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Environmental Systems Science Centre
University of Reading

Anthony Slingo

Professor of Environmental Science and Deputy Director, Environmental Systems Science Centre. Research interests include atmospheric radiation, the Earth's radiation budget, the greenhouse effect, climate variability, feedbacks and climate change. Experience in both theoretical and experimental physics including the development and evaluation of advanced climate models. Management experience in leading large research groups both in the university and government laboratory sectors.

Degrees

PhD, Radio Astronomy, University of Cambridge, 1975

BSc, Physics (First Class Honours), University of Southampton, 1971

Career Outline

2002-present: Professor of Environmental Science and Deputy Director, Environmental Systems Science Centre, University of Reading

1996-2002: Head of Model Parametrizations, Hadley Centre, Met Office

1990-1996: Head, Clouds and Climate group, Hadley Centre, Met Office

1988-1990: Scientist III, National Center for Atmospheric Research, Boulder, Colorado, USA

1986-1988: Visiting Scientist, National Center for Atmospheric Research, Boulder, Colorado, USA

1974-1986: Met Office. 1981: Head of Physical Processes group, Dynamical Climatology Branch

Professional activities

Member, ESA EarthCARE Joint Mission Advisory Group (2002–present)

Member, Hadley Centre Expert Panel Review, December 2006

Chairman, NERC GERB Project Steering Group (1999-present)

Member, NERC Peer Review College (2004-2007)

Member, NERC UK SOLAS Thematic Programme Steering Committee

Member, NERC APPRAISE Programme Advisory Group

Member, Geostationary Earth Radiation Budget International Science Team

External examiner for PhD candidates at University of Reading (1992), University College London (1997), Imperial College London (1998, 2000, 2004 and 2005), Oxford (2007)

Internal examiner for several PhD candidates at University of Reading

Reviewer for international scientific journals, research council grant applications, etc

Professional Societies: Royal Meteorological Society (Fellow since 1974); American Meteorological Society (Member since 1994); American Geophysical Union (Member since 1994)

Honours and prizes

2008: Personalized facsimile of Nobel Peace prize from IPCC for contributions to IPCC reports

2003: H.J.E. Reid award, NASA Langley Research Center (for authors of Wielicki et al. 2002)

1996: Buchan Prize, Royal Meteorological Society

1992: Len Curtis European Award of the Remote Sensing Society (with M.J. Webb)

1992: L.G. Groves Memorial Prize for Meteorology

PhD students

2006-date Helen White

2004-2008 Ruth Comer

2002-2005 Keith Williams (PhD awarded December 2005)

2002-2006 Peter Henderson (PhD awarded 2006)

2002-2003 Francesca di Giuseppe (PhD awarded 2003)

1995-1998 Richard Allan, (Joint CASE student with Dr. K.P. Shine, Reading University)

1992-1995 James Haywood, (Joint CASE student with Dr. K.P. Shine, Reading University)

Grants

Cloud System Resolving Modelling of the Tropical Atmosphere (CSRMTA). Start date: late 2007 (TBD), End date: TBD. NERC Consortium grant led by Centre for Global Atmospheric Modelling (NE/E00525X/1). Awarded: 1 PDRA for 30 months at ESSC. Total grant budget is £1,884,061.

Surface and Atmospheric Budgets of Radiation in AMMA (SABRINA). Start date: 01/01/2006. End date: 31/12/2008. Awarded: £140,440 from NERC (NE/D/002370/1) and tied studentship to Imperial College, London.

UK-HIGEM: A national programme in "Grand Challenge" high resolution modelling of the global environment. Start date: 01/01/04. End date: 31/12/06. NERC Consortium grant led by Centre for Global Atmospheric Modelling (NER/O/S/2002/00975). Awarded: £133,086 to ESSC out of total of £1,191,634

Simulations from an NWP model to exploit radiation data from a new geostationary satellite, explore radiative processes and evaluate models (SINERGEE). Start date: 01/04/03. End date: 31/03/06. Awarded: £93,672 from NERC (NER/D/S/2002/00412) and £35,505 from Met Office

