

ESSReS-PeP-POLMAR, an international and interdisciplinary postgraduate education concept on Earth and Environmental Sciences

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The joint ESSReS-PeP-POLMAR team: Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research, Bremerhaven, Germany; Institute for Environmental Physics, University of Bremen, Germany; Jacobs University Bremen, Germany.



Institute of Environmental Physics
University Bremen

Postgraduate Programme Environmental Physics (PEP)

pep

postgraduate programme environmental physics

atmosphere, ocean, land, climate

PEP is an international two years master programme offered by the **Institute of Environmental Physics (IUP) at the University of Bremen** in cooperation with the **Alfred Wegener Institute (AWI) in Bremerhaven**.

Based on a Sino-German cooperation a double degree with the Ocean University of China (OUC), Qingdao is possible.

Profile

Expert scientists and staff provide knowledge via lectures, exercises and in experimental methods in the areas of

- Atmospheric Sciences,
- Physics of the Ocean and Ice,
- Polar Research,
- Remote Sensing,
- and Soil Physics.



PEP-Curriculum

The lectures, exercises and practices are organized in thematic modules:

1. Basic Environmental Sciences
 2. Theoretical Basics
 3. Experimental Techniques
 4. Advanced Environmental Physics
 5. Research in Environmental Physics
 6. Project Work
 7. Master Thesis
- Master Degree

Earth System Science Research School (ESSReS)



ESSReS is an international and interdisciplinary research school for 23 PhD students at the **Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research (AWI)** and their partner universities: **University of Bremen** and **Jacobs University Bremen**. ESSReS combines observations, modelling, and data analysis in order to decipher the Earth's complex climate system. Structured training and supervision support interdisciplinary research at an early stage of the scientific career.

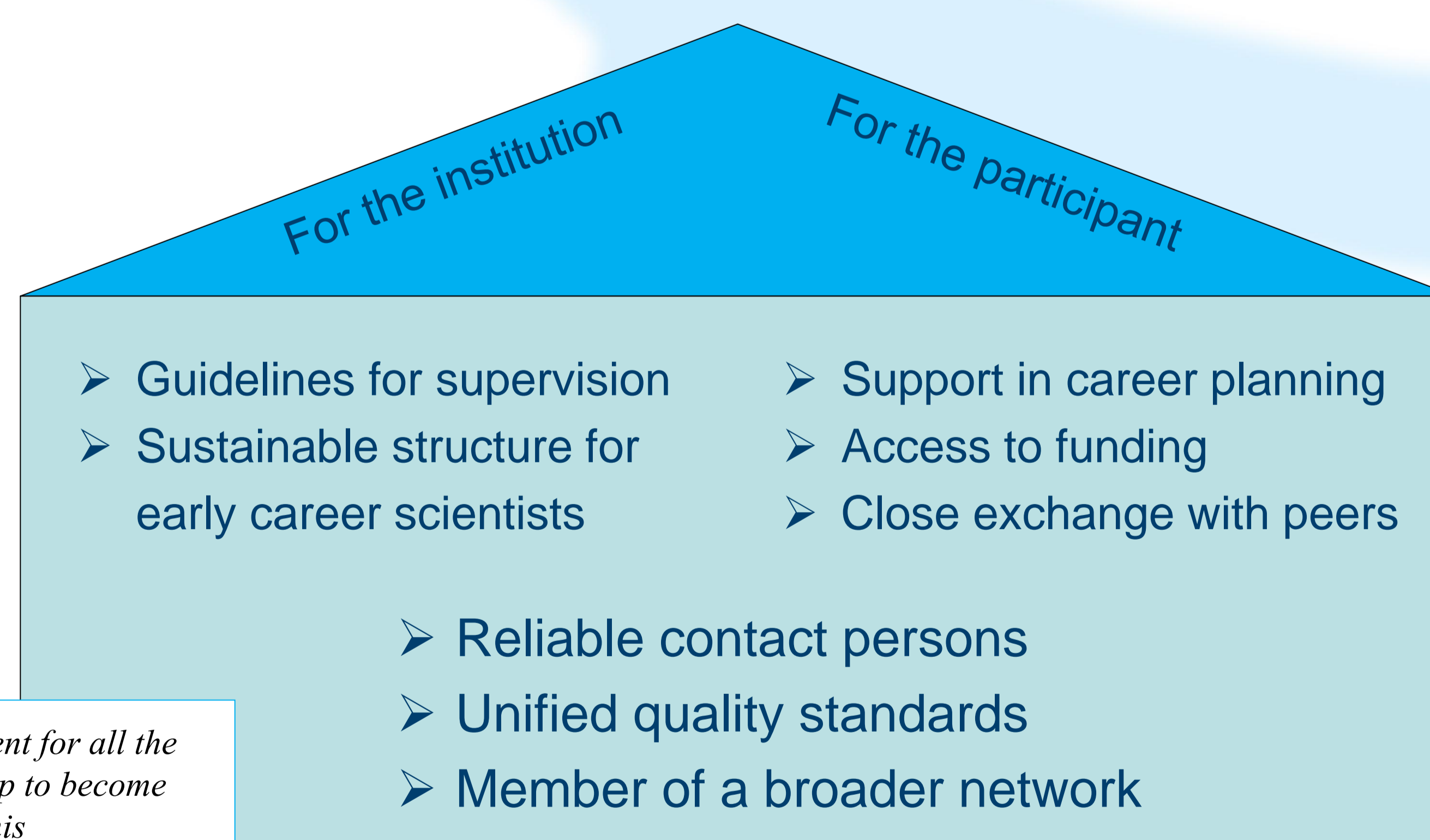
Education programme:

