

18th Young Researchers Meeting

6 and 7 June 2019

Hotel Aeschi Park, Aeschi b. Spiez

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UNIVERSITÄT
BERN

OESCHGER CENTRE
CLIMATE CHANGE RESEARCH

Scientific Excellence for Climate Sciences

How to deliver (and offer) scientific work in good, if not excellent quality

The replicability crisis in science, combined with ever more powerful information and communication technology ICT, is about to revolutionize the quality standards for scientific work, e.g. regarding code, data, or texts. It has already changed policies of grant committees and science foundations, for instance. The YRM 2019 provides views on what scientific excellence is or should be in this transient context. It also offers hands-on workshops on ICT tools for reproducible code and data management, and on concepts for clear and persuasive argumentation in scientific texts.

PROGRAM

Thursday, 6 June 2019

- 09:45 – 10:15 *Check-in at Hotel Aeschi Park, Coffee*
- 10:20 – 10:35 Welcome and introduction
- 10:35 – 11:10 Keynote 1 (Martin Grosjean)
What is a good doctorate?
- 11:15 – 12:20 Keynote 2 (Matthias Egger)
What is Scientific Excellence? Evaluation beyond the H-Index
Questions and plenary discussion
- 12:30 – 14:00 *Lunch break*
- 14:00 – 15:45 Input and Workshops 1 and 2 (Sigve Haug, Guillaume Witz)
Science IT tools for reproducibility: Git, Jupyter, Data Management
- 15:45 – 16:15 *Coffee break*
- 18:00 – 18:00 Workshops 1 and 2 continued
- 18:00 – 18:15 Plenary

Friday, 7 June 2019

- 07:30 – 08:45 *Breakfast, check-out, organizational matters*
- 08:45 – 09:30 Keynote 3 (Claus Beisbart)
How to excel in scientific argumentation
- 09:30 – 12:00 Workshops 3 and 4 (Claus Beisbart, Christoph Baumberger)
Analysis and evaluation of arguments
Coffee break included
- 12:10 – 13:30 *Lunch*
- 13:30 – 14:15 Keynote 4 (Mathias Binswanger)
Excellence by nonsense? - Perverse incentives in academic research
- 14:20 – 15:30 Short inputs and panel discussion (Willy Tinner, Hubertus Fischer, Kathrin Altwegg)
How to create an excellent environment for young researchers
Questions by Kaspar Meuli and the audience
- 15:30 – 15:45 *Wrap-Up and Closure*

MORE DETAILS ON THE MEETING PROGRAM

Please bring your own laptop for the workshops 1 and 2. You'll be informed about software installation and accounts after registration.

Keynote 1: What is a good doctorate?

The keynote draws on the experience of Martin Grosjean as a professor, supervisor and director. It touches on aspects of excellence in the narrow sense of high-impact publication as well as on what doctoral students can learn for life in their three-year projects. His views may present a base for discussions throughout the YRM.

Martin Grosjean is the director of the Oeschger Centre and leads a research group at the Institute of Geography, Univ. Bern. He has been a supervisor for many years and has seen substantial changes in the academic working environment

Keynote 2: What is Scientific Excellence? Evaluation beyond the H-Index

Impact factors and citation rankings have become standard metrics for scientific excellence and common tools for allocating research resources to a growing number of competing scientists and institutions. However, these metrics potentially undermine integrity principles, scientific exploration and valuation of other kinds of scientific expertise. This calls for scientific evaluation that goes beyond publication indices.

Matthias Egger is the president of the National Research Council within the Swiss National Science Foundation SNSF. At the same time, he is also a professor and the head of a research group at the Institute of Social and Preventive Medicine, Univ. Bern.

Input, Workshops 1 and 2: Science IT tools for reproducibility: Git, Jupyter, Data Management

In these sequences, you will learn about concrete ICT tools to meet the increasing demands for transparency and documentation of scientific work. This involves version control of code, documentation and presentation of working steps and ideas as well as data management in general.

Sigve Haug and **Guillaume Witz** operate the Science IT Support, Teaching and Research liaison hosted by the Mathematical Institute, Univ. Bern. They offer consultancy for ICT challenges in research and are increasingly involved in data management planning.

