

Curriculum Vitae

Prof. Dr. Dr. h. c. mult.
Hans Joachim SCHELLHUBER,
IIASA Director General



Foto: IIASA/ Matthias Silveri

Name: Hans Joachim (John) Schellnhuber
Born: 7 Juni 1950, Ortenburg

Main Research Interests: Condensed Matter Physics, Complex Systems Dynamics, Climate Change Research, Earth System Analysis, Sustainability Science

Hans Joachim Schellnhuber has made numerous important contributions to theoretical physics, both to the foundations of the field (condensed matter, complex dynamics) and to its applications (climate & environmental systems analysis). His research in solid state physics (inter alia, at UC Santa Barbara's ITP) focused on the behavior of electrons in almost periodic/fractal fields and generated crucial results on the Fibonacci Hamiltonian and the Frenkel-Kontorova chain.

Academic and Professional Career

- from 12/2023 Director General of the International Institute for Applied System Analysis, Laxenburg, Austria
- from 2019 Visiting Professor at Tsinghua University, China
- 1993 - 2018 Director of the Potsdam Institute for Climate Impact Research (PIK), in conjunction with a Chair for Theoretical Physics at the University of Potsdam, Germany
- 2005 - 2009 Visiting Professor for Physics, Honorary Member of Christ Church College and Senior James Martin Fellow at the University of Oxford, UK
- 2001 - 2005 Additional engagement as Research Director of the Tyndall Centre for Climate Change Research and Professor at the Environmental sciences School of the University of East Anglia, Norwich, UK
- 1992 Managing Director of the Interdisciplinary Institute for Coastal Environment Studies (ICBM), University of Oldenburg, Germany
- 1991 Founding Director of the Potsdam Institute for Climate Impact Research (PIK), Germany
- 1988 - 1993 Full Professor for Theoretical Physics, University of Oldenburg, Germany

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| 1987 - 1989 | Fellow of the Heisenberg Programme of the German Science Foundation (DFG) |
| 1987 - 1988 | Visiting Professor at the Institute of Nonlinear Sciences, University of California, Santa Cruz, USA |
| 1982 - 1987 | Assistant Professor in the Physics Department, University of Oldenburg, Germany |
| 1985 | Habilitation (Qualification as University Lecturer) for Theoretical Physics, University of Oldenburg, Germany |
| 1981 - 1982 | Postdoctoral Fellow at the Institute for Theoretical Physics (ITP), University of California, Santa Barbara, USA |
| 1980 | Ph.D. in Theoretical Physics, University of Regensburg, Germany |
| 1976 - 1981 | Scientific Assistant in the Physics Department, University of Regensburg, Germany |
| 1976 | Physics Degree (First Class Honors) |
| 1971 - 1976 | Student Assistant in the Physics Department, University of Regensburg, Germany |
| 1970 - 1976 | Study of Physics and Mathematics at the University of Regensburg, Germany |

Honors and Awarded Memberships (Selection)

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| 2021 | Knight of the Legion of Honor, France |
| 2021 | Grand Cross of Merit of the Order of Merit of the Federal Republic of Germany |
| 2017 | Blue Planet Prize of the Asahi Glass Foundation, Japan |
| 2015 | Member of the Pontifical Academy of Sciences, Vatican City |
| 2011 | Honorary Doctorate of the University of Copenhagen, Denmark |
| 2011 | Order of Merit of the Federal Republic of Germany |
| 2011 | Volvo Environment Prize |
| 2009 | Ambassador of Science of the State of Brandenburg, Germany |
| 2008 | Order of Merit ("Roter-Adler-Orden") of the State of Brandenburg, Germany |
| 2008 | Environment Prize of the Bundesdeutscher Arbeitskreis für Umweltbewusstes Management (B.A.U.M) |
| 2007 | German Environment Prize by the Deutsche Bundesstiftung Umwelt (DBU) |
| 2004 | Honorary CBE (Commander of the Most Excellent Order of the British Empire) awarded by Queen Elizabeth II |
| 2002 | Wolfson Research Merit Award and Research Fellowship of the Royal Society |
| 1987 | Heisenberg Fellowship of the German Science Foundation (DFG) |
| 1970 | Bavarian Scholarship for the Exceptionally Gifted |

