

## VITA

### Paul Josef Crutzen

born, December 3, 1933 in Amsterdam, The Netherlands  
Married, two children

deceased January 28, 2021 in Mainz, Germany

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(office) Max-Planck-Institute for Chemistry  
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### EDUCATION:

1946-1951 High School:, St. Ignatius College, Amsterdam, The Netherlands

1951-1954 Civil Engineering, Amsterdam, The Netherlands

1959-1974 Academic Studies and Research Activities, Institute of Meteorology,  
University of Stockholm, Sweden

1963 M.Sc. (Filosofie Kandidat)

1968 Ph.D. (Filosofie Licentiat), Meteorology  
Title: "*Determination of parameters appearing in the 'dry' and the 'wet' photochemical theories for ozone in the stratosphere*",  
Examiner: Prof. Dr. Bert Bolin, Stockholm.

1973 D.Sc. (Filosofie Doctor), Stockholm, Sweden  
Title: "*On the photochemistry of ozone in the stratosphere and troposphere and pollution of the stratosphere by high-flying aircraft*",  
Promoters: Prof. Dr. John Houghton, FRS, Oxford, and Prof. Dr. R.P. Wayne, Oxford.  
(Ph.D. and D.Sc. degrees were given with the highest possible distinctions)

### MAIN RESEARCH INTEREST:

Atmospheric chemistry and its role in biogeochemical cycles and climate; Climate-engineering; Climate and biofuels.

## **EMPLOYMENT:**

- 1954 - 1958 Bridge Construction Bureau of the City of Amsterdam, The Netherlands
- 1956 - 1958 Military Service (compulsory), The Netherlands
- 1958 - 1959 House Construction Bureau (HKB), Gävle, Sweden
- 1959 - 1974 Various computer consulting, teaching and research positions at the Department of Meteorology of the University of Stockholm, Sweden, Latest position: Research Associate Professor
- 1969 - 1971 Post-doctoral fellow of the European Space Research Organization at the Clarendon Laboratory of the University of Oxford, England
- 1969 - 1971 Visiting Fellow of St. Cross College, Oxford, England
- 1974 - 1977 Research Scientist in the Upper Atmosphere Project, National Center for Atmospheric Research (NCAR), Boulder, Colorado, USA (half time)
- Consultant at the Aeronomy Laboratory, Environmental Research Laboratories, National Oceanic and Atmospheric Administration (NOAA), Boulder, Colorado, USA (half time)
- 1976 - 1984 Adjunct professor at the Atmospheric Sciences Department, Colorado State University, Fort Collins, Colorado
- 1977 - 1980 Senior Scientist and Director of the Air Quality Division, National Center for Atmospheric Research (NCAR), Boulder, Colorado, USA
- 1980 - 2000 Director of the Atmospheric Chemistry Division, Max-Planck-Institute for Chemistry, Mainz, Germany
- 1987 - 1991 Professor (part-time) at the Department of Geophysical Sciences, University of Chicago, USA
- 1991 - 1992 Tage Erlander Professor of the Swedish Natural Science Research Council at the University of Stockholm, Sweden
- 1992 - 2008 Distinguished Professor (part-time), Scripps Institution of Oceanography, University of California, San Diego, La Jolla, USA

- 1997 - 2000 Professor of Aeronomy (part-time), Utrecht University, at the faculty of Physics and Astronomy, The Netherlands
- Since 1980 Scientific Member (for life) of the Max Planck Institute for Chemistry (Otto-Hahn-Institute), Mainz and the Max-Planck-Society, Munich, Germany
- Since 2000 Director Emeritus, Atmospheric Chemistry Department of the Max Planck Institute for Chemistry (Otto-Hahn-Institute), Mainz
- Since 2004 Institute Scholar, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria
- Since 2008 Emeritus Professor, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, USA

## **SERVICES:**

NASA Stratospheric Research Advisory Committee (1975 - 1977)

