

“Even though my mom is my motivation, I know she can only help me, but she can’t do it for me,” says Rainy. “I can and I will do it for myself.” Rainy’s advice to other girls is to make sure they know what their goals really are and then to work toward them. “You have to have the ambition and really want to do it for yourself.” Having a strong support system certainly helps a lot, too. For those women who don’t have a family member interested in the same fields or a mentor to encourage them, luckily, there’s always IEEE Women in Engineering.

—Leslie Prives

A Dual-Career Academic Couple

Schulz espouses a strong support system

Noel Schulz was an instructor at The University of North Dakota (UND) when she decided she wanted to go back to school to get her doctorate in electrical engineering. The question was where. Her husband, Kirk, was a tenure-track professor of chemical engineering at UND, and they had a son, Timothy, who was two. They had met at Virginia Tech when she was a freshman and he was a junior, and they had chosen to have children relatively early, Schulz says—she was 24 and Kirk was 27—because she “didn’t want to start a position and then have to work out whatever the maternity policy is.” Yet, it was a generally accepted unwritten rule that most schools do not hire their own doctoral graduates. Schulz decided her best bet was to go to the University of Minnesota.

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“The idea was, if I went away from The University of North Dakota and got my Ph.D. somewhere else, then hopefully they might hire me. Plus, it was a very strong Big Ten program, so there were mutual benefits there,” recalls Schulz. “Kirk was a single dad for two years.”

Sure, people worried, she says. Could Kirk change a diaper? Could he cook? And when he had to take Timothy to the doctor when he was sick, people sometimes wondered where his mother was. They had promised themselves that living apart would be only a temporary thing, and they were comfortable with that, says Schulz, “but when I got my Ph.D., I interviewed at the place where my husband was teaching and did not receive a job offer.”

This pattern shows up again and again in what has become known as



Kansas State President Kirk Schulz and his wife, Noel, host leaders from nearby Fort Riley at the Kansas State president’s home. (Photo courtesy of the Kansas State Division of Communications and Marketing.)

“dual-career academic couples.” For many, the original job search—finding positions at the same institution or in the same general location—is often one of the first professional challenges they face as a couple,

followed by both partners making it through the tenure and promotion process and having advancement opportunities.

According to the Michelle R. Clayman Institute for Gender Research at Stanford University, “Over 70% of faculty are in a dual-career relationship; more than a third are partnered with another academic. This trend is particularly strong among women scientists and assistant professors. As the

number of women receiving Ph.D.s continues to rise, U.S. universities will see an increasing number of high quality candidates for faculty positions partnered with another academic.” A 2008 institute report found that the rate at which universities are hiring couples has increased from 3% in the 1970s to 13% since 2000. Nonetheless, the institute also acknowledges that “dual-career academic hiring often remains difficult and controversial.” Schulz’s own study of engineering faculty, conducted with colleagues in the mid-1990s, found that while “partners in a dual-career couple might have had as many as two or three individual offers, the average number of tenure track dual-career offers made was one.”

Schulz and her husband were fortunate. In 1995, they both began professorships at Michigan Technological University. In 2001, they moved to Mississippi State University, where Schulz was the Tennessee Valley Authority Endowed Professor in Power Systems Engineering, and Kirk was director of the school of chemical engineering, then dean of engineering, and finally vice president for research and economic development. In 2009, Kirk was named the 13th president of Kansas

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State University, and Schulz became first lady, as well as the Paslay Professor of Electrical and Computer Engineering. She is also the current president of the IEEE Power & Energy Society (PES), where she previously served as secretary, treasurer, and president-elect.

“Because my husband is an administrator at my university and we chose to be at the same university, it was challenging for me to advance in some leadership positions without there being some possible nepotism-type issues or people being uncomfortable with that,” she says. “So I made a decision to do some of my leadership in my professional society rather than be a department head or something like that.”

There have been other positive, if unintended, side effects of working at the same school as Kirk. “One of the surprising things about the response is the way other female faculty members view Kirk,” she says. “A lot of the women feel that Kirk understands women’s issues better because he has a working wife, that he understands a little more about some of their concerns. As a couple, even though I’m being a role model, Kirk is also, they feel, an advocate because he’s supportive of me and what I’ve done, and they’ve seen him being supportive. Someone talked to me about how great it was to see the president of the university in the carpool line. It just wasn’t something you expected. And the fact that he was part of that, for the women and the men, was also helping show that it’s a partnership.”

Schulz and her husband have written several papers and given a number of presentations over the years on dual-career hiring and balancing professional and personal activities. They realize that for each couple, the dynamics will be a little different (depending on their stage of life, the age of their children, career aspirations, and location), but they have set out to discover what successful dual-career partners have in common. For one thing, they effectively



Tim (21, a junior in computer science at Mississippi State), Kirk (president of Kansas State), Noel, and Andrew (17, a junior in high school who is considering mechanical or chemical engineering) enjoyed a hike to a glacier near Skagway, Alaska, in June 2011 while on a family vacation.

communicate their goals and understand their priorities, both as a couple and individually. They look for opportunities and environments where both partners can advance. They understand that sometimes one spouse might lead and the other follow, but one spouse can’t lead over and over again. They’re organized.



