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TELECOMMUTING

No place like home

Researchers can avoid stressful commutes and boost efficiency by working from home.

BY KAREN KAPLAN

Peter Griffith is not a fan of traffic in the Washington DC area. On a bad day, his 103-kilometre round-trip commute means that he can spend more than four hours on the road. By the time he gets to his desk at NASA's Goddard Space Flight Center, Griffith — like millions of metropolitan commuters worldwide — feels drained.

Griffith, who is chief support scientist for NASA's carbon cycle and ecosystems office in Greenbelt, Maryland, coordinates the North American Carbon Program at Goddard. His work involves computer analysis of remote-sensing and geospatial data, for which he needs long, uninterrupted blocks of time — almost impossible when the phone is ringing, e-mails

are pouring into his in-box and people are knocking on his door. So to save commuting time and ensure solitude, he works from home twice a week. "I don't have a wet lab. I don't have an engineer," says Griffith. "I'm not one of the people at Goddard building a satellite. It's just easier for me to do a lot of my work from home."

Griffith is one of a growing number of scientists around the world who are enjoying the benefits of working from home. According to the US Census Bureau, about 13.4 million people in the United States worked from home for at least one day a week in 2010, up 41% from a decade earlier.

The practice is not new for researchers, who have long worked from home writing grant applications and research papers, grading

exams or preparing lectures. But advances in technology are facilitating and accelerating this trend, allowing researchers to do more from home than ever before, especially if they work in bioinformatics or computational science (see *Nature* 504, 319–321; 2013). An Internet connection provides access to everything from e-mail to remote supercomputers; Skype and other computer programs enable inexpensive long-distance voice and video chats; and applications such as Google Drive allow multiple users to access documents remotely and simultaneously.

Early-career researchers who want to work from home will need to determine how to balance their obligations. A researcher may be required to develop a written proposal for their principal investigator, supervisor or ►

► department head that explains why they want to work from home, the work they will do and their projected home-based schedule.

At the very least, the researcher should be prepared to draw up talking points for a discussion of the proposal. “You need to have a clear story,” emphasizes Ferdinand Grozema, a chemist at the Delft University of Technology in the Netherlands.

Early-career researchers should also clarify how they plan to address problems that may arise. For example, they may need to explain how a glitch with an experiment they are managing might be handled in their absence, or how they can attend a lab or department meeting virtually. And, of course, to work most successfully from home generally means that one should be conducting the type of research — like Griffith’s — that does not require eight to ten hours in the lab each day (see ‘Comforts of home’).

BREATHING SPACE

Researchers who work regularly from home cite quiet time and the absence of disruption as the primary benefits.

Paul Bédard, a geochemist at the University of Quebec in Chicoutimi, Canada, spends one day a week at home processing data sets. While there, he also prepares course material for classes that he teaches in mineralogy and geostatistics, and works on grant applications and papers. “If I’m at the office, I am constantly getting a knock on my door from students or colleagues,” he says. “You need quiet time for more than a few minutes to do this work, and at home I have a few hours. You need breathing and thinking space — you need to let your brain wander around. That’s where you find the solution, the answer.”

Alison Diaper, who juggles jobs as a contract researcher in mental health and addiction at the University of Bristol, UK, and as a clinical-trials manager at Frenchay Hospital in Bristol, says, “I can escape random questions, other

colleagues and the telephone ringing.” She works from home once a week or so, using the time to set up studies, analyse data and write up results for both jobs.

There are also other practical considerations. Bédard is happy to avoid the commute through Quebec’s wintry climes. “I don’t have to drive to the university during a big snowstorm,” he says.

Marcel Swart, a theoretical chemist at the University of Girona in Spain, likes to avoid the tourist traffic in the summer that swarms in from the coast, east of his home in La Bisbal d’Empordà. “They don’t know where they’re going,” he says. “You can’t go more than 30 kilometres an hour.”

SETTING UP

Aspiring scientist telecommuters need to notify managers, lab mates, colleagues and students of their home schedule well in advance. Researchers who are used to working remotely say that their regular notification routine includes sending out e-mails and texts, leaving voicemail messages and posting notices on their lab calendars and office doors at the beginning of the week — in some cases, up to ten days in advance — with their home-based schedule and contact information.

If necessary, an early-career researcher should make it clear to colleagues, including managers and graduate students, that calls, texts and e-mails will receive responses only at certain times of the day. But veteran home workers say that it is crucial to have consistent access to colleagues, especially for recently appointed faculty members.

Catherine Cardelús, a biologist at Colgate University in Hamilton, New York, has 6–12 undergraduate students in her lab all year. When Cardelús is out of the lab, she ensures that everyone knows her schedule and that she is available by phone or online. “I want research constantly done, so I make sure my students have what they want and need,” she

TIPS FOR WORKING REMOTELY

Comforts of home

To be effective at working from home, keep these guidelines in mind.