- Monthly seminars
- Basic and expert courses taught by internationally high-rated research groups and international guest scientists
- Student-to-Student lectures

Supervision concept:

- Regular PhD committee meetings
- PhD proposal after 6 month
- Progress Assessment Form
- Conference attendance, presentations
- Research stay abroad
- Clearly structured research and education plan

Added values of a postgraduate education



"I have set as a requirement for all the PhD recruited in my group to become members of POLMAR. This requirement is useful to me and to the student in many ways. (...) It will help to structure the group transversally in providing rules relevant and equal to all candidates."
Hugues L. (Helmholtz Young Investigator Group Leader)

"I want to be encouraged in interdisciplinary thinking" (PhD Students at the AWI)

"I believe the work-related soft skill courses are essential for a good working relationship with colleagues" (PhD Students at the AWI)

"The certificate will give me advantages for my future career" (PhD Students at the AWI)

"The modular concept of the courses is attractive" (PhD Students at the AWI)

Helmholtz Graduate School for Polar and Marine Research (POLMAR)



POLMAR provides a structured framework for education and qualification for Ph.D. students at the AWI in general. Developing all categories of skills needed for analysing complex climate and environmental systems and the development of integrated solutions in a supportive network of collaborating research institutions fosters outstanding career options.

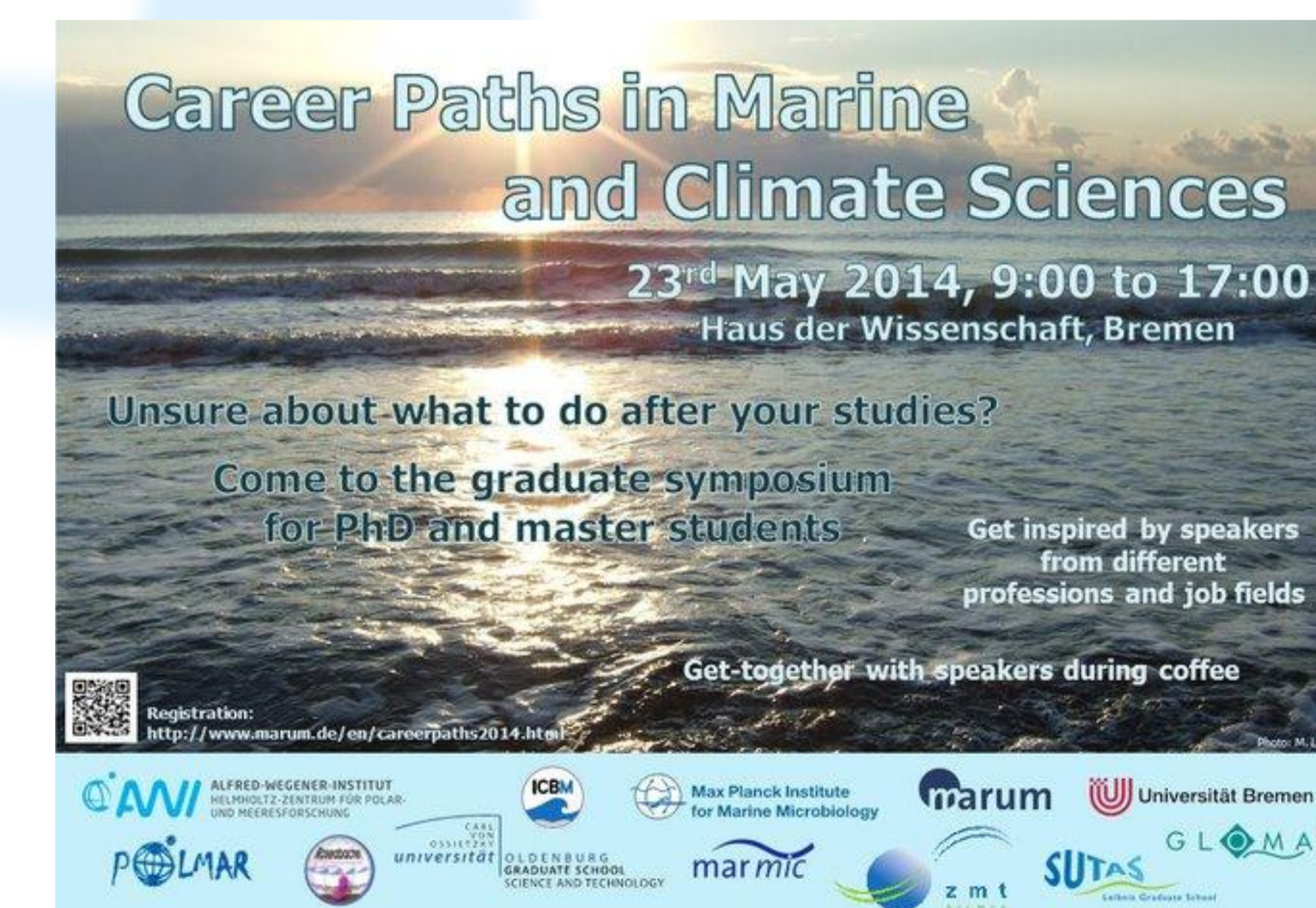
Transferable skill training:

