## **MS31-04** How to survive in Academia <u>Alessia Bacchi</u>, Dipartimento di Chimica, University of Parma, Italy E-mail: <u>alessia.bacchi@unipr.it</u>

The word survive has two meanings: one, more heroic and romantic, refers to the idea of being able to succeed in life better than the others; on the other hand, another concept that can be associated to the word survive is more related to the ability to make a living out of scarce resources. Both meanings can be applied to academic life nowadays. This communication will explore the obstacles and pitfalls that can be encountered during the early stages of an academic career. Some examples will be discussed of different situations found in different countries, and gender issues will be analyzed. The importance of networking will be highlighted.

## Keywords: academic career; gender issues; networking

**MS31-05** How to ensure the future of crystallography - a teaching perspective. Elena Boldyreva,\* <sup>ab</sup> <sup>a</sup>Institute of Solid State Chemistry and Mechanochemistry SB RAS, Russian Federation, <sup>b</sup>REC-008 Novosibirsk State University, Russian Federation

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If one looks at the program of the ECM, one will find many exciting contributions related to a wide variety of ranging from biology to materials sciences, topics. geosciencies, physics, chemistry, pharmaceuticals, engineering, etc. This definitely proves the importance of crystallography for modern science and technology. At the same time, in many countries the official status of crystallography declines, the chairs of crystallography and positions of professors of crystallography are closed. Many former contributors of crystallographic journals make their choice for publications in chemistry, physics, or materials science journals, although, at the same time, they find their results appropriate for being presented at a specialized crystallographic meeting like ECM or IUCr Congress. What are the reasons for this? How can we ensure the future of crystallography?

In the present contribution I shall try to approach this problem from a teaching perspective. How can we educate different audience, in order to i) promote crystallography, ii) provoque interest in it in children and select the best of them for future, more advanced education, iii) ensure good contacts between people who need structural data and people who know how to produce them reliably, iv) keep the high level of professionals able to produce reliable high-quality structural data for challenging samples?

What is the role of teaching crystallography at school, promoting it in museums, at exhibitions, via mass-media? Are there several alternative ways of teaching crystallography to non-crystallographers and future crystallographers at the universities? Do we need professional crystallographers as a separate profession, or should we educate chemists, physicists, materials scientists, and biologists, to let them solve, refine, and analyze structures at a professional level? What is the role of Advanced Study Institutes, Summer and Winter Courses? Do we need as many of them as possible, or is it better to support a few well-established and recognized ones? What is the role of crystallographic journals in promoting and teaching crystallography, also to non-crystallographers?

These are just examples of questions which I shall raise and try to give my personal answers to them.

[1] Boldyreva E. Teaching general chemistry, solid-state chemistry and crystallography in one comprehensive undergraduate course: can the effect be synergistic? J. Appl. Cryst. 2010, 43, 5(2), 1172-1180.

## Keywords: crystallographic teaching, materials science, biocrystallography, pharmaceuticals, experimental mineralogy