

GEORGIY L. STENCHIKOV

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Employment History

- 2009-present Professor of Applied Mathematics and Computational Sciences and Professor of Environmental Sciences, Division of Physical Sciences and Engineering, King Abdullah University of Science and Technology, Kingdom of Saudi Arabia
- 1998-2009 Research Professor, Department of Environmental Sciences, Rutgers University, New Brunswick, NJ, USA
- 1992-1998 Senior Research Scientist, Department of Meteorology (previously Associate Research Scientist and Research Associate), University of Maryland, College Park, MD, USA
- 1976-1992 Head of the Branch of Mathematical Modeling of Anthropogenic Impacts (previously Senior Research Scientist and Junior Research Scientist), Computer Center of the Russian Academy of Sciences, Moscow, Russia

Education

- 1989 Habilitation, Modeling of the Large-Scale Anthropogenic Impacts on Climate, Computer Center of the Russian Academy of Sciences, Moscow, Russia
- 1977 Ph.D., Numerical and Analytical Study of Weak Plasma Turbulence, Moscow Physical Technical Institute, Dolgoprudny, Russia
- 1973 M.S., Physics and Mathematics (with distinction), Moscow Physical Technical Institute, Dolgoprudny, Russia

Research Experience

Dr. Stenchikov's expertise is in Applied Mathematics, Climate Modeling, Numerical Fluid Dynamics, and Atmospheric Physics. His long-term research focus is on the effect of strong aerosol pollution associated with volcanic eruptions, urban and forest fires, dust storms, and anthropogenic pollution on climate and environmental systems. Dr. Stenchikov did pioneering research on the global climatic effects of nuclear war in Russia in the 1980s. He continued this research in the United States in the 2000s. He also led an important study assessing the environmental effects of the collapse of the World Trade Center in 2001. His contributions to research and teaching span three countries: Russia, USA, and Saudi Arabia.

Ongoing and Selected Recent Research Projects

- 3/15-2/18 KAUST-CRG3/Max Planck Institute for Chemistry/National Center for Atmospheric Research, Combined radiative and air quality effects of anthropogenic air pollution and dust over the Arabian Peninsula, \$ 1,172,799 (Dr. Stenchikov – PI)
- 10/13-9/17 SABIC, Assessment of the near-surface and elevated wind power resources over Saudi Arabia, \$1,017,917 (Dr. Stenchikov – PI)
- 1/13-12/15 KAUST-CRG1/Imperial College London, Quantifying the radiative impact of dust aerosol over the Arabian Peninsula and Red Sea and its implications for local, regional and global climate, \$1,200,000 (Dr. Stenchikov – PI)
- 9/11-8/14 KAUST-AEA/UT Austin, Refinement of Dust Entrainment and Transport Dynamics for Input into the Next Generation Coupled Land–Atmosphere Models, \$360,000 (Dr. Stenchikov-P.I.)
- 7/10-6/13 KAUST-AEA/UT Austin, **Dust Storms and Climate Change**, \$146,149 (Dr. Stenchikov-P.I.)

1/12-12/14 KAUST-GRP/Oxford University-OCCAM, GRP Collaborative Fellow Proposal, **Modelling the Interaction of Atmospheric Flow with a Sandy Surface**, \$160,000 (Dr. Stenchikov-P.I.)

Honors/Awards

2007 Co-authored the Nobel Prize winning IPCC AR4 report

2006 AGU Journal Highlight Award for the 2005 paper by Delworth, Ramaswamy, and Stenchikov: The impact of aerosols on simulated ocean temperature and heat content in the 20th century, *Geophys. Res. Lett.*, DOI: 10.1029/2005GL024457.

2004 NOAA Outstanding Scientific Paper Award for 2003 for paper by Soden, Wetherald, Stenchikov, and Robock, 2002: Global cooling after the eruption of Mt. Pinatubo: A test of climate feedback by water vapor, *Science*, 296, 727-730.

2003 The National Aeronautics and Space Administration Group Achievement Award “in recognition of outstanding accomplishments and contributions to the extremely successful Cirrus Regional Study of Tropical Anvils and Cirrus Layers - Florida Area Cirrus Experiment (CRYSTAL-FACE) based in the Florida Everglades region in July 2002”

1986 Prize of the Council of Ministers of the USSR for the development of multi-tasking software

1985 Gold Medal Award of the National Exhibition of the Economy Achievements of the USSR for the climate impact studies

Memberships in Professional Societies

1993-present American Meteorological Society, American Geophysical Union

2004-present International Association of Volcanology and Chemistry of the Earth’s Interior

Service to the Community (selected)

2012-present Member of the Academic Council, KAUST

2009-present Program Chair of the Earth Sciences and Engineering Program, KAUST

2007 Panel Reviewer for the NASA Atmospheric Composition Modeling and Analysis Program (ACMAP), July 25-26, 2007

2006 Panel Reviewer for the USEPA Program “STAR Implications of Tropospheric Air Pollution for Surface UV Exposures,” April 27, 2006, Washington, DC

1996-present Paper reviewer for *Journal of Geophysical Research*, *Journal of Atmospheric Sciences*, *Science*, *Numerical Methods for Partial Differential Equations*, *Geophysical Research Letters*, *Journal of Meteorological Society of Japan*, *Monthly Weather Review*, *Journal of Climate*, *Journal of Hydrometeorology*

1996-present Proposal reviewer for NASA, National Academy of Sciences (USAID program), National Institute of Global Environmental Change (NIGEC), NSF, Natural Environment Research Council, USEPA

1990-1991 Served on the USSR National Committee on Climate Research Program

1982-1990 Contributed to International Studies on Environmental Consequences of Nuclear War (ENUWAR) coordinated by the Scientific Committee on Problems of the Environment (SCOPE).

1985 Served as an editor of Russian translation of SCOPE 28, Vol. 1, Environmental Consequences of Nuclear War

1986-1992 Paper reviewer for IZVESTIYA Academy of Sciences USSR Atmospheric and Oceanic Physics, and USSR Computational Mathematics and Mathematical Physics