Curriculum Vitae Professor Dr Johannes Lelieveld

Image: Max Planck Institute for Chemistry

Name: **Johannes Lelieveld**

Born: **1955**

Research Priorities: Atmospheric chemistry, troposphere, air pollution, climate change, ozone, development of models and measuring devices, HALO research

Johannes Lelieveld is a Dutch atmospheric scientist. The focus of his research is on atmospheric chemistry. He develops aircraft-based measuring programmes and models that describe transport processes in the atmosphere as well as climate change. Recent research is concerned with air pollution's impact on human health.

Academic and Professional Career

since 2020	Managing Director, Max-Planck-Institute for Chemistry, Mainz, Germany
2010 - 2013	Managing Director, Max-Planck-Institute for Chemistry, Mainz, Germany
since 2008	Parttime Professor, Cyprus Institute, Nikosia, Cyprus
2004 - 2007	Managing Director, Max-Planck-Institute for Chemistry, Mainz, Germany
since 2002	Professor of Atmospheric Physics, Universität Mainz, Mainz, Germany
since 2000	Director, Department Atmospheric Chemistry and Scientific Member, Max-Planck Institute for Chemistry, Mainz, Germany
1993 - 2000	Professor of Atmospheric Physics and Chemistry, University of Wageningen, Wageningen, Netherlands and Utrecht University, Utrecht, Netherlands
1992	Extended Visit, University of California (UC) San Diego, San Diego, USA
1991	Extended Visit, Stockholm University, Stockholm, Sweden
1990	PhD in Physics, Utrecht University, Utrecht, Netherlands

1987 - 1993	Research Associate, Department of Atmospheric Chemistry, Max-Planck Institute for Chemistry, Mainz, Germany
1984 - 1987	Staff, GEOsens GmbH, Rotterdam, Netherlands
	Studies in Science, Leiden University, Leiden, Netherlands

Functions in Scientific Societies and Committees

since 2019	Member, Advisory Board, Panhellenic infrastructure for atmospheric composition and climate change (PANACEA), National Observatory of Athens, Athens, Greece
since 2019	Member, Advisory Board, Ruisdael Observatory, Rotterdam, Netherlands
since 2019	Member, Scientific Advisory Board, National Observatory of Athens, Athens, Greece
since 2018	Guest Editor, National Academy of Sciences (NAS), USA
since 2016	Member, Kick-off-Committee, International Silk Road Academy of Sciences
since 2013	Member, Evaluation Committee, Institute for Basic Science, Daejeon, South Korea
since 2010	Member, Editorial Board, Earth System Dynamics
since 2008	Member, Steering Committee, Max Planck Graduate Center with Johannes Gutenberg-Universität Mainz, Mainz Germany
2008 - 2012	Member, Advisory Board, Netherlands Institute for Space Research (SRON), Netherlands
2007 - 2012	Member, Advisory Council, COSMOS network, Community Earth System Model (CESM), Boulder, USA
2006 - 2019	Member, Scientific-Technical Committee, Executive Board and Chair, Advisory Board, Atmosphere and Climate Programme, Karlsruher Institute of Technology (KIT), Karlsruhe, Germany
2003 - 2017	Member, Scientific Steering Committee, Research Plane HALO (High Altitude and Long Range Research Aircraft), German Aerospace Center (DLR)
2003 - 2008	Member, Programme Committee, Earth Observation Center (EOC), DLR
2003 - 2005	Chair, Science Panel on Atmospheric Research, European Commission
since 2002	Spokesperson, International Max Planck Research School (IMPRS)
1997 - 2003	Member, Scientific Advisory Board, Stratospheric Ozone Research, European Union (EU)
1997 - 2001	Associate Editor, Journal of Geophysical Research
1997 - 2000	Founding Director, International Research School "Cooperation on Oceanic, Atmospheric and Climate Change Studies" (COACh)

1996 - 2003	Member, Curatorium, Leibniz Institute for Tropospheric Research, Leipzig, Germany
since 1996	Member, Editorial Board, Journal of Atmospheric Chemistry
since 1996	Member, Advisory Board, Tellus B
1995 - 2005	Member, Editorial Board, Water, Air and Soil Pollution
1994 - 2002	Member, Committee, Atmospheric Chemistry and Global Pollution, International Association of Meteorology and Atmospheric Sciences (IAMAS)