International Ozone Commission of IAMAS (International Association of Meteorology and Atmospheric Sciences) (1976 – 1984)

Atmospheric Sciences Advisory Committee, National Foundation, USA (1977 - 1979)

Committee of Atmospheric Sciences (CAS), National Academy of Sciences, USA (1978 - 1980)

Advisory Committee, High Altitude Pollution Programme, Federal Aviation Authority (FAA), USA (1978 - 1982)

Commission of Air Chemistry and Global Air Pollution (CACGP) of the International Association of Meteorology and Atmospheric Physics (IAMAP) (1979 - 1990)

Past Editor "Journal of Atmospheric Chemistry"(1983)

Special Inter-Ministerial Advisory Commission on Forest Damage in the Federal Republic of Germany (1983 - 1987)

Various research Advisory Committees of the German National Science Foundation (DFG) and Ministry of Research and Technology (BMFT) of the Federal Republic of Germany (since 1984)

Steering Committees of the SCOPE/ICSU effort to estimate the potential environmental consequences of a nuclear war (SCOPE/ENUWAR) (1984 - 1988)

Kuratorium (Board of Trustees) of the Max-Planck-Institut für Meteorologie, Hamburg (1984 - 2000)

Editorial Board "Climate Dynamics" (1985 - 2000)

Special Committee and Executive Committee, and Chairman of Coordinating Panel I of the International Geosphere - Biosphere Programme (IGBP) (1986 - 1990)

Executive Board of SCOPE (Scientific Committee on Problems of the Environment) of the International Council of Scientific Unions and Chairman of the National SCOPE Committee of the FRG (1986 - 1989)

Commission of the Parliament of the FRG for the "Protection of the Earth's Atmosphere" (Enquete-Kommission "Vorsorge zum Schutz der Erdatmosphäre") (1987 - 1990)

Steering Committee (Chairman) of the International Global Atmospheric Chemistry (IGAC) Programme, a Core Project of the IGBP (1987 - 1990); Vice-Chairman (1990 - 1996)

Kuratorium (Board of Trustees) (Chairman) of the Fraunhofer-Institut für atmosphärische Umweltforschung, Garmisch-Partenkirchen (1992 - 1994)

European IGAC Project Office (Chairman) (1992 - 1998)

Editorial Advisory Board "Issues in Environmental Science and Technology", British Royal Society of Chemistry, Britain (since 1993)

Reviewing Editor "Science" (1993 - 1999)

Editorial Board "Mitigation and Adaptation Strategies for Global Change" (1993 - 2003)

Advisory Board of the Institute for Marine and Atmospheric Research, University Utrecht, The Netherlands (1993 - 1997)

STAP (Scientific and Technical Advisory Panel) Roster of Experts of the United Nations Environment Programme (1993 - 1998)

European Environmental Research Organisation (EERO) (1993 - 1999)

Advisory Council of the Volvo Environment Prize (1993)

Advisory Board Journal "Tellus B: Chemical and Physical Meteorology" (since 1993)

SPINOZA Prize Committee of Nederlandse Organisatie voor Wetenschappelijk Onderzoek (Dutch Organization for Scientific Research) (1994 - 1995)

Prix Lemaitre Committee, Belgium (1994 - 1997)

Steering Committee on Global Environmental Change of International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria (1995 - 1997)

Executive Board of Gesellschaft Deutscher Naturforscher und Ärzte (GDNÄ-German Society of Natural Scientists and Physicians) (1995 - 2000)

Scientific Advisory Group of the School of Environmental Sciences, University of East Anglia, Norwich, Britain (1995)

General Advisory Board of "Encyclopedia of Life Support Systems (EOLSS)" (1996 - 2002)

Editorial Board of "Earth and Planetary Science Letters" (1997 - 2001)

Board of Consulting Editors of "European Review" (Interdisciplinary Journal of the Academia Europaea) (since 1997)

