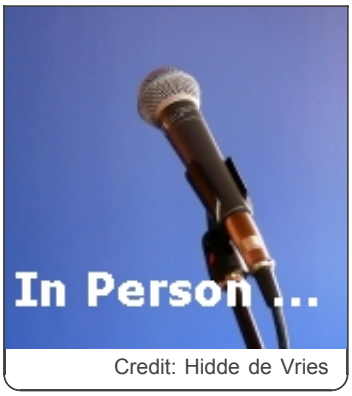
Science Careers From the journal Science

http://sciencecareers.sciencemag.org



Credit: Hidde de Vries

MySciNet
An Inclusive Community

MySciNet

In Person: Career GPS

In the spring of 2009, Anat Shahar, a geochemist, had just finished interviewing for tenure track jobs and was weighing two offers. Evgenya Shkolnik and Hannah Jang-Condell, both astronomers, were bracing for a competitive application and interview process in a tight economy. Alexandra Surcel, a cell biologist, was in the early part of her postdoc, applying for fellowships and developing her research while strategizing on how to secure two academic positions in one city, one for her and one her husband. All four of us were striving to succeed in our workplace while remaining active and engaged in our lives at home with young children. The effort to achieve a balance between work and home was difficult, and, in the absence of a cohort, isolating.

Staking out a position and being able to contribute positively to a peer's goal-setting and problem-solving skills builds confidence, expands experience, and diminishes self-doubt.

We were not looking for new friends. What we lacked were fellow-scientist moms with career ambitions such as our own.

And so we formed the first GPS group. GPS stands for "Goals and Problem-Solving for Scientists." At the time, we did not know how much we all needed such a group or how much we would benefit. We modeled our group and structured our meetings after a women's group described in Ellen Daniell's book, *Every Other Thursday: Stories and Strategies from Successful Women Scientists*.

We met every other week for 2 years. We discussed **imposter syndrome (http://en.wikipedia.org/wiki/Impostor_syndrome)** and unearthed myriad ways it was negatively affecting our work. We identified ways to improve our scientific productivity and implemented strategies for effective goal setting. We learned how to navigate job interviews, negotiations, and the two-body problem of having a spouse in academia. We drafted plans for how to approach professional bias, discriminatory or condescending comments from colleagues, and maternity leave issues. There was no end to the professional topics we covered and the strategies we cultivated and implemented.

GPS changed our lives:

• Three of us are now in tenure-track academic positions in our fields of choice. One is preparing to go on the job market using the tools developed in our group.

• Three of us have had second or third children while continuing to progress our research.

• All of us have learned to routinely apply the problem-solving skills we acquired in the group to our personal and professional relationships.

• GPS has pushed all of us to apply for fellowships, jobs, and conferences that


CREDIT: A. Dragushan

From left: Alexandra Surcel, Anat Shahar, Hannah Jang-Condell, and Evgenya Shkolnik.

we might not have been motivated or confident enough to apply for in the past.

Everyone has seen the numbers: Women leave the academic pipeline at much higher rates than men do. The numbers are just as discouraging for other underrepresented minority (URM) groups. This is unfortunate, since data show that diversity among STEM (science, technology, engineering, and mathematics) researchers means a better scientific labor force. The problem isn't just pipeline leakage: Women who stay on the academic track often report workplace bias and feelings of isolation, coupled with low expectations about their performance, leading to low opinions of their own scientific ability.

Mentoring has been held up as an effective solution for the leaky pipeline in STEM fields. Traditional mentoring relationships are valuable, but they are one-directional. Peer-mentorships offer a more complete alternative in that each person both gives and receives critical advice, serving as mentor and protégé simultaneously. Staking out a position and being able to contribute positively to a peer's goal-setting and problem-solving skills builds confidence, expands experience, and diminishes self-doubt.

The outcome has been so positive that we felt compelled to share and expand our peer-mentorship model. As Hannah once said, “GPS came through for me at the time when my career prospects were the bleakest. At one point, I seriously considered leaving academia and even went so far as to apply and interview for a non-academic job. The group forced me to question why I was thinking about leaving academia in the first place. In the end, I gave academia one more try, and because I had thought long and hard about non-academic paths, I approached the search with a lot more confidence and a lot less desperation than before. I know this played a large role in landing my current tenure-track job.”

Convinced? Start your own group.