Kirk and Noel Schulz. (Photo courtesy of the Kansas State Division of Communications and Marketing.)

They’re flexible. They realize there is no perfect time to have children. And they outsource basic housework (like cooking and cleaning), which recent research found can take approximately 19 hours a week.

Stanford University historian of science Londa Schiebinger conducted that study, which looked at housework among academic scientists. “Interestingly,” she wrote with quantitative analyst Shannon Gilmartin in a 2010 report for *Academe*, “our data suggest that employing others to help with core housework is characteristic of highly productive science faculty (where productivity is defined as total self-reported number of published articles over one’s career) even after rank, gender, salary, and one’s own share of labor are controlled (analysis was limited to scientists in dual-career partnerships).” Consider Schulz’s case. She has published 145 papers, including 25 articles and a book chapter. (Her research focuses on how computers can be used to solve problems in the design, control, and operation of power systems.) She and Kirk have long paid others to do household tasks they didn’t enjoy, particularly when

their boys were young; the college student they hired as a nanny essentially became what Schulz calls an “extra spouse,” helping with laundry, cooking, grocery shopping, and other errands.

“You pay a little bit more, but it gives you time back, and that’s what you don’t have as much of. It’s the balancing between time and money,” she says. “My mom was kind of the super-mom generation. She wanted to have the cleanest house and do a great job at teaching, somewhere between the old stay-at-home mom and the full working person like myself, where I’m very comfortable paying someone else to come. ... The paradigm is now different. I think we’re getting to a point now that people understand that if you go to a potluck, you can get Kentucky Fried Chicken and put it out there and that’s OK.”

The most successful couples, Schulz concludes, are those with strong support systems, and this begins at home. “When I give a seminar to younger women, I tell them the most important decision they make for their career is their spouse or partner because my husband has been very supportive. He’s encouraged me to do things that actually put more work on him,” she says. “In 2008, I went on sabbatical for four months just by myself because the timing wasn’t right for our children and my husband couldn’t go, and he took up the slack in that case. I think for us what’s been important is that we’ve shared and, at different times, different people pick up the slack. When he was writing his dissertation and we had a six- to nine-month-old, I did most of the stuff then.”

Mentors and both formal and informal networks are also critical, she believes. When Schulz was at Michigan Tech, she taught in the same

department as Martha Sloan—the first woman president of IEEE—and “she was very senior and professionally she was great,” says Schulz. “But she was in her late 50s, single, her husband had died, and empty nest, and I was an assistant professor with a six-month-old and a four-year-old. Even though professionally I had some good mentoring for women, I didn’t have very good mentoring for other areas. So I created a network—a group of the women in the science and engineering faculty—and we would get together and have lunch and talk about some of the different issues.” At Kansas State, she brought together a committee of about 20 women to develop the Women of K-State, an initiative that would coordinate the efforts of different campus groups and programs working on the recruitment, retention, and advancement of women at the university. In 2009, more than 500 women attended the initiative’s first two meetings. The plan over the next few years is to build a structure and support system that makes the school a “destination of choice” for female faculty, staff, and students.

Schulz has also worked to increase activities for women at PES events, and as president, she focused on three key issues in 2012, which she’s labeled “partnerships” (strengthening bonds with other groups), “exchanges” (sharing ideas and activities using new media technologies), and “society”—reaching out to women in engineering, other underrepresented groups, and Graduates of the Last Decade. She felt it was the right time to assume the role, which involves a significant amount of travel, because Timothy, now 21, is off at Mississippi State, where he’s majoring in computer science, and her younger son, Andrew, is a junior in high school. “We have a

teenager who can drive, and we have college students that can hang with him if both of us have to be out of town,” she says. And, she adds, she combines work and family whenever possible.

When Schulz was on sabbatical, Andrew, then 14, spent a week in Spain, and both her sons spent time in the United Kingdom and Italy. When Schulz spoke at a conference in New Zealand, Andrew came along, and this past summer, he went with her to South Africa. “I think a lot of time, we focus on the things that don’t happen because women choose to work. But there are also the opportunities to travel, to experience things, and maybe see a broader scope growing up than they might have if I hadn’t worked outside the home. Those benefits, it’s hard to quantify those,” she says. “And those experiences, you hope they make up for the times you weren’t there for something. Though as a couple, we try, if there’s an important event and we can plan, to do our best to have somebody there—one of the two of us.”

A dual-career academic couple’s life, as Schulz is the first to admit, is often challenging and complicated, especially when there are children involved. Great effort is required. There are inevitable tradeoffs and missed opportunities. But the first thing she would tell young women engineers, she says, is that “children are worth the effort. It does take planning and some personal and professional sacrifices, but in the long run, for me personally, it was worth it. There are days when you have a bad day at work, and you go home and it’s great to have that distraction from work, and there have been occasions when it was good to have a distraction at work from home—fortunately not as often as the other way.” Even though combining child rearing and engineering “hasn’t always been easy,” she says, “it’s important for them to see people who have been able to do both, have been successful in doing both.

—Heather Wax

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