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Biography

1997-2002 Study of physics, University of Wuppertal, Germany
2003-2005 Ph.D. student, Forschungszentrum Jülich, Germany
2006 Ph.D. in experimental physics, University of Wuppertal
2007 Visiting Scientist NWRA/CoRA, Inc., and
Research Associate at University of Colorado, Boulder
since 2006 Post-Doc at Forschungszentrum Jülich

Ongoing work

The following topics will be briefly presented at the symposium:

- An overview on simulation projects currently carried out on the Juelich massive parallel computers covering the Earth's atmosphere, biosphere and terrestrial systems. First activities of the simulation laboratory 'Earth and Environmental Science' to be established at the Juelich Supercomputing Centre.
- Inverse modelling of atmospheric remote sensing measurements as an example of computationally demanding high performance computing applications. Upcoming remote sensing satellite experiments will provide significantly more measurements and sample the Earth's atmosphere on much finer scales than current instruments. Some results of a performance assessment carried out for a new satellite mission proposed to the European Space Agency will be presented to illustrate the particular requirements in detail.

Topics for possible future collaborations

Future collaborations would ideally be related to current activities of the simulation laboratory 'Earth and Environmental Sciences' at the Juelich Supercomputing Centre, e.g. climate modelling, atmospheric process modelling, analysis of remote sensing measurements, data assimilation, as well as other modelling activities of the biosphere and terrestrial systems.

Bibliographical References

Envisat MIPAS measurements of CFC-11: Retrieval, Validation, and Climatology. L. Hoffmann, M. Kaufmann, R. Spang, R. Müller, J. J. R. Remedios, D. P. M. Moore, C. M. Volk, T. von Clarmann, and M. Riese, *Atmos. Chem. Phys.* 8, 3671-3688 (2008).

CRISTA-NF measurements of water vapor during the SCOUT-O3 Tropical Aircraft Campaign. L. Hoffmann, K. Weigel, R. Spang, S. Schroeder, K. Arndt, C. Lehmann, M. Kaufmann, M. Ern, P. Preusse, F. Stroh, and M. Riese, *Adv. Space Res.* 42, doi:10.1016/j.asr.2008.03.018 (2008).