

Curriculum Vitae

Name: **Dr. Martin Füllekrug, Associate (Research) Professor, or Reader**

Contact details: Department of Electronic and Electrical Engineering
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Date of appointment: 05.04.2004

Posts prior to joining the University of Bath:

2002-2003: Lecturer (Privatdozent) at the Institut für Meteorologie und Geophysik, Universität Frankfurt am Main, Germany
2001: **Fellowship**, Minerva Fellowship Award of the Max-Planck Society in the Department of Geophysics and Planetary Sciences, Tel Aviv University, Israel
1997-2000: **Fellowship**, Habilitation Fellowship Award of the German Research Foundation at the Institut für Meteorologie und Geophysik, Universität Frankfurt am Main, Germany
1995-1996: **Fellowship**, Research Fellowship Award of the German Research Foundation in the STAR Laboratory, Stanford University, California
1992-1994: Teaching Assistant at the Institut für Geophysik, Universität Göttingen, Germany
1991: Research Assistant at the Institut für Bioklimatologie, Universität Göttingen, Germany

Academic Qualifications:

2007: Postgraduate Certificate in Learning and Teaching in Higher Education, University of Bath, UK
2001: Venia Legendi, or Habilitation, Universität Frankfurt am Main, Germany
1994: PhD, Universität Göttingen, Germany, (30.04.1994)

Scientific Focus: The main theme of my research programme is the observation of the Earth's atmospheric electrodynamic in the context of global climate change by use of electromagnetic remote sensing technology. This interdisciplinary research programme entails atmospheric electricity, near-earth space science and solar terrestrial physics. For example, lightning discharges within thunderstorms and their impact on the Earth's upper atmosphere above thunderstorms, such as transient luminous events, are of particular interest. The methodology includes the development of novel sensor technology for remote sensing, the deployment of sensor networks to conduct measurements, analyses of the collected big data and their subsequent scientific interpretation. The applications of the research programme fall into the areas of lightning detection networks for protection, space weather variability and its impact on communication channels of safety critical systems, and timing which is one of the foundations of physics for service delivery. The research programme is formalised in the 'CTR Wilson Institute for Atmospheric Electricity' (<https://www.ctrwiae.org>).

Grants Awarded: income >£1.93M (FEC), 22 person years acquired:

Funding bodies include the Royal Society, French Embassy, Natural Environment Research Council, Science and Technology Facilities Council, Particle Physics and Astronomy Research Council, European Commission, North Atlantic Treaty Organization, European Science Foundation, Max-Planck Society, and the "Deutsche Forschungsgemeinschaft".

Publications: (74 publications with h-index 20 and more than 1260 citations – ISI)

The assigned percentages of my contribution to the publications are based on the position in the list of authors: single author (100 %), first author (80 %), supervising senior author (50 %), contributing author (10 %).

	100 %	80 %	50 %	10 %	total
books	1	1			2
editorials		2	1		3
publications	11	30	14	14	69
in press					
total	12	33	15	14	74

More than 100 contributions to international scientific conferences.

Academic Management:

1. Associated Topical Editor for Atmospheric Electricity in *Frontiers in Earth Science* (2020-)
2. Associate Editor for *Surveys in Geophysics* (2019-)
3. Member of the European Science Foundation College of expert reviewers (2016-)
4. Founding Member of the CTR Wilson Institute for Atmospheric Electricity (2013-)
5. Member of the Natural Environment Research Council (NERC) Peer Review College (2013-)
6. Chair of IAGA Division II WGII-A on Electrodynamics of the Middle Atmosphere (2013-)
7. Visiting Professor at the “Laboratoire de Physique et Chimie de l'Environnement et de l'Espace” (LPC2E) at the “Centre National de la Recherche Scientifique” (CNRS), Orléans, France (2012-).
8. Member of Advisory Board to the SCOSTEP Bureau of the International Council for Science (2012-).
9. Representative of URSI commission E in the UK (2011-2017).
10. Chair and proposer of meeting at the French Embassy in London, 2011.
11. Thematic Action Group leader of the ICESTAR consortium of the Scientific Committee on Antarctic Research of the International Council for Science (2004-2012).
12. Representative of the COST action “The physics of lightning flash and its effects” of the European Commission (2005-2009).
13. Invited Guest Lecture on “Atmospheric Electrodynamics” at Tohoku University, Sendai, Japan (2006).
14. Coordinator of the European Science Foundation’s (ESF) “European Solar-Terrestrial and Atmospheric Research” (E-STAR) priority programme (2004-2006).
15. Director of a North Atlantic Treaty Organization (NATO) Advanced Study Institute (ASI) on “Sprites, elves and intense lightning discharges” (2004).
16. Chairman of the European Science Foundation (ESF) scientific network Space Processes and Electrical Changes Influencing Atmospheric Layers (SPECIAL) (2000-2004).

Editorial Responsibilities:

1. Editor of a book on “Sprites, Elves and intense lightning discharges”, Springer (2006).
2. Editor of a special issue on “Solar and heliospheric influences on the Earth’s weather and climate” in the *Journal of Atmospheric and Solar-Terrestrial Physics* (67(8-9), 753-828, 2005).
3. Editor of a special issue on “Sprites, Elves, and their global activities” in the *Journal of Atmospheric and Solar-Terrestrial Physics* (65(5), 499-659, 2003).
4. Co-Editor of a special issue on “Space Weather in Europe” in *Annales Geophysicae* (23, 2967-2968, 2005).

Meeting Organisation:

1. Organiser of the annual “Wilson Meeting for Atmospheric Electricity” at the University of Bath (2013-).
2. Organiser of the “Thunderstorm Effects on the Atmosphere - Ionosphere System” (TEA-IS) Meeting at the University of Vienna, Austria (2015).
3. Organiser of the “Magnetosphere, Ionosphere and Solar-Terrestrial” (MIST) Meeting at the University of Bath, UK (2014).
4. Organiser of the “Energetic Particles and Hard Radiation in the ATmosphere” (EPHRAT) meeting at the French Embassy in London, 2011.
5. Co-organiser of the Chapman Conference “Effects of thunderstorms and lightning in the upper atmosphere” at the Pennsylvania State University, US (2009).
6. Co-organiser of a workshop on “The multiscale nature of spark precursors and high altitude lightning” at the Lorentz Center of the Universiteit Leiden, Netherlands (2005).
7. Organiser of a NATO Advanced Study Institute (ASI) on “Sprites, elves and intense lightning discharges” (2004).
8. Convener and Co-convener of more than 20 sessions during international scientific meetings.

Invited Presentations:

Many invited presentations are delivered, typically ~1-2 a year. Recent examples include: Universite Paul Sabatier Toulouse (2019), UK Meteor Observing Network (2018), Atomic Weapons Establishment (2018), University of Birmingham (2018), South African National Space Agency (2017), Florida Institute of Technology (2016), US Airforce/Zeltech (2016), Mullard Space Science Laboratory (2016), Royal Meteorological Society (2016), Institute of Physics (2015), International Union of Radio Science (2014), South African National Space Agency (2014), Institute of Physics (2013), UK MetOffice (2013), University of Leeds (2013), American Geophysical Union (2012), Royal Astronomical Society (2012), European Science Foundation TEA-IS (2012), Royal Meteorological Society (2012), Institute of Physics (2011), International Union of Radio Science (2011), Surrey Satellite Centre (2009), Chapman Conference of the American Geophysical Union (2009).

Memberships:

1. International Union of Radio Science (URSI)
2. Royal Astronomical Society (RAS)
3. European Geosciences Union (EGU)
4. American Geophysical Union (AGU)
5. Deutsche Geophysikalische Gesellschaft (DGG)
6. Deutscher Hochschulverband (DHV)