Memberships of Boards & Committees (selection)

- Member of the German Advisory Council on Global Change (WBGU)
- Chair Emeritus of the Climate-KIC Governing Board of the European Institute of Innovation and technology (EIT)
- Lifetime Member of the Pontifical Academy of Sciences

- Chair of the High-level Panel of the European Decarbonization Pathways Initiative of European Union
- Commissioner for Research, Science and Innovation Carlos Moedas
- Member of the Commission „Wachstum, Strukturwandel und Beschäftigung (WSB)“ of the German Federal Government
- Chair of the Scientific Commission "Climate, Energy and Environment" of the National Academy of Sciences Leopoldina
- Research Fellow at the Stockholm Resilience Centre
- Senior Advisor at the Institute for Advanced Sustainability Studies (IASS) in Potsdam
- Member of the Joint Advisory Board on Climate Change Research at Imperial College and LSE (Grantham Institute)
- Chair of the Strategy Advisory Board of the IASS from 2010-2012, 2012-2017 Deputy Chair
- Chair of the Global Change Advisory Group for the Sixth Framework Programme of the European Commission; Member of the corresponding panel for the Seventh Framework Programme
- Chair of the Global Analysis, Integration & Modelling (GAIM) Task Force of the International Geosphere Biosphere Programme (IGBP)
- Member of the Board of the Stockholm Environment Institute (SEI)
- Member of the Committee on Scientific Planning & Review of the International Council for Science (ICSU)
- Member of the Environment Steering Panel of the European Academies Science Advisory Council (EASAC)
- Distinguished Visiting Fellow des International Institute for Applied System Analysis (IIASA)
- Member of the World Economic Forum (WEF) Global Agenda Council on Climate Change
- Member of the Advisory Board for the World Development Report (WDR) 2010
- Member of the Global Energy Assessment (GEA) Council
- Chair of the Advisory Board of the European Climate Foundation (ECF)
- Member of the Board of Trustees of the NaturTon Foundation
- Member of the Climate Justice Dialogue Advisory Committee
- Member of the Programme Committee Haus der Zukunft
- Member of DARA's Advisory Panel for the 1st and 2nd Climate Vulnerability Monitor (2010 and 2012)
- Member of the Advisory Committee on the Joint PhD program on Climate Change and Sustainable Development Policy of the three Lisbon public universities (Universidade Nova de Lisboa, Universidade de Lisboa and Universidade Técnica de Lisboa)
- Member of the Senior Advisory Board for the 2013 China National Human Development Report "Sustainable and Livable Cities: Toward Ecological Civilization"
- Full Member of The Club of Rome
- Member of the Earth League
- Associate Editor of the scientific journal "Science Advances" and Member of the Editorial Boards of "Proceedings of the National Academy of Sciences" (PNAS), "Climatic Change", "Climate Policy", "Integrated Assessment", "Systems Analysis, Modelling, Simulation", and "Europe's World"

Major Scientific Interests

Hans Joachim Schellnhuber has made numerous important contributions to theoretical physics, both to the foundations of the field (condensed matter, complex dynamics) and to its applications (climate & environmental systems analysis). His research in solid state physics (inter alia, at UC Santa Barbara's ITP) focused on the behavior of electrons in almost periodic/fractal fields and generated crucial results on the Fibonacci Hamiltonian and the Frenkel-Kontorova chain.

Schellnhuber conducted his more applied research particularly at the Potsdam Institute for Climate Impact Research, which he founded in 1992 and which he has headed ever since (partly in parallel to engagements abroad, such as the director post at the British Tyndall Centre). The topical foci in this context are stability analysis of the Earth System, climate impacts assessment and sustainability science. Schellnhuber's ideas have been seminal for the international development of those areas.

Only recently, he was able to demonstrate (together with colleagues from several countries) that unabated anthropogenic global warming is likely to activate large-scale tipping elements, thereby triggering irreversible environmental impacts.