

MOVERS

Brian Foster, European regional director, International Linear Collider's Global Design Effort, Oxford, UK



2004–present: Head of Sub-department of Particle Physics, University of Oxford, UK

2003–present: Professor of experimental physics, University of Oxford, UK

2002–05: Chairman, European Committee for Future Accelerators

1984–2003: Lecturer to professor, Department of Physics, University of Bristol, UK

Believing in things of a size most people can't imagine is part of a physicist's everyday life. In his work towards the proposed International Linear Collider (ILC), Brian Foster has gone from subatomic quarks and leptons to the largest linear collider ever built.

For Foster, this is the biggest step in a career that has seen him building new equipment to take discovery further and influencing the direction of physics by advising the UK government. The ILC will be about 40 kilometres long, able to smash electrons together at 500 billion electronvolts in its search for new dimensions of space and forces of nature, and is likely to cost several billion dollars.

Foster's new role extends beyond building the machinery to constructing support for it. Some people, especially outside the particle-physics community, see the project as too big to build and too expensive to pay for. "I expect to spend a lot of time on outreach, both to fellow scientists and to the general public," he says.

Although the focus of his research has remained steady for more than 25 years, Foster has been open to change when necessary. After gaining his DPhil from Oxford, he spent nearly 20 years in the physics department at the University of Bristol, where he is now professor emeritus. Then, in his late 40s, he became chairman of the European Committee for Future Accelerators and soon afterwards took "the obvious next step" back to Oxford.

"Never get depressed when you think that your career isn't developing or advancing," he advises. "This happened to me several times. What is actually happening is that the pressure is gradually building up, more and more people are noticing you, there will be a sudden 'dam-break' and your career will move to another level."

He is always learning from colleagues: veteran physicist George Kalmus, for example, a colleague on many Particle Physics and Astronomy Research Council committees, taught him "how to keep calm and extract the best from what seemed like awful dilemmas".

He is learning from interests outside science, too — touring the globe with his violin teacher Jack Liebeck, giving a World Year of Physics lecture that celebrates Einstein (another passionate violinist) through a mixture of music and science. "Playing the violin seriously again has shown me that you are never too old to get better at something, if you want it badly enough, are lucky enough to find a superb teacher and can put in the work," he says. ■
Janet Wright

SCIENTISTS & SOCIETIES

Networking in the Framework

A group of PhDs and postdocs from eight European countries, all funded by the European Union (EU) as part of its Framework Programme on research, met recently in Cambridge, UK, with no supervisors, group leaders or principal investigators, but loads of enthusiasm.

The Framework Programme is the EU's main instrument for funding research. The sixth programme has a budget of nearly €18 billion (US\$22 billion). The fifth programme funded no fewer than 500 projects, each representing a Research Training Network (RTN) — a consortium of teams in different countries that propose a common project to provide training and transfer of knowledge.

Our RTN involves laboratories in Germany, the Netherlands, Italy, France, Spain, Switzerland, Denmark and Britain. Using a multidisciplinary approach, it aims to improve understanding of how genome stability is controlled by checkpoints for DNA damage and DNA repair mechanisms. It will also give young researchers intensive, internationally competitive training in a dynamic field, with emphasis on the use of integrated genetic and biochemical approaches.

The transfer of knowledge and interaction between participants is one of the key points of the network. Researchers can meet regularly without having to cross the Atlantic. Another benefit is that young scientists can

develop collaborations outside their own institutes early in their careers.

After a successful conference in Amsterdam in February, five PhDs and five postdocs involved in the project decided to meet again. The goal of this meeting, held in July in the beautiful surroundings of Magdalene College, was to provide a platform for setting up collaborations or reinforcing ongoing ones. The small numbers allowed for longer presentations and discussions, and the absence of principal investigators let the young researchers express their thoughts and ideas freely. Two important issues scientists encounter early in their careers were addressed by invited speakers: Patrick Bateson, an ethologist at Cambridge, discussed the ethics of using animals in research, and Cambridge pathologist Anne Cooke talked about writing successful grant applications.

In November 2005, this RTN will culminate in a final meeting in Milan, Italy. By that time, and thanks to the meeting in Cambridge, all young researchers involved will not only have benefited from the project and its complementary teams, but also from contacts that could prove vital to their careers. ■

Alessandro Sartori is a postdoc at the Gurdon Institute of Cancer and Developmental Biology, University of Cambridge, UK.

GRADUATE JOURNAL

Dualities

The first year of my PhD studies is over, and it has taught me as much about myself and others as it has about structural biology and bioinformatics. Most significantly, I have learned that most of the decisions I make have both upsides and downsides, both of which you have to come to terms with. My first year has been both a blessing and a curse. On one hand, it has been a constant struggle for money. But on the other, I feel that I am living my life the way I want.

My research experience has been equally mixed. There were moments when I felt that time was standing still and I was not progressing at all. But this just came down to the time I needed to learn new techniques to get me to the next research phase. Once there, I experienced moments of failure, followed by feelings of satisfaction, when the work moved along. I've also been very busy, commuting between Lodz and Warsaw. But I've still managed to carve out time for other non-scientific activities, such as photography and travel — which I've managed to intermingle with attending scientific conferences.

Perhaps the biggest thing I've learned in the past year is to live with both sides of a decision — and to find ways to balance the positives and negatives. ■
Karolina Tkaczuk is a graduate student at the Technical University of Lodz, Poland.