Keynote 3, Workshops 3 and 4: How to excel in scientific argumentation

Argumentation is a key aspect of scientific method. The aim of these sessions is to enable you to analyze, assess and (re-)construct arguments. The keynote lecture will explain what arguments are, how they are used in the sciences and how they may be classified. In the workshops, you will learn how to analyze arguments, how to deal with incomplete arguments and how to recognize flaws in argumentation. We'll also train your skills to object against arguments and to defend your argumentation.

Claus Beisbart's research and teaching at the University of Bern focus on philosophy of (climate) science. He has published about scientific methods, philosophy of physics, probabilities and metaethics.

Christoph Baumberger is a senior researcher with the Institute for Environmental Decisions at ETH Zurich. He has published in epistemology, philosophy of science, and aesthetics.

Keynote 4: Excellence by nonsense? - Perverse incentives in academic research

The topic of this keynote are competition mechanisms in academic research. These create perverse incentives such as the mania of publication, where quantity counts rather than content. The underlying assumption is that research will improve, if everybody publishes more. However, sticks and carrots do not help to promote creative work, but they rather lead to the production of nonsense, stress and the crowding out of intrinsic motivation.

Mathias Binswanger is a professor of economics at the University of Applied Sciences Nordwestschweiz and at the University of St. Gallen. Among others, he published a book about absurd competition in education, science, or healthcare.

Short inputs and panel: How to create an excellent environment for young researchers

The final sequence features senior researchers who give their views on scientific excellence, and what it takes to be a good, or excellent professor. This is in fact much more than being a good supervisor. It is as well about human resources in general, project acquisitions, finances, reporting and controlling, strategic thinking, and, of course, delivery of excellent publications, services and products.

Kathrin Altwegg was the director of the Center for Space and Habitability and a project leader within the Rosetta space mission to comet Churyumov–Gerasimenko by the European Space Agency ESA.

Willy Tinner is the head of Paleoecology and co-director of the Institute of Plant Sciences, co-chair of the Past Global Changes PAGES project and holds a grant from the European Research Council ERC.

Hubertus Fischer is a group leader in Climate and Environmental Physics, manager of the Beyond EPICA ice core project and currently holds a second ERC grant already.

They are all professors at the University of Bern, supervisors, and managers of million-dollar scientific projects. How do they build bridges between the requirements of 'highest-quality, investigator-driven frontier research' and a creative, productive research environment for young researchers?

Kaspar Meuli, communication officer with the Oeschger Centre, will challenge the panel with questions, and you will be asked to take part in the discussion as well.

REGISTRATION

Please register online at

www.oeschger.unibe.ch/ym

Deadline for registration: Tuesday, 30 April 2019

The number of available places is limited.

Please note cancellation costs after Sunday, 5 May 2019: 100 CHF.

Cancellation costs do not apply in cases of health or family emergency. Deadlines to submit a thesis or a paper and other workshops / conferences, however, are not considered as a case of emergency.

VENUE

Hotel Aeschi Park www.aeschipark.ch/

Accommodation: double room, full board.

Meals: table service, vegetarian meals are available.

Costs: The costs of the meeting (full board accommodation and teaching material) are covered by the Oeschger Centre for Climate Change Research. Reimbursement of travel expenses must be organized through the individual projects / research groups. For any further question and requirements concerning accommodation please contact Cornelia Kehl (cornelia.kehl@oeschger.unibe.ch).

TRAVEL

These are the ideal train and bus connections from Bern to Aeschi b. Spiez on 6 June 2019. Participants coming from other locations may check www.sbb.ch/ for connecting trains.

09:04	dep.	Bern (IC to Interlaken Ost)
09:32	arr.	Spiez
09:36	dep.	Spiez, train station (Bus 62, direction to: Aeschiried, Schulhaus) The bus leaves from the front left of the arrival platform.
09:45	arr.	Aeschi b. Spiez, Post

To get to Hotel Aeschi Park, just walk back for about 100 m. Return connections on 9 June 2017:

16:05	dep.	Aeschi b. Spiez, Post
16:18	arr.	Spiez, train station
16:22	dep.	Spiez (IC to Basel SBB)
16:52	arr.	Bern