

Douglas W. Nychka Receives 2004 Sacks Award



Jerry Sacks, Doug Nychka, Vijay Nair and Alan Karr

The 2004 Jerome Sacks Award for Cross-Disciplinary Research is given by NISS to Douglas W. Nychka of the National Center for Atmospheric Research (NCAR) for his outstanding contributions to the statistical sciences, both theory and practice, atmospheric science, climatology, environmetrics and the geosciences. Doug's research reflects perfectly the spirit of the Sacks award, but he has mentored a large number of postdoctoral fellows in the ways of cross-disciplinary research through the Geophysical Statistics Project at NCAR.

Doug is a leading expert on modeling and analysis of atmospheric data and the associated spatial-temporal models. That work has covered many aspects of atmospheric sciences from ocean winds to dispersion of pollutants, from design of monitoring networks to data assimilation in precipitation models, and from assessment of model fits to global warming. His cross-disciplinary work has contributed to both the basic sciences and the theory and methods of statistics.

Doug's direction has been clear from the very beginning; his first paper was a statistical analysis of stratospheric ozone data. In the same year, his publications span the asymptotics of Lyapunov exponents and the spatial distribution of sulfur dioxide in the eastern United States!

Doug is a key player and co-leader of the Weather and Climate Assessment Initiative at NCAR, a very large multi-disciplinary collaborative research program. This large-scale atmospheric

science initiative has three main themes, the first of which is characterizing uncertainty, and Doug's influence is apparent.

Doug has the rare ability to connect his pragmatic view of applied problems with technical mastery of the theory and methods of mathematical statistics. He is a leader of large interdisciplinary research program serving the important role of mentoring young statisticians, teaching them how to take solutions from one problem domain and carry them to another for further use. He is a most deserving recipient of the Sacks Award for 2004.