Editorial Advisory Board of "Current Topics in Meteorology" (since 1997)

International Advisory Board on the "Encyclopedia of Global Environment Change Project" (1997)

ESTA (European Science and Technology Assembly) of the European Union, Brussels (1997 - 2000)

Advisory Board of "The International Journal of Environmental Studies" (1997 - 2020)

Editorial Board "Rendiconti Lincei" (Accademia Nazionale dei Lincei, Rome) (since 1997)

Deutscher Studienpreis, Jury Member of the Körber Foundation, Germany (1998 - 1999)

Global Change Committee of the German Research Council and the Federal Ministry of Research and Technology, Germany (1998 - 1999)

Executive Advisory Board of the "Encyclopedia of Physical Science and Technology, 3<sup>rd</sup> edition" (1998 - 2003)

Editorial Board of "Ambio – A Journal of the Human Environment", Vol. 27 to 41 (1998 - 2012)

Scientific Committee for the International Geosphere-Biosphere Programme (SC-IGBP), Vice Chairman (1998 - 2003)

International Steering Committee of INDOEX (1999)

Scientific and Academic Advisory Committee, Weizmann Institute, Israel (1999 - 2010)

“Council on the Future”, UNESCO, Paris (1999 - 2003)

Indian Ocean Experiment (INDOEX) Co-Chief Scientist (with Prof. V. Ramanathan, Scripps Institution of Oceanography) (1999)

Advisory Committee (Beirat), Jahrbuch Ökologie, Berlin (since 1999)

Editorial Advisory Board of “ChemPhysChem” (2000)

Working Group on Establishing an Independent Advisory Body on European Research (2000 - 2002)

Advisory Body on Science and Technology in Europe (2000 - 2002)

Steering Committee of the Center for Atmospheric Sciences, University of California, Berkeley (2000)

Steering Committee of the “Atmospheric Brown Clouds” programme, in collaboration with the United Nations Environmental Program (UNEP), La Jolla / Nairobi (2001)

Fifth Framework Programme Expert Advisory Group (EAG) on “Global change, climate and biodiversity”, European Commission, Brussels (2001 - 2003)

ABC (Atmospheric Brown Clouds) Science Team, Co-Chief scientist (2002 - 2005)

ABC (Atmospheric Brown Clouds) International Science Team (since 2002)

Advisory committee of the Institute: Urbanization, Emissions, and the Global Carbon Cycle, START, Washington DC (2002)

Board of the General Advisors (BGA) of the UNESCO-EOLSS (since 2002)

Scientific Council of the International Centre for Theoretical Physics (Abdus Salam), Trieste (2003-2005)

Advisory Board of the Atmospheric Chemistry and Physics, EGU Journal (since 2004)

Advisory Board of The National Society of High School Scholars, Atlanta (2005)

“Comité van Aanbeveling” (Committee of Recommendation) of the International Polar Year 2005, Nederlandse Organisatie voor Wetenschappelijk Onderzoek, Den Haag (2005)

Committee for the Gérard Mégie Prize, Académie des Sciences, France (2005)

Scientific Council of European Research Council, Brussels, Belgium (2005 - 2008)

International Advisory Board of the Mahatma Gandhi Center for Global Nonviolence, James Madison University, Harrisonburg, USA (since 2005)

Advisory Board of the Ernst Strüngmann Forum, Frankfurt, Germany (since 2006)

Editorial Board “Anthropocene”, ELSEVIER (2013- 2016)

## **MEMBERSHIPS:**

Fellow of the American Geophysical Union (AGU) (since 1986), Member since 1973

Member of the Science Foundation (DFG) and Ministry of Research and Technology (BMFT) of the Federal Republic of Germany

Founder Member of The Academy of Europe (Academia Europaea), London (since 1988)

Corresponding Member of The Royal Netherlands Academy of Science (since 1990)

Member Leopoldina Nationale Akademie der Wissenschaften, Halle, Germany (1992 - 2014); now Honorary Member.