- Determine which tasks are best done at the workplace. Working remotely using screen-sharing software often changes the dynamics of a collaboration, and team members should clarify who has the final say on changes, or try to produce final drafts in person.
- Set up your teleworking schedule to overlap as much as possible with those of your lab head, supervisor, colleagues and anyone else with whom you regularly interact.
- Determine what portion of your work is best handled by e-mail or online versus by phone. For detailed calculations that require input from colleagues, for example, e-mail is best. A written record helps to minimize errors and misunderstandings.
- Keep on top of tasks that need to be done in person at the lab or office, such as taking measurements or signing paperwork.
- Arrange regular coffees and lunches with colleagues and others while at the lab or office to catch up on informal workplace news exchanges. **K.K.**



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says. “If you want an active lab, you have to be accessible. My students can text me with questions such as, ‘When are you going to be back in the lab?’ or ‘How do we order some HCl?’ I make sure that what they need is always there, and that’s what has allowed me to work at home when I do.” If she needs to stay off e-mail or her mobile for an hour or two, she does so, but provides ample warning that she will be unavailable.

Getting used to providing an open line of communication and a transparent schedule may be an adjustment for researchers who have been accustomed to more autonomy, she warns. “The biggest shocker for most early-career faculty members is how hard it is to be able to stay at home because people rely on you to be in your lab and your office.”

Depending on the institution, there may be thorny or murky policy issues on telecommuting to contend with. When Grozema’s first child was born and he wanted to work from home, he elected to take a day’s paternity leave per week for about one-third less pay for that day.

But when his second child arrived about a year ago, and Grozema considered working from home again, he discovered that many of his colleagues regularly worked from home without having to take leave and get paid less — the policy was not well defined. He approached his department head, and the two worked out an agreement under which Grozema uses a half-day’s leave per week when he works from home.

Once remote workers have settled on a schedule, they need to stick to it, say researchers. If time at home provides the luxury of several hours without interruption, an early-career researcher needs to use that time to actually do work — many warn that it is all too easy to give in to the siren song of smartphones and social media. “You have to motivate,” says Diaper. “You have to be strict and say to yourself that you have to get the job done. You can’t be swayed by your partner’s request or your own temptation.”

DEALING WITH DOWNSIDES

There are other pitfalls for those who work from home, including the possibility of a lower profile because of reduced visibility. Cardelús says that it is wise to interact

regularly and often in person with colleagues, associates and superiors. Working from home “can be very isolating”, she says. “You need to be networking — you need to be seen.”

Some ways of counteracting the potential ‘out of sight, out of mind’ problem include securing a mentor who is particularly sympathetic to junior researchers’ telecommuting and career-support needs. An understanding mentor might help to keep a home worker’s profile high by routinely talking up their work, thus mitigating the impact of decreased visibility.

People who work from home do risk missing impromptu chats, which can do more than just provide entertainment or build rapport — they offer access to unofficial intelligence that is a key part of understanding the changing dynamics of every workplace. “When I’m home, I miss out on going to have coffee with people, and that’s when all kinds of information about employment applications, the ministries and the university comes up,” says Swart. “If I’m not there, I don’t go out — and this kind of information is never shared on e-mail.”



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Alison Diaper

has been working from home for four days per week, and makes sure that he regularly e-mails colleagues and sets up Skype chats to confer about ideas when he is at home. He also arranges in-person discussions and meetings for days on which he comes in to the university. “You have to make the most of the day when you’re in the lab,” he says.

Scientists who routinely work from home agree that it takes effort to counterbalance the downsides. But that is not a deal-breaker, they say. “It’s not unpleasant to be at a bit of a distance,” says Grozema, who adds that a day of telecommuting per week has helped with his work–life balance. “You don’t have to be less productive.” ■

Karen Kaplan is the associate Careers editor at Nature.

METRICS

Blog citations count

Papers that are formally cited by research-oriented blogs receive more journal citations, finds a study published on 15 January (H. Shema *et al.* *J. Assoc. Inf. Sci. Technol.* <http://doi.org/q88>; 2014). For 7 of the 12 scientific journals examined in 2009, and 13 of 19 journals analysed in 2010, papers cited in blog posts aggregated by ResearchBlogging.org received more subsequent citations than did papers from the same journal in the same year that had not been cited by blogs. Hiring and tenure-review committees could use blog citations to assess the impact of recently published papers, suggests co-author Hadas Shema, an information scientist at Bar-Ilan University in Ramat-Gan, Israel.

TRAINING

Doctorates diversify

Leading European Union (EU) research universities are adding career development to their doctoral programmes, including schemes to help postgraduates into non-academic careers, finds a 27 January report by the League of European Research Universities (LERU) in Leuven, Belgium. Institutions are increasingly offering options including employer-led career-skills workshops, employment forums and fairs, student consultancies and internships with industry, it found. A LERU report four years ago called for such expansion in the face of declining academic research positions and a tight economic climate. Doctoral students sometimes do not appreciate the rare number of academic posts, and institutions need to offer guidance for alternatives, says Katrien Maes, LERU’s chief policy officer.

SCHOLARSHIPS

Trust funds PhDs

The Leverhulme Trust, a non-profit research funder in London, will invest £10 million (US\$16.6 million) to create 150 doctoral scholarships across all UK science and humanities disciplines. Each award will be for £70,000 over 36 months. Universities can opt to offer extra funding to awardees, says trust spokesman Daniel Mapp. The scheme is meant to help those with undergraduate debt to pursue PhD degrees, but winners do not have to aim for any one professional path. “It will be for individuals to decide how they take their careers forward,” Mapp says. Anyone at a UK university is eligible, but UK and European Union students get priority.