

GRADUATE JOURNAL

Tough questions

A research career begins with research: you have to find the right graduate programme for you. I don't know how many hours I spent on the Internet searching for the ideal position. Months elapsed before I dared send a letter. Why so long? Mainly because of two simple questions.

First: what is the ideal graduate programme? Quite a few factors matter. The programme's scientific scope, quality and reputation are, of course, very important. Political atmosphere in the country you're considering, distance from home and accommodation are equally essential. Salary and career opportunities also matter. But for me, it was the second question that was more important — and the hardest to ask. Am I good enough to apply successfully?

When I first noticed the post I'm now in, I was immediately excited. I wanted to get it. After that, the application period was governed by doubt. Was I the ideal student for this position? What about the level of competition?

Most graduate opportunities are now advertised globally. The number of people competing for a post can be huge. So a feeling of insecurity is natural. The best way to deal with doubt is to fill in the application, send it off, and try not to think too much about the response. ■

Tobias Langenhan is a first-year graduate student in neuroscience at the University of Oxford, UK.

What you don't say can hurt you

Do you tend to skip lunch or dine with the same familiar colleagues? Are you someone who avoids or rushes through personal introductions? Have you ever passed up a chance to hear a guest lecturer or attend a work-sponsored social event? How often do you flippantly reply with a wave and a one-word response to the enquiry: "How are you doing?"

Each of these scenarios, often a missed opportunity, offers the potential to connect with others, learn about another area of research or gain support for an idea. You never know when something you reveal in passing may connect in a useful manner with another scientist.

Architects are fostering connections by including open common areas in their plans. Lab designers are creating layouts that



With Deb Koen
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maximize the chance of encounters that might lead to creative collaboration or a new direction (see *Nature* 424, 718–720; 2003).

Your approach doesn't have to be contrived; it simply requires openness to new people and a wish to communicate.

The next time you introduce yourself, speak with purpose. Slowly and clearly say your first name, then your full name, so the person you're speaking to has a chance to hear and remember you. Be prepared with a simple two-to-three sentence description of who you are and what you

do, in layperson's terms for those not immersed in the same research as you.

Be ready for the casual conversations that can occur even in a quick e-mail. When asked, "What's up?" have in mind a response that may be of interest to the other person.

As for lunches and work gatherings, you don't have to exhaust the social circuit. Just be on the lookout, and pick one to attend from time to time. Have a few people in mind with whom you would like to connect. Coming prepared with your brief introductory remarks will help build a rapport and ease your apprehension.

A bit of forethought about how to present yourself and a willingness to step out of your comfort zone will go a long way in maximizing these chance encounters. ■

Deb Koen is vice-president of Career Development Services and a columnist for *The Wall Street Journal's CareerJournal.com*.

MOVERS

Cherry Murray, deputy director, Lawrence Livermore National Laboratory, California



Managing scientists is often described as "herding cats", says physicist Cherry Murray. That's why she was initially reluctant to pursue her first opportunity to head a team of scientists when it was offered to her at Bell Labs in Murray Hill, New Jersey, almost 20 years ago.

"I wasn't expecting to become a manager, but my department head left," Murray says. "I was having such a great time doing science, but I realized I had an opportunity to make decisions and I thought that was important." Murray's research focuses on experiments at low temperatures, with an emphasis on light scattering and imaging.

As deputy director for science and technology at Lawrence Livermore National Laboratory in California, Murray will now have to discern what's going on in the minds of many scientists. She supervised a few hundred at Bell Labs; at her new post she will oversee several thousand. "Learning what's going on here is my biggest challenge because it's so huge," she says of Livermore.

At Murray Hill, Murray led a scientific-leadership training programme. She envisions creating a similar project at her new institution. "At Livermore, I'd like to continue to teach management," she says.

Looking back, Murray realizes that she learned one of her most important career lessons when she was a graduate student at the Massachusetts Institute of Technology: be a good mentor. Mildred Dresselhaus, a professor at the institute and someone Murray admired,

set up a mentoring series for graduate students, which saw them take turns presenting research seminars. That provided Murray with a 'safe' place to learn how to discuss her research and give talks.

As her career progressed, Murray came to understand one of a mentor's most important roles. "Some people have a hard time getting out of certain habits," Murray says. A good mentor is able tactfully to point out those habits and then help the person find a way to overcome them.

That can be a delicate balancing act, Murray says. Scientists enjoy autonomy and problem solving. "They don't want to be told what to do," she notes. But at Livermore, she hopes to rally scientists around crucial problems, such as nuclear security. Focusing scientists on common problems like that will be much easier than herding cats. ■

CV **1978–2004:** Bell Labs, rising to senior vice-president for physical-sciences research, Murray Hill, New Jersey.
1978: PhD, Massachusetts Institute of Technology, Cambridge, Massachusetts.