniques over the years to gear students up in these dimensions. Perhaps the most important—beyond individual meetings on a regular basis, of course—is taking students, ideally as a small group, to major conferences. I work with them before the conference to understand their responsibilities (e.g., identifying a set of people in the field they'd like to meet), what talks to go to (and not to go to), how to handle expenses, etc. I try to check in with them fairly frequently during the conference, finding out what cool ideas they've heard, introducing them to key people, getting their insights about the conference, etc. Other than the people they meet, the key to going to a conference is learning that they are plenty smart enough to make critical contributions to the field: although the field is populated with really smart people, the students learn that they can compete successfully in the discipline. This confidence, developed first hand, goes far beyond anything I can provide as an adviser and mentor.

Mentoring graduate students has been and continues to be by far the most rewarding and productive aspect of my years in academia. The introspection I've done about mentoring over the past few years has been valuable to me and, I hope, to my current and future graduate students.

Dean's Statement

The University of Washington is an institution that prizes not only traditional classroom and research activities but also the mentoring of its graduate students. It is fitting that a great research university publicly recognize the intense, one-on-one relationship that is the hallmark of graduate education. The Distinguished Graduate Mentor Award, established in 1999, is one of the most prized awards given at UW. Recipients of the award are faculty members who have made outstanding contributions to the education and guidance of graduate students. The Graduate School and the University have been proud to present the award to Professors Noel Weiss (1999), David Notkin (2000), Judith Howard (2001), and Thomas Daniel (2002), as well as twelve other faculty recognized with Honorable Mentions.

Criteria used in evaluating nominees for the award are that the nominee:

- Provides intellectual leadership
- Respects students' goals and helps students to work towards them
- Is supportive at a personal as well as a professional level, is a good advocate for students
- Actively guides students' research and training; clearly articulates expectations and holds students to high standards
- Actively seeks financial support for students' graduate study and research
- Actively involves students in teaching or research
- Actively recruits and encourages applications to the unit's graduate program
- Is accessible for advice and assistance, whether student is in residence, on leave, is or is not 'one of theirs'
- Actively involves students in professional conferences

- Actively involves students in publications
- Helps students to overcome problems, discord, and barriers
- Provides good model of professionalism
- Helps students to 'network' with other relevant professionals and faculty
- Assists students in career preparation
- Alerts students to career opportunities; helps students secure post-degree employment
- Provides assistance in post-degree professional work

Each of the aforementioned recipients exemplifies these qualities of fine mentoring, and we are publishing their essays in order to capture and publicize best practices in graduate mentoring. Preceding each essay are comments from their students that demonstrate the positive impact faculty mentoring has on students and the professional community. We hope that these awards will inspire the community of scholars at UW to continue debating what constitutes excellence in graduate mentoring and following through on their own mentoring practices.

Our awardees are highly recognized in their respective fields as scholars and as mentors.

Thomas Daniel takes the view that, rather than guiding his students' research, they guide his. He sees himself as a partner to the graduate and undergraduate students working in his lab. "The research machine at this University is a complete and utter partnership with graduate students. We couldn't do what we do without that brain power." Students testify that he encourages them to focus on projects that interest them. A zoology doctoral candidate who was left without an advisor found a home in Daniel's lab. He encouraged her to pursue her own research interests without trying to squeeze them into the lab's designated research area. Daniel has helped graduate students financially as well, by donating money from his 1996 MacArthur "Genius" Award to support the work in areas outside the scope of traditional grants. His support also

extends to inviting students home for the holidays, talking them through rough patches, and encouraging them to pursue career paths that will make them happy, whether inside the academy or beyond.

Judith Howard's enthusiasm for working with graduate students has lead her to serve twice as her department's Graduate Program Coordinator, organize graduate student workshops on such topics as preparing for job interviews and applying for grants, and inform students constantly about new hires, new course offerings, job opportunities, workshops of interest, etc. It's all part of Howard's philosophy of mentoring, which she says is "making sure that grad students, while they're in the program, develop skills that they need, many of which are not just about academic content." Her students have gone on to careers at non-research-oriented as well as research-oriented institutions and to careers outside the academy. "These are very important relationships that you develop through mentoring," Howard says. "When I learned about the award I was higher than a kite. I said to various colleagues that I couldn't imagine receiving an award that would matter more to me."

Professor Notkin, whose specialty is software engineering, adopted his mentoring philosophy from his own adviser at Carnegie Mellon University. "He used to say that you should focus on graduating terrific students, and then you'll have terrific re-search," Notkin said. "But if you focus on just the research, you might not get terrific students." Along those lines, he said he tries to get students to pursue topics that interest them rather than him. Again and again, Notkin's current and former students recount invitations to dinner, informal gatherings to celebrate milestones, social introductions and personal and career advice, in addition to exceptional academic guidance, as hallmarks of their time at the UW and important factors in their success after graduation. Some now collaborate with one another, even though they weren't at the UW at the same time. Notkin, they say, is the catalyst behind the network.

Professor Weiss has a worldwide reputation among his students in the public health field. Legendary for his "open door policy" as a teacher and for research projects with his graduate students, he continues to provide career advice and guidance on grant applications for his former students worldwide. Students who take his epidemiology courses earn what Weiss calls their "union card," described by one former student as "a lifetime contract for continued assistance and mentorship." Even more than a decade after leaving the UW for professional posts all over the world, Weiss stays in touch with many of his former students, some on a weekly basis. Among other things, he alerts them to developments in related fields, continues to review draft manuscripts and grants, and shares not only scientific expertise but also insights and advice on building a career in academia and research. Weiss' students say that he remains a key advisor, generous colleague, and inspiring role model in their lives and work.

Thanks to the successful mentoring they have received, the students of these mentors are able to give back to their professional communities and act as role models for other young professionals in their fields. The relationship between a graduate student and a faculty advisor is one that can have a profound, lifelong influence on both parties. At its best, this mentoring relationship inspires and gives confidence to the student and provides the faculty member with a valued colleague. Therefore, it is with great pleasure that I recognize these recipients of the Distinguished Graduate Mentor Award.

—Marsha Landolt
Dean, The Graduate School