- Courses in cooperation with the Imperial College London organized by the Helmholtz Association.
- Research skill development training
- Communication and presentation skills
- Career development and leadership

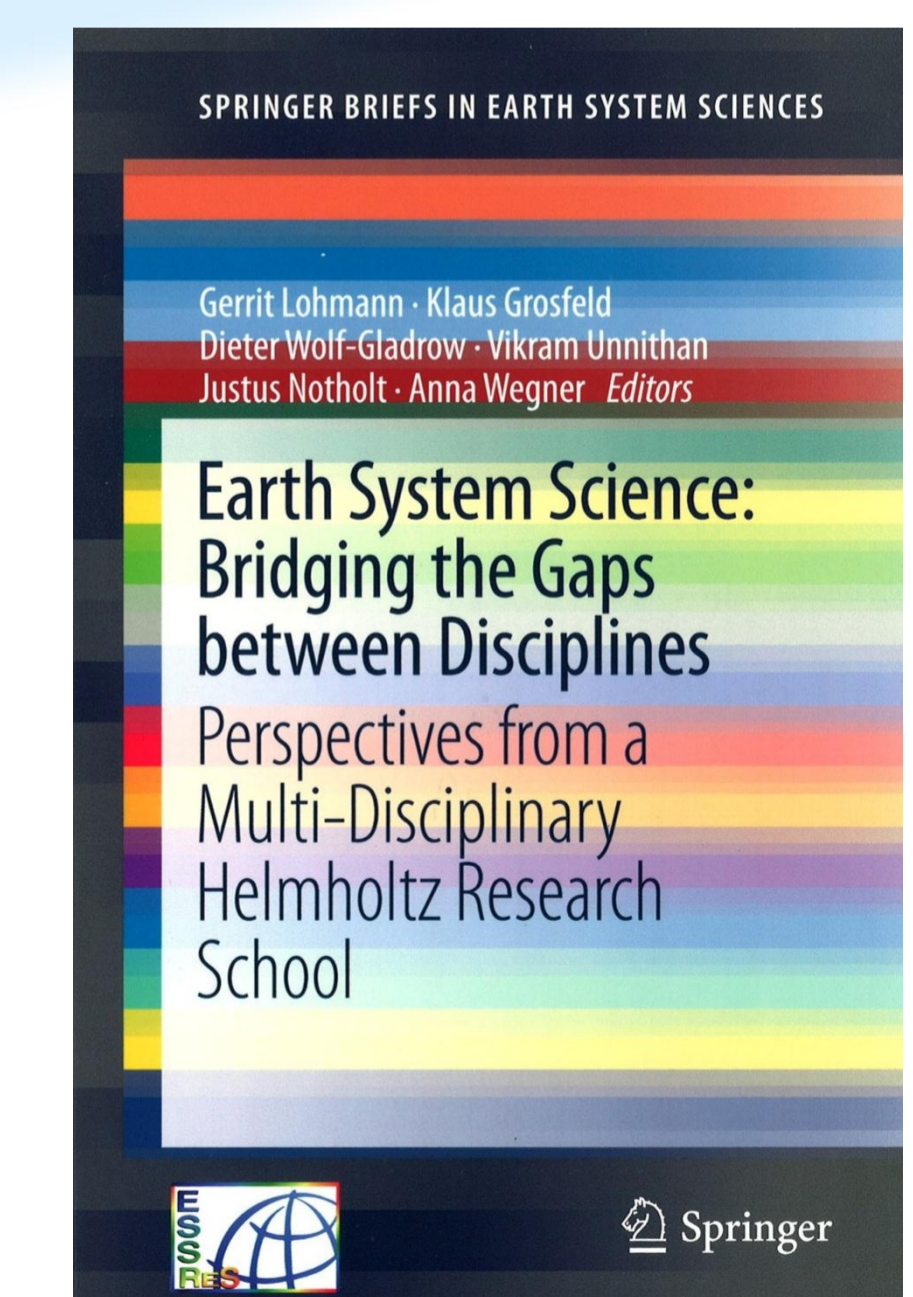
Support and grants:

- Provides competitive grants for
 - conference attendance
 - collaborative research with international partners
- Personal training, coaching, child care, etc.

ESSReS and POLMAR are preparing PhDs for their professional career!



Concept and research topics of the first ESSReS class



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...and the second generation 2014