Recent refereed publications in scientific journals

- Milton, S.F., G. Greed, M.E. Brooks, J. Haywood, B. Johnson, R.P. Allan, A. Slingo and W.M.F. Grey, 2008. Modeled and observed atmospheric radiation balance during the West African dry season: Role of mineral dust, biomass burning aerosol, and surface albedo. *J. Geophys. Res.*, **113**, D00C02, doi:10.1029/2007JD009741
- Allan, R.P., A. Slingo, S.F. Milton and M.E. Brooks, 2007. Evaluation of the Met Office global forecast model using Geostationary Earth Radiation Budget (GERB) data. *Q. J. R. Meteorol. Soc.*, **133**, 1993-2010
- Miller, M.A. and A. Slingo, 2007. The Atmospheric Radiation Measurement (ARM) Mobile Facility (AMF) and its first international deployment: measuring radiative flux divergence in West Africa. *Bull. Amer. Meteorol. Soc.*, **88**, 1229-1244
- Comer, R.E., A. Slingo and R.P. Allan, 2007. Observations of the diurnal cycle of outgoing longwave radiation from the Geostationary Earth Radiation Budget instrument. *Geophys. Res. Lett.*, **34**, L02823, doi:10.1029/2006GL028229
- Slingo, A., Ackerman, T. P., Allan, R. P., Kassianov, E. I., McFarlane, S. A., Robinson, G. J., Barnard, J. C., Miller, M. A., Harries, J. E., Russell, J. E., Dewitte, S., 2006. Observations of the impact of a major Saharan dust storm on the atmospheric radiation balance. *Geophys. Res. Lett.*, **33** (24), L24817, doi: 10.1029/2006GL027869. This paper appears as one of the "Editor's Highlights"
- Williams, K.D., M.A. Ringer, C.A. Senior, M.J. Webb, B.J. McAvaney, N. Andronova, J.-L. Dufresne, S. Emori, R. Gudgel, T. Knutson, B. Li, K. Lo, I. Musat, J. Wegner, A. Slingo and J.F.B. Mitchell, 2006. Evaluation of a component of the cloud response to climate change in an intercomparison of climate models. *Climate Dynamics*, **26**, 145-165
- Allan, R. P., A. Slingo, S.F. Milton and I. Culverwell, 2005. Exploitation of Geostationary Earth Radiation Budget data using simulations from a numerical weather prediction model: Methodology and data validation. *J. Geophys. Res.*, **110**, D14111, doi:10.1029/2004JD005698
- Haywood, J.M., R. P. Allan, I. Culverwell, A. Slingo, S. Milton, J. M. Edwards and N. Clerbaux, 2005. Can desert dust explain the outgoing longwave radiation anomaly over the Sahara during July 2003? *J. Geophys. Res.*, **110**, D5, D05105, doi: 10.1029/2004JD005232
- Harries, J.E. and 42 authors (including A. Slingo and R.P. Allan), 2005. The Geostationary Earth Radiation Budget (GERB) project. *Bull. Amer. Meteorol. Soc.*, **86**, 945-960
- Williams, K.D., C.A. Senior, A. Slingo and J.F.B. Mitchell, 2005. Towards evaluating cloud response to climate change using clustering technique identification of cloud regimes. *Climate Dynamics*, **24**, 701-719
- Allan, R. P., M.A. Ringer, J.A. Pamment and A. Slingo, 2004. Simulation of the Earth's radiation budget by the European Centre for Medium-Range Weather Forecasts 40-year reanalysis (ERA40), *J. Geophys. Res.*, **109**, D18107, doi:10.1029/2004JD004816
- Slingo, A., K.I. Hodges and G.R. Robinson, 2004. Simulation of the diurnal cycle in a climate model and its evaluation using data from Meteosat 7. *Q. J. R. Meteorol. Soc.*, **130**, 1449-1467

Recent invited presentations

- "Results from the ARM Mobile Facility deployment in Niamey and the RADAGAST project". ARM Science Team meeting, Monterey, California, 26-30 March 2007
- "Observations of the Earth's radiation budget from geostationary orbit and from the surface". SORCE Science Team meeting, San Juan Islands, Washington State, USA, September 2006
- Lectures on "Atmospheric Radiation", "Remote sensing from satellites" and "Introduction to climate modelling", NCAS Summer School in Atmospheric Measurement, Arran, September 2006

August 2008