

Plenary Talk

PV III Tue 8:30 Audimax

Research Data Infrastructures – Challenges, Desires, Incentives — ●MAIK THOMAS — Helmholtz-Centre Potsdam, GFZ German Research Centre for Geosciences

New scientific instruments, such as sensor networks, satellites, telescopes and supercomputers, are generating vast amounts of data providing one of the most important pillars for scientific findings and supporting progressively decision-making processes. Although research data acquisition is generally associated with large technical, staff, and thus financial investments, the information content of resulting data products is often not fully exploited due to restricted access, deficiencies in documentation, or limited availability. After a long lasting fragmentation of science into more and more specialized research fields, present scientific challenges increasingly demand overcoming of frontiers separating scientific disciplines. In particular, substantial progress in modern information technologies supports this linking and, in prin-

ciple, promotes the achievement of new synergetic effects. However, multi-disciplinary synergies and improvement in efficiency imply that research data are easily accessible and comprehensibly documented in order to be usable for a broad community outside of the specific subject area. This gains in importance considering that the spectrum of transdisciplinary benefit of research data is generally not obvious at the time of their generation. Although scientists are becoming more and more aware of the need for sustainable data handling and numerous data policies and strategies have been developed, the realization mainly depends on appropriate incentives for parties involved in data generation.

From the perspective of a scientist producing large amounts of data the talk outlines requirements concerning the development of future research data infrastructures and tries to identify prospects for the motivation of scientists to make their contribution to sustainable handling of research data.