Project Coordination and Membership in Collaborative Research Projects

2015 - 2018	Co-Investigator, Project "Impact of Organic Aerosols on Air Quality and Climate", DFG
2008	Advanced Grant "Consistent computation of the chemistry-cloud continuum and climate change in Cyprus", European Research Council (ERC)
2007 - 2011	Applicant, Project "Coupling of the LM and ECHAMS/MESSy for consistently investigating chemistry and transport from the global to the regional scale", DFG
2005 - 2008	Deputy Spokesperson, Clusters of Excellence "Geocycles: time and space in the Earth sciences", DFG

Honours and Awarded Memberships

2021	Cardiovascular research high impact award, European Society of Cardiology (ESC)
2019	Vilhelm Bjerknes Medal, European Geosciences Union (EGU)
2018	Fellow, American Geophysical Union (AGU), USA
since 2017	Member, Royal Society of Chemistry, London, UK
2016	Honorary Doctorate, School of Sciences and Technology, University of Crete, Heraklion, Greece
since 2015	Member, German National Academy of Sciences Leopoldina. Gerrmany
since 2015	Member, European Geosciences Union (EGU)
2013	Presidential plaquette for the advancement of science in the Republic of Cyprus, Cyprus
2010	Yuval Ne'eman distinguished lecturer in Geophysics, Tel Aviv University, Tel Aviv, Israel
2010	Honorary Professor of Geophysics, King Saud University, Riad, Saudi-Arabia
2008	Hubert Curien Lecturer, Cyprus Institute, Cyprus
2007	Honor, Academy of Athens, Athens, Greece

2005	Distinguished Lecturer, Weizmann Institute, Rechovot, Israel
2002	Harold Schiff Lecturer, York University, Toronto, Canada
2001 - 2014	Highly cited researcher, ISI Web of Knowledge
2000	Professor of the Year 2000, Utrecht University, Utrecht, Netherlands
1994	J.W. van Oostrom Meyjes Prijs, Royal Association of Gas Producers in the Netherlands (Koninklijk Vereniging van Gasfabrikanten in Nederland, KGNV), Niederlande

Research Priorities

Johannes Lelieveld is a Dutch atmospheric scientist. The focus of his research is on atmospheric chemistry. He develops aircraft-based measuring programmes and models that describe transport processes in the atmosphere as well as climate change. Recent research is concerned with air pollution's impact on humans.

Johannes Lelieveld researches the interplay between the atmosphere and processes back on earth. He asks what effect ozone and organic substances have on the climate and how the lifestyles of humans impact atmospheric processes. For his research, he developed computational models that simulate the interaction of chemical and meteorological processes and describe processes like the exchange between the liquid and the gaseous stage of the atmosphere. With these models, he was able to show that processes in the clouds affect the chemistry of ozone. His studies on the influence of tropospheric ozone, methane, and sulphate aerosols on the climate were important contributions for understanding climatic and chemical processes in the atmosphere and to the prognosis of global climate change.

Together with his team, Johannes Lelieveld develops measurement devices which are deployed on ships, satellites, and aircraft. The scientists researched, for example, the influence of the Asian monsoon on the atmosphere's ability to self-clean during a mission with the HALO research aircraft.

The working group around Johannes Lelieveld also described the risks of nuclear catastrophes like those of Chernobyl and Fukushima with the aid of computer simulations. For this, they developed models with data from all currently-active nuclear power plants on Earth. As a result, they found that the risks associated with a nuclear meltdown are higher than previously expected.

Johannes Lelieveld was also the first to study how different sources for emissions impact the mortality rate in humans: the deaths of more than three million people around the globe are linked to air pollution. In many countries, this means that about ten times as many people die from air pollution than from traffic accidents.

The research done by Johannes Lelieveld aims to increase the understanding of chemical processes and processes of transportation in the atmosphere in order to sharpen the predictions of air pollution and climate change so that better-suited measures can be taken.