

Dr. Matthias Zahn

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Curriculum Vitae

Personal Details

Birth	7 Sep 1978 in Herford, Germany
Marital status	married, three children
Nationality	German

Employment

since 2013	Scientist at HZG Forschungszentrum Geesthacht, Germany <i>applying spatial filters and discriminant analysis to detect regional scale storms in numerical data of the atmosphere</i>
2010-2013	Post-doctoral researcher at the University of Reading, U.K. <i>development of an algorithm to calculate atmospheric moisture transports and assess climate warming related changes of the hydrological cycle</i>
2009-2010	Scientist at GKSS Forschungszentrum Geesthacht, Germany <i>extend my PhD work into the future and publish the results in Nature</i>
2005-2009	PhD student at the University of Hamburg, Germany <i>investigate past frequency changes of Arctic storms and relate their variability to large scale forcing using canonical correlation analysis</i>
2004-2005	Diploma student at GKSS Forschungszentrum Geesthacht, Germany <i>simulation of nutrient and pollutant transports in the southern North Sea</i>
2003-2004	Student assistant at GKSS Forschungszentrum Geesthacht, Germany <i>edit and convert digital data to various formats for publication purposes</i>
2002-2003	leading the tutorial to the lecture 'Introduction into physics' at the University of Lüneburg

Education

2005-2009	PhD, Department of Geo-sciences, University of Hamburg, Germany Disputation: <i>very good</i> , Dissertation: <i>excellent</i> Title ' <i>A long-term climatology of North Atlantic Polar Lows</i> ' <ul style="list-style-type: none">• <i>regional climate modelling, numerical simulations of the atmosphere run on the supercomputer of the HLRN in Hamburg</i>• <i>development of an algorithm for automated detection of small-scale storms</i>• <i>statistical analysis of the results</i>
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1999-2005	Diploma, Environmental Sciences, University of Lüneburg, Germany <i>Thesis (1.3): 'Development of a transport climatology for the southern North Sea - application on river inputs' (in German)</i> <i>main subjects: computer science, natural sciences (physics/chemistry)</i> <i>environmental planning</i>
1988-1997	Abitur (A-levels equivalent), Gymnasium Lohfeld, Bad Salzuflen, Germany main subjects: mathematics, history
1984-1988	Primary school, Retzen, Germany

Computer skills

Linux	main operating system: Redhat/Fedora for more than 12 years, recently switched to Ubuntu
UNIX	daily use since 10 years
Shells	main shell: tcsh, also used bash, csh, ksh
Fortran	daily use since 14 years for running climate models and post-processing model and satellite data
Java	topic of one of my diploma exams (marked 1.0/very good) and applied for professional and personal purposes
HTML	basic knowledge, used e.g. for my homepage
R	switched to using R for my statistical analyses 3 years ago
LaTeX	since 12 years
Software used	rstudio, awk, gnuplot, cdo, emacs, gmt, IDL, OpenOffice, MS-office

Relevant experiences and professional activities

Presentations	oral talks on conferences and workshops in Trier, Munich, Bremen, Fulda (Germany), Ljubljana (Slovenia), Lund (Sweden), Miami and San Francisco (USA), Helsinki (Finland), Sapporo (Japan) and at research institutes and Universities in Hamburg, Potsdam (Germany), Reading (U.K.), Bologna (Italy), Bergen and Oslo (Norway) and Tokyo (Japan)
Publications	8 peer reviewed (one of them in Nature) as first author and 7 co-authored (list of publications available on my Homepage)
Reviewing	reviewer for numerous scientific journals including Journal of Climate, Nature Climate Change, Nature Geoscience and the IPCC Assessment Report 5, Review Editor for Frontiers in Atmospheric Science
Polar low campaign	visiting the IPY-Thorpex field campaign monitoring and measuring the vertical structure of Polar Lows and Arctic Fronts, based in Andøya, Lofoten Islands, Norway, March 2008
Organisation	responsible for the organisation of an international workshop on Polar Lows held at the University Bergen, January 2008
Stay abroad	in Hobart, Tasmania, Australia, 3 months from 1998-1999
Languages	German: mother tongue, English: working knowledge/fluent, Italian: Basic knowledge (Italian partner)

Lüneburg, 25/04/16