

22nd Young Researchers Meeting

6 and 7 June 2024

Graduate School Climate Sciences, University of Bern

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UNIVERSITÄT
BERN

OESCHGER CENTRE
CLIMATE CHANGE RESEARCH

Scientific Excellence in Climate Sciences

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 2024 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 2024

- 09:50 – 10:30 *Public transport arrival at Leissigen. Hotel bus and check-in at Hotel Meielisalp*
- 10:35 – 10:40 Welcome and introduction
- 10:45 – 11:15 Keynote 1 (Mathias Binswanger)
Excellence by nonsense? - Perverse incentives in academic research
- 11:15 – 12:00 Keynote 2 (Stuart Lane)
**How not to judge excellence:
Lessons and policy developments from the SNSF for early career researchers**
- 12:00 – 12:20 Synthesis 1: Questions and plenary discussion
- 12:30 – 14:00 *Lunch break*
- 14:00 – 14:30 Input 1 (Martin Wegmann, Guillaume Witz, Federico Grasso Toro)
Tools for open science and reproducibility
- 14:30 – 18:00 Workshops 1 and 2 (Martin Wegmann, Guillaume Witz, Federico Grasso Toro)
Tools for open science and reproducibility
Parallel workshops, coffee break included

Friday, 7 June 2024

- 07:15 – 08:35 *Breakfast and check-out*
- 08:35 – 08:45 Announcements / Introduction
- 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 – 13:40 *Lunch break*
- 13:40 – 14:25 Keynote 4 (Martin Grosjean)
What is a good doctorate?
- 14:30 – 15:30 Short inputs and panel discussion (Professors Univ. Bern)
How to create an excellent environment for young researchers
- 15:30 – 15:45 Wrap-Up and Closure, Taxi transport to Leissigen

MORE DETAILS ON THE MEETING PROGRAM

Please bring your own laptop.

Keynote 1: Excellence by nonsense? - Perverse incentives in academic research

This introductory keynote will focus on competitive mechanisms in academic research. These create perverse incentives such as the publication mania, in which quantity rather than content counts. The underlying assumption is that research will improve if everyone publishes more. However, carrots and sticks do not promote creative work, but rather lead to the production of nonsense, stress and the suppression 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.

Keynote 2: How not to judge excellence:

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. This keynote explores how a Funding Agency (here SNSF) views 'Excellence in Science', and how criteria in the evaluation and funding process are modified to avoid adverse effects of 'traditional metrics'.

Stuart Lane is a full professor in geomorphology at the University of Lausanne, where he works on impacts of rapid climate change and human activities on Alpine landscapes. Stuart has been an Editor-in-Chief of scientific journals. Since 2023, he has been a member of the Swiss National Research Council Presiding Board and the President of the Careers Committee. He has been active in a range of review panels and steering committees, review and evaluation panels of the SNSF, among others.

Input 1, Workshops 1 and 2: Science IT tools for reproducibility

In this hands-on workshop you will learn about tools for open science and reproducibility. After a quick intro to some baseline philosophy and concepts of open science, we will find out what it takes to reproduce results, how to create reproducible code and what tools are especially useful for documenting your research process.

The teachers will be **Guillaume Witz** from the Data Science Lab of the University of Bern, as well as **Martin Wegmann** and **Federico Grasso Toro** from the Open Science Team of the University of Bern.

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

Inference is a key aspect of the 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 can 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. Presently, his publications concentrate on computer-based methods in science (computer simulation, machine learning) and the relation between science and broader society.

Christoph Baumberger is a lecturer (Privatdozent) at the University Bern and teaches also at the KSALP at Lucerne. His recent publications focus on understanding, value judgments in climate science and big data.

Keynote 4: What is a good doctorate?

The keynote draws on the experience of Martin Grosjean as a professor, supervisor, director of the Graduate School and OCCR, and member of many Faculty hiring committees for academic positions. The Keynote touches on aspects of excellence in the context of a PhD, the discussion of making PhD training fit for purpose, and what doctoral students can learn for life in their 4-years PhD training. He will also briefly touch on current changes in the selection criteria for academic positions (the view from Department Chairs).

Martin Grosjean is the director of the Oeschger Centre and the Graduate School of Climate Sciences 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.

Short Inputs and Interviews 1 and 2: 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.

Margit Schwikowski heads the Laboratory of Environmental Chemistry at the Paul Scherrer Institute. Among others, she has organized and participated in very demanding high-altitude glacier drilling projects around the world, has collaborations with ETH, EAWAG, EMPA, Univ. Bern, and supervises PhD students in the working environment of a Swiss Federal research institute.

Flavio Anselmetti is the managing director of the Institute of Geology, Univ. Bern. As the head of the Quaternary Geology and Paleoclimatology group, he supervises a range of PhD students, but also overviews an impressive range of laboratory machines and technicians, field equipment and a number of research projects on three continents.

Olivia Romppainen is a co-director of the Mobiliar Lab for Natural Risks, one of the most prominent joint research initiatives at the Univ. Bern. As the leader of the Climate Impacts group at the Institute of Geography, she supervises research projects, reviews approx. 12 articles per year, organizes high-impact weather workshops, among other tasks.

REGISTRATION

Please register online at www.oeschger.unibe.ch/yrm

Deadline for registration: Sunday, 12 May 2024

The number of available places is limited.

Please note cancellation costs of 100 CHF after Sunday, 12 May 2024 if no replacement is presented. Cancellation costs do not apply in cases of health or family emergency. Deadlines to submit a thesis or a paper and other workshops / field work, etc., however, are not considered as a case of emergency.

VENUE

Hotel Meielisalp: www.meielisalp.ch

Accommodation: Full board. Double room as a default, triple or four-bed rooms may be assigned.

Meals: Please note that we will opt for vegetarian food. You may specify special diets in the registration, but need to be aware that not everything can be catered for.

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 please contact Isabel Jakob (isabel.jakob@unibe.ch).

TRAVEL

These are the ideal train and bus connections from Bern to **Leissigen, Schulhaus**. Upon request (see registration), taxi transport is organized to the hotel. If you prefer to walk, count with 45 minutes steep uphill.

09:04 dep. Bern (IC to Interlaken Ost)

09:33 arr. Spiez

09:37 dep. Spiez (Bus 60, direction to Interlaken, same platform, near the head of the train)