



[EDITORIAL]

## Surviving in Science

**Like most scientists, I have greatly benefited from interactions with colleagues from many different countries. I have also been lucky to participate in several travelling lecturer programmes set up to support seminars for students and early-career researchers. This has allowed me to meet many young researchers working in very different environments: from small groups operating on a shoestring in developing countries, to students working with Nobel Prize Winners in major national labs.**

Irrespective of geography or environment, however, it is immediately apparent that the same two questions preoccupy the vast majority of young physicists. Firstly, how do I obtain a permanent job? Secondly, having got one, how do I survive as a scientist in the long term?

Of course, it has never been easy to obtain a permanent position in physics, and research and teaching are extremely demanding. But everything does seem to be harder for the current generation of young scientists: there is a real scarcity of openings relative to the number of applicants, and there is increasing pressure for young scientists to take on administrative responsibilities early in their careers. Students are keen observers, and as they watch their supervisors work in the modern research environment, it is clear that they will naturally ask serious questions about the best way to navigate their own future careers.

These concerns are extremely important, but it is not often that they are addressed head on. However, as scientists we are also educators, and so we should not hesitate to actively provide advice on careers as well as on physics! Obtaining a PhD is of course an important and significant achievement, but it is really only the start! A successful career in research requires many other skills: from an appreciation of the politics of science, to writing and communication, to management and leadership.

When starting out, the breadth of this required expertise can seem daunting, but it is very easy to identify topics where simple and practical advice can help young researchers to build and enjoy a long-term career in physics. There is no shortage of helpful resources available, and assembling this material into a half day format of seminars and talks and exchanges is not only straightforward but is in fact a great deal of fun! I have been organizer, speaker and a member of the audience at many events of this kind, and I have seen at first hand the tremendous benefit that they provide.

There are many important points to make during such an event, but my own favourite is the importance

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▼ A successful career in science involves maintaining long term collaborations

of developing a collaborative spirit. Physicists work in an environment where we constantly challenge and test each other's ideas, and this places great demands on collaborations. I like to stress the need to successfully maintain working relationships with colleagues who are at times co-workers, at times competitors, and at times employers! Learning how to manage long-term collaborations is in my view one of the most important skills that we can discuss with young scientists. Learning how to effectively share ideas is essential to stimulate new discoveries. And this, after all, is what we are all aiming at. ■

■ **John Dudley**  
President of the EPS