Member of the Royal Swedish Academy of Engineering Sciences (Kungl. Ingenjörsvetenskaps Akademien IVA). (since 1992)

Member of the Royal Swedish Academy of Sciences (Kungl. Vetenskapsakademien KVA) (since 1992)

Foreign Associate of the National Academy of Sciences of the United States of America, Washington (since 1994)

Member of the Institut Mondial des Sciences (World Institute of Science) Brussels, Belgium (since 1994)

Titular Member of the European Academy of Arts, Sciences and Humanities, Paris (since 1996)

Member of the Pontifical Academy of Sciences (since 1996)

Member of Vereinigung Deutscher Wissenschaftler - VDW - (Association of German Scientists) (since 1997)

Foreign Member of Accademia Nazionale dei Lincei (Italian Academy of Sciences, Roma, Italy) (since 1997)

Corresponding member of the Société Royale des Sciences de Liège (1997)

Member of the Board of Directors of the Mariolopoulos-Kanaguinis Foundation for Environmental Sciences, Athens (since 1997)

Member of the Deutsche Physikalische Gesellschaft (DPG), Bad Honnef, Germany (since 1998)

Member of the Fachverband Umweltphysik (Association of Environmental Physics) of the DPG (Deutsche Physikalische Gesellschaft) (since 1998)

Member of the Board of Governors, Weizmann Institute, Israel (1999 - 2012)

Foreign Member of the Russian Academy of Sciences (since 1999)

Member of the Council of the Pontifical Academy of Sciences (2001 - 2015)

Member of the Council of Chancellors of The Global Foundation of the Consejo Cultural Mundial, Mexico (since 2001)

Member of the Founders' Assembly, Foundation Lindau Nobel Laureates Meetings at Lake Constance, Lindau (since 2003)

Fellow of the Literary & Historical Society, University College of Dublin (since 2004)

Fellow of the American Association for the Advancement of Science (AAAS), Washington (since 2004)

Associate Fellow of TWAS (Third World Academy of Sciences), Trieste (since 2004)

Institute Scholar, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria (since 2004)

Member of the ABC science team (2005 - present)

Fellow of the World Academy of Art and Science, San Francisco, USA (2005 – 2016). Emeritus Fellow (since 2016)



International Member of the American Philosophical Society, Class 1, USA (2007)

Member of the International Scientific Advisory Council of the CREF-Cyprus Institute, Cyprus (since 2008)

Founder Member of the Anthropocene Working Group (AWG) of the Subcommittee on Quaternary Stratigraphy (part of the International Commission on Stratigraphy) (since 2009); (now Honorary member).

### **HONORARY DOCTORAL / PROFESSOR DEGREES:**

1986	Honorary Doctor of the York University, York, Canada
1992	Honorary Doctor of the Université Catholique de Louvain, Belgium
1993	Honorary Professor at the Johannes Gutenberg-University of Mainz
1994	Honorary Doctor of the University of East Anglia, Norwich, U.K.
1996	Honorary Doctor of the Aristotle University of Thessaloniki, Greece
1997	Honorary Doctor of the University of San José, Costa Rica
1997	Honorary Doctor of the Université de Liège, Belgium
1997	Honorary Doctor of the Tel Aviv University, Israel
1997	Honorary Doctor of the Oregon State University, Corvallis, USA
1997	Honorary Doctor of the Université de Bourgogne, Dijon, France
1997	Honorary Doctor of the University of Chile, Santiago, Chile
1998	Honorary Doctor of the University of Athens, Greece
2001	Honorary Doctor of the Democritus University of Thrace, Greece
2002	Honorary Doctor of the Nova Gorica Polytechnic, Slovenia (since 2006 Nova Gorica University)
2002	Honorary Doctor of the University of Hull, United Kingdom