While a GPS group can be beneficial to anyone at any career stage, it is likely to be most valuable in early and transitional career stages. That's when the largest drops in URM representation in STEM fields occur.

Here are some guidelines for starting your own GPS group:

1. **Member selection.** The ideal group, we found, has four to six people at similar career stages who coalesce around similar goals and challenges. We were all early-career female scientists with children, facing sexism, harassment, and/or work-life balance pressures. Picking friends from within your department might seem like an easy choice, but we found that it is best to choose people from other fields. This limits competition among members who may be applying for the same fellowships, grants, and jobs -- a problem we struggled with, since two group members and a spouse were astronomers on the job market at the same time.

Sometimes all it takes is making an initial contact. Evgenya contacted Hannah and then approached Anat. Hannah suggested Alexandra. If you cannot find enough like-minded people to set up a group, organize a large, informal get-together with people across disciplines and career stages. Such meetings, which we have held at our homes with 20 to 40 attendees, also serve as excellent networking opportunities.

2. **A commitment to meet often.** We met every other week and treated GPS meetings as a top priority, showing up even on the eve of proposal deadlines and job interviews, sometimes with newborns in tow. We found that frequent meetings -- and a real commitment -- engendered a feeling of mutual respect among the members and ensured the group's viability. Several times, one of us felt too busy to go to a meeting. But we quickly learned that our meetings ultimately liberated more time than they consumed. And even when they didn't, we decided, they were too valuable to miss. There will be meetings when someone in your group doesn’t have an issue to discuss. She should attend anyway, in order to fulfill her mentorship responsibilities to the other group members.

3. **A commitment to confidentiality.** This creates an open and comfortable environment where group members can ask questions, show weaknesses, test ideas, and be critical. It’s valuable to have a place to discuss research ideas without the fear of being scooped, or express self-doubt without being judged. We found we were more comfortable expressing (and then combatting) doubt among our peers than among more traditional mentors.

4. **Restricted times.** We kept each meeting to about 2 hours. Meetings started with 30-second “check-ins” during which we stated our points for discussion and requested time. The "check-in" set the agenda for the meeting. When Hannah needed to decide whether to attend another conference, weighing the pros and cons took 10 minutes. But we spent nearly an hour getting Evgenya ready for a faculty job interview, going over potential interview questions and critiquing her job talk.

5. **Choosing topics.** GPS meetings are not venting sessions. Valuable time should be spent seeking active resolution to professional problems. In the 2 years we met, each of us experienced a dry spell, when experiments weren't working or writing was slow and it was difficult to get motivated. When the issue came up in a second meeting, we called each other out: It was time to stop venting and develop a strategy to get out of the slump.

6. **Honest feedback.** The ability of members to both give and receive honest, exacting feedback is critical. The hardest but most rewarding part of GPS was pinpointing personal challenges and then having the support of a close-knit group to work through them.

Our GPS group was one of the most important commitments we've ever made. No matter what happened in our lives, we knew there was a dedicated time when three other female scientists would focus 110% on our concerns. We left each conversation with a slate of solutions to put into practice in the coming weeks. In a world driven by competition and plagued by overt and unconscious biases, that was HUGE.

As word of mouth spreads, new GPS chapters are sprouting around the globe. If you'd like to find out more information, or reach other people interested in forming a group, visit **GPSGroups.com (http://GPSGroups.com/)** .

In Person Guidelines

Credit: Hidde de Vries

Your essay should be about 800 words long and personal in tone. Please send us your submission as an editable text document attachment in an e-mail message, addressed to snweditor@aaas.org (Subject: In Person submission); Microsoft Word format is preferred, but OpenOffice format is acceptable. Please do NOT include photographs or other attachments with the original submission.

We will give each manuscript we receive careful consideration and contact you within 6 weeks if we decide to publish your essay. Most essays will be edited prior to publication. If you do not hear from us in 6 weeks, feel free to submit your work elsewhere.

Evgenya Shkoknik is an astronomer at Lowell Observatory in Flagstaff, Arizona. Alexandra Surcel is a postdoc at the Johns Hopkins University School of Medicine in Baltimore, Maryland. Anat Shahar is a staff scientist at the Carnegie Institution for Science in Washington, D.C. Hanna Jang-Condell is an assistant professor of astronomy at the University of Wyoming in Laramie.

10.1126/science.caredit.a1200032

Cancel