

Press Release

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Empa's 2006 PhD Symposium held for the first time at Empa in St. Gallen

Passion, Curiosity and Imagination

Empa's yearly PhD Symposium, a part of the PhD Students' Program, has almost become a tradition. This year as well, the October 19, 2006 Symposium offered a varied program consisting of lectures and discussions in five areas of research emphasis at Empa, poster sessions, and a guest lecture by Swiss Nobel prize winner, emeritus Professor Richard R. Ernst, whose presence will no doubt make this year's presentation a memorable one. At the conclusion of the Symposium day, the authors of the best posters and lectures received prizes, and Empa's Research Award was awarded for the fourth time. A doctoral student at Empa reports the following.

This year's motto chosen by the organizing committee, "**Science is my passion**", is fully supported by all of the doctoral students. Together with Passion, two further maxims of research, **Curiosity** and **Imagination**, form the Alpha and Omega of a researcher's life. 90 people from Empa and its sister institution Eawag as well as from the Zurich and Lausanne ETH, and from the Universities of Zurich, Basel, Neuenburg and Karlsruhe, took part in the Empa PHD symposium at St. Gallen, where they could exchange research experiences, present and discuss research results, and inform each other about new insights and observations which broaden scientific horizons. The symposium was divided into several points of focus: postersessions and lectures in the areas of "Advanced Materials and Surfaces", „Materials and Systems for Protection and Wellbeing of the Human Body“, „Civil and Mechanical Engineering“ and „Mobility and Environment took turns and were rounded by a welcoming opening speech and the closing words, both given by Louis Schlapbach, Empa's CEO.

Driving forces in research

Already the first presentation was forcefully motivating, though, the speaker, Doris M. Spori, who received for her Master's work the silver medal of the 2005 Mirko-Ros Award, given on the occasion of Empa's 125th year celebration, was somewhat cautious. However, in the discussion following her lecture, her energy showed through in the form of high challenging goals which energize us as scientists and motivate us forward. In our attempts to reach the set goals, the above mentioned three maxims can be thought of as the „gasoline which drives the motor“. **Curiosity** causes us to seek books and periodicals so as to answer the questions of utmost interest to us – What was already discovered in this field? What are the limits of this science? As soon as our curiosity is to some degree satisfied and enables us to set a picture of what knowledge the field encompasses, we need the next driving force. **Fantasy**, making itself at home in our heads, challenges us day and night and points to us ways through which the border limits of science could

perhaps be stretched in a certain direction, and how we may find new pathways to reach our goals. All this could never be accomplished without being smitten with **passion**. Passion which always suggests new pathways, even as when the road on which we just traveled led us to a „cul de sac“. Each of us has surely experienced the feeling of standing up again from far below and continuing relentlessly up the road towards the goal. These are the „ups and downs“, which, as was noted in the opening remarks by Louis Schlapbach, shape and re-shape our personality and character.

We, and I speak as a PhD student, know that since we are at the start of our scientific journey, we must develop ourselves further, and learn to represent to the outside world our path of work and research. This event provided us with the necessary framework and opportunity to do so. As Louis Schlapbach so astutely pointed out in his opening remarks, our work does not end with the accomplishment of results, since these results must be understood and interpreted. *Only in this manner do we create new knowledge and that is the goal of a research work.* We gain this new knowledge not for ourselves alone, but rather in order to share it with our research colleagues.

A Nobel Prize winner's wealth of experience

Highlight of the day was the presence of Nobel Prize winner Professor emeritus Richard R. Ernst who received the Nobel Prize in Chemistry in 1991 for his work in developing NMR (Nuclear Magnetic Resonance) spectroscopy and thereby creating a whole new field of knowledge. In his lecture titled „My pathway into science and beyond“, he skillfully combined the personal with the factual and laced it all with a grain of humor. Right from the start he encouraged us, the PhD candidates, by the statement: „Each of us is a researcher“, since each child has a natural curiosity which, if properly nourished translates itself into passion. Ernst depicted figuratively the importance of the two pillars of Profession and Passion. We need both to make our path certain, for one alone is not enough. However, a third supporting leg can also be helpful, for example music or art as in his case. The pillars are bound to each other through creativity, and to be creative means to distend curiosity to other fields of knowledge as well, to think interdisciplinarily and to unfold, and with it all to remain true to oneself and towards others. Richard Ernst was received with long and warm applause as thanks for his open speech in which he allowed us to share his experiences.

Awarding Prizes and Thanks

The two best lectures as well as the three best posters were chosen for awards based upon their evaluations by experts and the public. Prize winners are Markus Ambruster, Anne-Kathrin Born, Gilles Buchs, Nadzeya Homazava and Enrico Koerner. Korner and Ruben Maeder are also recipients of this year's Empa Research Award for their outstanding Masters work.

A big thank you for the success of this PhD day goes to the organizers of the event Agnes Psikuta, Lutz-Christian Gerhardt, Corinne Keiser, Dmitry Nazarov, Katinka Ruth and Ratnesh Thapliyal. Special thanks go also to Heinrich Stuelpnagel, the organizer of the PhD Students Program at Empa and the initiator of the PhD Symposium.

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Professor Richard Ernst is obviously enjoying himself telling about his „pathway into science and beyond“ at Empa’s PhD day.



Katinka Ruth (second from left), awarding the prizes for best lectures and posters. Prize winners are (from left to right) Enrico Koerner, Nadzeya Homazava, Markus Armbruster, Anne-Kathrin Born, Gilles Buchs.



Katinka Ruth (left) and Corinne Keiser, event organizers.