

PROF. DR. KATJA MATTHES

Member of the Executive Board of the German Marine Research Alliance DAM

Director of the GEOMAR Helmholtz Centre for Ocean Research Kiel

- Since 10/2020 Director, GEOMAR Helmholtz Centre for Ocean Research Kiel
- 2018 – 2020 Head of Research Division 1: Ocean Circulation and Climate Dynamics
- Since 2012 W3-Professorship for General Meteorology at the Christian-Albrechts Universität zu Kiel and the GEOMAR Helmholtz Centre for Ocean Research Kiel, Head of the Working Group "Physics of the Atmosphere"
- 2012 – 2015 Head of the Helmholtz-University Young Investigators Group NATHAN(Quantification of Natural Climate Variability in the Atmosphere-Hydrosphere System with Data Constrained Simulations) at the GEOMAR Helmholtz Centre for Ocean Research Kiel
- 2010 – 2011 W2-Professorship for Atmosphere-Hydrosphere Systems at the Faculty of Geosciences at the Freie Universität Berlin and the Helmholtz-Centre Potsdam, the German Centre for Geosciences (GFZ)
- 2009 – 2011 Head of the Helmholtz-University Young Investigators Group NATHAN(Quantification of Natural Climate Variability in the Atmosphere-Hydrosphere System with Data Constrained Simulations), Helmholtz-Centre Potsdam, German Centre for Geosciences and Freie Universität Berlin
- 2004 – 2008 PostDoc, Institut für Meteorologie, Freie Universität Berlin
- 2007 – 2008 Reintegration phase of a Marie Curie Outgoing International Fellowship (OIF) SOLVO (The Influence of Solar Variability on Climate) within the 6th framework of the European commission
- 2004 – 2007 PostDoc National Center for Atmospheric Research, Boulder/CO, USA, Outgoing phase of the Marie Curie Fellowship
- 2003 Dr. rer. nat., Institut für Meteorologie, Freie Universität Berlin
Topi: The influence of the 11-Year Solar Cycle and the QBO on the Atmosphere. a Model Study (summa cum laude, Prof. Dr. K. Labitzke, Prof. Dr. U. Cubasch) [PDE](#)
- 2000 – 2003 PhD student, Institut für Meteorologie, Freie Universität Berlin (Stratospheric Research Group)

- 2000 Diploma in Meteorology (with distinction)
- 1995 – 2000 Freie Universität Berlin (Studies of Meteorology)

Personal information

- Born: 23. September 1975 in Berlin
- married, 3 children (2004, 2006, 2012)

Honors and awards

- 2019: Contributing author, 6th assessment report, Intergovernmental Panel on Climate Change (WG I, Chapter 2)
- 2010: Interview film about career path from KISSWIN
- 2010: Admission to the AcademiaNet (<http://www.academia-net.de/>), a German online platform to enhance the visibility of excellent women in science
- 2009 - 2010: Selected participant of the Helmholtz-Mentoring program for women "In Führung gehen" („Preparing for Leadership“)
- 2008 - 2009: Selected participant of the 'ProFiL Programme' which prepares outstanding women for leadership positions in science and higher education from the Technische Universität Berlin, the Humboldt-Universität zu Berlin and the Freie Universität Berlin (ProFiL. Professionalisierung für Frauen in Forschung und Lehre: Mentoring – Training - Networking) (<http://www.profil-programm.de/>)
- 2004: Ernst-Reuter Award of the Freie Universität Berlin
- 2001: Award for the best young scientist from the "Stiftung Umwelt und Schadensvorsorge der SV Gebäudeversicherung, Stuttgart" at the DACH-Meteorologentagung in Vienna, Austria

Research Interests

Key aspects

- Stratosphere-troposphere-ocean modeling with special focus on chemistry-climate modeling
- Role of the middle atmosphere for (natural) climate variability
- Mechanisms for Sun-climate connections
- Decadal climate variability and predictability
- Processes in the UTLS (Upper Troposphere Lower Stratosphere)

- Development of and contribution to international model intercomparison studies of climate variability and climate change

Teaching

Master of Science: "Climate Physics: Meteorology and Physical Oceanography"; in Englisch:

- Modern Aspects in Meteorology I: "Climate Modeling and IPCC2013" (Lecture+Seminar)
- Modern Aspects in Meteorology II: "Data Assimilation" (Lecture + Seminar)
- Modern Aspects in Meteorology III: "The Stratosphere" (Lecture + Seminar)
- Advanced Meteorology: Cloud Physics (Lecture + Exercises)
- Advanced Meteorology: Radiation (Lecture + Exercises)
- Advanced Meteorology: Stratospheric Physics and Dynamics (Lecture + Exercises)
- Meteorological Seminar: "Clouds and Circulation"
- Advanced Meteorological Seminar: "Seamless predictions"
- Advanced Meteorological Seminar: "North Atlantic Climate Variability"
- Oceanography-Meteorology-Climate Seminar: "Decadal Variability and Trends of the Pacific Ocean-Atmosphere System"
- Meteorological Lunch Seminar

Bachelor of Science: "Physik des Erdsystems: Meteorologie - Ozeanographie - Geophysik"; in Deutsch:

- Literaturseminar der Meteorologie, Ozeanographie, Geophysik

Committees

National

- 2019-2020: Co-speaker for POF-IV Topic 2 "Ocean and Cryosphere in Climate"
- 2019-2020: Chair of Examining Board Climate Physics MSc)
- Since 2018: Chairwoman of the Scientific Advisory Board of the Leibniz-Institut für Atmosphärenphysik (IAP) in Kühlungsborn
- 2016-2021: Member and deputy chair of the German National SCOSTEP (Scientific Committee On Solar-Terrestrial Physics) committee

- 2013-2019: Member of the Scientific Advisory Board of the Karlsruhe Institute of Technology(KIT)
- 2016-2018: Member of the Scientific Advisory Board of the Leibniz-Institut für Atmosphärenphysik (IAP) in Kühlungsborn
- 2013-2017: Head of des GEOMAR Women's Executive Board (WEB)

International

- 2020: Co-chair of SCOSTEP's next program PRESTO - Predictability of variable solar-terrestrial coupling (2020-2024)
- Since 2017: Scientific Steering Group member of the World Climate Research Programme (WCRP) Grand Challenge Near-Term Climate Prediction (NTCP)
- 2011-2019: Member of the International Committee on the Middle Atmosphere (ICMA)
- Since 2011: Co-Chair of WG II-D "External Forcing of the Middle Atmosphere" of IAGA
- Since 2006: Coordination of the SPARC solar influence study group (SOLARIS-HEPPA) for the World Climate Research Programme – Stratospheric Processes and their Role in Climate (WCRP-SPARC) <http://solarisheppa.geomar.de>
- 2011-2015: Vice-chair of the EU-COST Action ES-1005 "Towards a more complete assesement of the impact of solar variability on the Earth's climate (TOSCA)"
- 2012-2014: Co-Leader of CAWSES TG1 "What is the solar influence on the Earth's climate"
- 2008-2012: Scientific Discipline Representative for the Scientific Committee on Solar Terrestrial Physics (SCOSTEP)
- 2001-2004: Co-coordination of the GRIPS (GCM Reality Intercomparison Project for SPARC) solar influence study group for WCRP-SPARC