2004	Honorary Professor of the College of Environmental Sciences, Peking University, China
2005	Honorary Doctor of the Université Joseph Fourier, Grenoble, France
2005	Honorary Professor of the Tongji University, Shanghai, China
2007	Honorary Doctor of the Environmental Engineering, Politecnico, Milan, Italy
2008	Honorary Professor at the Seoul National University, Seoul South Korea
2010	Honorary Doctor of the University of Venice, Italy
2013	Honorary Doctor of the Maastricht University, Maastricht, The Netherlands

### **SPECIAL DISTINCTIONS, AWARDS and HONORS:**

1975	Outstanding Publication Award, Environmental Research Laboratories, National Oceanic and Atmospheric Administration (NOAA), Boulder, Colorado, U.S.A
1977	Special Achievement Award, Environmental Research Laboratories, NOAA, Boulder, Colorado, U.S.A
1983	NASA Public Service Group Achievement Award to SME Project Operations and Control Center Team
1984	Rolex-Discover Scientist of the Year
1985	Centennial Medallion for participation in the Centennial Colloquium of the Georgia Institute of Technology
1985	"The Fourth Raymond R. Tucker Memorial Lecturer in Mechanical Engineering", Washington University, School of Engineering
1985	Recipient of the Leo Szilard Award for "Physics in the Public Interest" of the American Physical Society
1987	Lindsay Memorial Lecturer, Goddard Space Flight Center, National Aeronautics and Space Administration
1989	Recipient of the Tyler Prize for Environmental Achievement

- 1990 Tracy and Ruth Storer Lecturer at the University of California, Davis, U.S.A
- 1991 Recipient of the Volvo Environmental Prize by the Royal Swedish Academy of Science, Stockholm, Sweden
- 1993 Ida Beam Visiting Professor, The University of Iowa, USA
- 1994 Recipient of the Deutscher Umweltpreis of the Umweltstiftung (DBU) (German Environmental Prize of the Federal Foundation for the Environment)
- 1994 Recipient of the Max-Planck Forschungspreis (Research Prize) (with M. Molina, USA)
- 1994 Raymond and Beverly Sackler Distinguished Lecturer in Geophysics and Planetary Sciences, Tel Aviv University, Israel
- 1994 Aristoteles Lecturer at the Aristotle University of Thessaloniki, Greece
- 1994 Group Achievement Award (to HALOE Science Data Validation, Data Processing, and Flight Operations Team) for outstanding contributions to the success of the HALOE/UARS satellite experiment by NASA Langley Research Center
- 1995 Recipient of the Nobel Prize in Chemistry (with M. Molina and F.S. Rowland, USA)
- 1995 Recipient of the Global Ozone Award for "Outstanding Contribution to the Protection of the Ozone Layer" by UNEP (United Nations Environment Programme)
- 1996 "Commandeur in de Orde van de Nederlandse Leeuw" (knighted by the Queen of The Netherlands)
- 1996 Recipient of the Bundesverdienstkreuz mit Stern (Federal Merit Cross with Star of the Federal Republic of Germany)
- 1996 Symons Memorial Lecturer of the Royal Meteorological Society of England, Imperial College, London
- 1996 Holder of the 'Ehrenring' (ring of honour) of the City of Mainz

- 1996 Name "Prof. Dr. P.J. Crutzenlaan" given to a street in De Bilt, The Netherlands
- 1996 Election to the Global 500 Roll of Honour of the United Nations Environment Programme (UNEP)
- 1996 Recipient of The Louis J. Battan Author's Award (with Dr. T.E. Graedel, USA) by the American Meteorological Society for "their book entitled *Atmosphere, Climate and Change*, an authoritative and beautifully illustrated introduction to the role of the atmosphere in global change"
- 1996 Recipient of The Minnie Rosen Award for "High Achievement in Service to Mankind" of Ross University, New York
- 1996 Recipient of the Médaille d'Or de la Ville de Grenoble, France
- 1997 Ceremonial Lecturer (Festvortrag) at the Annual General Assembly of the Max-Planck-Society, Bremen
- 1997 Erasmus Lecturer and Medalist of the Academia Europaeae
- 1997 Shipley Distinguished Lecturer, Clarkson University, Potsdam, USA
- 1997 "XXVII Krishnan Memorial Lecturer", Title: 30 Years of Progress in Atmospheric Chemistry, National Physical Laboratory, New Delhi, India
- 1998 45<sup>th</sup> Gilbert N. Lewis Lecturer at the University of California, Berkeley, USA
- 1998 "First Lecturer in the Thompson Lecture Series", Advanced Study Program, National Center for Atmospheric Research, Boulder, Colorado, USA
- 1998 Ceremonial Lecturer (Festvortrag) at the Annual Assembly of the Deutsche Physikalische Gesellschaft (German Physical Society), Regensburg.
- 1998 Public lecturer at Michigan Technological University, Houghton, USA
- 1999 H. Julian Allan Award 1998, in recognition of the outstanding scientific paper (co-authored) for 1998 at NASA Ames
- 1999 Eyring Lecturer at the Arizona State University
- 2000 Named among "Heroes for the Planet" by TIME Magazine, Special Issue April/May 2000, Earth Day 2000

- 2000 Name "Crutzen" given to asteroid n° 9679 on Nov. 11, 2000 (asteroid discovered by C.J. van Houten and I. van Houten-Groeneveld on September 24, 1960)
- 2000 "Beatty Memorial" Lecturer at McGill University, Montreal, Canada
- 2000 The Third "Rosenblith" Lecturer at the Massachusetts Institute of Technology: Atmospheric Chemistry in the 21<sup>st</sup> Century (Co-speaker M. Molina, F. Sherwood Rowland)
- 2001 Honorary Chairman "Climate Conference 2001", 20.-24. August, Utrecht, The Netherlands.
- 2001 Honored by the Constantinos Karamanlis Institute for Democracy Athens, Greece, for outstanding contributions to Science and Society
- 2002 Worldwide most cited author in the Geosciences with 2911 citations from 110 publications during the decade 1991-2001, ISI (Institute for Scientific Information, Philadelphia, USA), issue November/December 2001
- 2003 Recipient of the Golden Medal (highest destination), The Academy of Athens
- 2003 Paul Crutzen Prize awarded to the best paper for participants in the International Young Scientists' Global Change START Conference, Trieste, Italy, November 16-19, 2003
- 2005 Recipient of the UNEP/WMO Vienna Convention Award
- 2005 Distinguished Lecturer in Science, The Hongkong University of Science and Technology School of Science
- 2006 Recipient of the Jawaharlal Nehru Birth Centenary Medal 2006, Indian National Science Academy, New Delhi, India
- 2007 Named among "Heroes of the Environment" by TIME Magazine
- 2008 Recipient of the Capo d'Orlando Award, Discepolo Foundation, Vico Equense, Italy
- 2008 Einstein Lecture Dahlem, Free University Berlin, Germany

- 2013 Recipient of the Landesverdienstordens of Rheinland-Pfalz (Order of Merit of the land Rhineland-Palatinate), Mainz, Germany
- 2018 Recipient of the Haagen-Smit Clean Air Award, (California Air Resources Board), Sacramento, USA
- 2019 Recipient of the Lomonosov Gold Medal, Russian Academy of Sciences (RAS)
- 2022 posthum: Future of Life Award 2022, Future of Life Institute, Cambridge, Massachusetts, USA

Foreign Honorary Member (IHM) of the American Academy of Arts and Sciences, Cambridge, USA (since 1986)

Honorary Member of the International Ozone Commission of IAMAS (International Association of Meteorology and Atmospheric Sciences) (since 1996)

Honorary Member of the International Ozone Commission (IO3C) (International Union of Geodesy and Geophysics) (since 1996)

Honorary Fellow of Physical Research Laboratory (PRL), Ahmedabad, India (since 1997)

Honorary Member of the American Meteorological Society (since 1997)

Honorary Member of the European Geophysical Society (EGS (since 1997)

Honorary Fellow of St. Cross College, Oxford, England (since 1998)

Honorary Member of the Committee of EUROSCEINCE (European Association for the Promotion of Science and Technology), Strasbourg (since 1999)

Honorary Member of the Swedish Meteorological Society (Svenska Meteorologiska Sällskapet) (since 2000)

Ambassador for the Environment of the European Commission for the Environment (since 2001)

Honorary Member of the The World innovation Foundation (since 2002)

Honorary Member of the The International Raoul Wallenberg Foundation and the Angelo Roncalli International Committee, Jerusalem (since 2003)

Honorary Member of the International Polar Foundation, Brussels (since 2003)

Honorary Member of the European Geosciences Union (EGU) (since 2004)

Foreign Member of The British Royal Society (allowed to use the title Paul Josef Crutzen, ForMemRS), London, UK (since 2006)

Honorary Member of European Academy of Sciences and Arts (Academia Scientiarum et Artium Europaea), Salzburg, Austria (since 2007)

Honorary Fellow of the Institute of Green Professionals, Weston, Florida, USA. Entitled to use the identifier “Hon. FIGP” (since 2007)

Honorary Member of the Commission on Atmospheric Chemistry and Global Pollution (iCACGP/CACGP) (since 2010)

Honorary Member of the „Naturforschende Gesellschaft zu Emden von 1814“, Emden, Germany (since 2011)

Honorary Member of “Nationale Akademie der Wissenschaften Leopoldina”, Halle, Germany (since 2014); (Member since 1992)

Honorary Member of the Institute for Earth System Preservation (IESP), Garching, Germany (since 2015)

Honorary Member of the Royal Netherlands Chemical Society (KNCV), The Hague, The Netherlands (since 2017)

Honorary Member of the Anthropocene Working Group (AWG) of the Subcommittee on Quaternary Stratigraphy (part of the International Commission on Stratigraphy) (since 2019); (Founder Member 2009)

#### **DOCTORAL STUDENTS AND POST-DOCTORAL CO-WORKERS**

Ariya, Patricia (post-doc)

Bergamaschi, Peter

Berges, Markus

Biermann, Uta

Bott, Andreas

Brühl, Christoph

Burrows, John (post-doc)

Chatfield, Robert

de Liang, Chen

Dentener, Frank

Dickerson, Russ (Don Stedman, main advisor)  
Feichter, Johan (post-doc)  
Fishman, Jack  
von Glasow, Roland  
Gidel, Louis T. (post-doc)  
Grooß, Jens-Uwe  
Harris, Geoff (post-doc)  
Hein, Ralf  
Holzinger, Rupert (post-doc)  
Jöckel, Patrick  
Kanakidou, Maria (post-doc)  
Kleiss, Bettina  
Koop, Thomas  
Kouker, Wolfgang (with James Holton)  
von Kuhlmann, Rolf  
Krueger, Arlin  
Kuhlbusch, Thomas  
Landgraf, Jochen  
Lawrence, Mark  
Lelieveld, Jos  
Lobert, Jürgen  
Müller, Rolf  
Peter, Thomas (post-doc)  
Pöschl, Ulrich (post-doc)  
Quesada, Jaime  
Reichenauer, Helga (Diplom = Masters degree)  
Röckmann, Thomas  
Sander, Rolf  
Saueressig, Gerd  
Schade, Gunnar  
Solomon, Susan  
Steil, Benedikt  
Valentin, Karen  
Valverde-Canossa, Jessica  
Vogt, Rainer (post-doc)  
Waibel, Andreas  
Zimmermann, Peter

September 2019