2014 Albert W. Johnson Research Lecture On Global Warming

- When: Friday, March 14, 2014 at 3 p.m.
- Where: San Diego State University, San Diego - View Map
- Age limit: All ages
- Categories: Community, Lectures
- Cost: Free

Above: Graphic image of Dr. Sam Shen. Courtesy of The Department of Mathematics and Statistics at SDSU.

Dr. Sam Shen, Professor of Mathematics and Statistics, will deliver his presentation entitled "Global warming: How do we know it's real?" on **Friday, March 14, 2014, from 3 to 5 p.m.** at San Diego State University.

Dr. Shen started his career at SDSU as a Professor in 2006, after serving as McCalla Professor at the University of Alberta, Canada. His research tackles problems of great significance and breadth including climate change and uncertainty, for which he has developed and used a range of mathematical and statistical tools.

The Intergovernmental Panel on Climate Change (IPCC) presents the conclusions of a multi-national, multi-disciplinary series of working groups approximately every 6 years. These reports are viewed by many as the authoritative general assessment for both academics and the public of our understanding of the status, drivers, and consequences of climate change.

In 1994, Dr. Shen developed a new approach, the spectral optimal averaging (SOA) method for estimating uncertainty in climate change assessment based on both observational data and models, which in turn was adopted by the IPCC in 2001 for the first quantification of uncertainty on the observed rates of climate warming.

Rather than presenting their findings as absolutes, the IPCC provides estimates of certainty for their findings in an effort to provide to the public an indirect measure of confidence in their conclusions.

Dr. Shen has made several methodological contributions to a wide range of application areas, such as space-time signal detection for identifying carbon dioxide factor in the global average surface air temperature, and probabilistic assessment of cloud cover for stochastic climate models, which treat climate variables as random variables.

Dr. Shen maintains a highly interdisciplinary research program and has collaborated with meteorologists, oceanographers, agricultural scientists, computer scientists, and hydrologists. He has held visiting positions at various institutions and governmental labs, including the NASA Goddard Space Flight Center, the NOAA Climate Prediction Center, and the University of Tokyo.

In addition to pursuing excellence in advanced education and research, Dr. Shen cares about K-12 education. He recently worked with a local elementary school to protect vernal pools in the Carmel Mountain Preserve. He also donated desks and chairs to the one-room elementary school he attended in his remote Chinese mountain village. He successfully lobbied the Chinese government to invest the US dollar equivalent of $50 billion from 2007-2012 to provide free Grades 1-9 education to children in socially and economically disadvantaged rural areas of China.

Dr. Shen has been a consistent author of refereed papers with 99 papers in top journals including Nature Geoscience, J. of Geophysical Research and J. of Climate, as well as being the author of three books, numerous government technical reports and conference proceedings.

Recognition of his research program is also evidenced in the continuous funding of his research since 1988 by highly competitive federal programs such as NSF, Dept. of Energy, NOAA, or NSERC of Canada.

His strong history with graduate education includes not only seven Ph.D. students, 20 MS students, but also serving as a supervisor for three Ph.D. and four MS students. His contributions in service include national roles such as President of the Canadian Applied and Industrial Mathematics Society, VP of Canadian Mathematical Society, as well as many international recognitions including his work to help establish the SDSU Confucius Institute and to develop the SDSU Xiamen Summer School in Global Climate Change and Emerging Infection Disease in China.

The lecture is open to the university community and to the public, **free of charge.** Seating is limited, however, and will be available on a first-come, first-served basis.
The University Research Lecture Series is sponsored by Graduate and Research Affairs and the University Research Council in recognition of SDSU faculty who make outstanding research and teaching contributions.
Location: San Diego State University (Arts & Letters Room 201) 5500 Campanile Dr, San Diego, CA 92182 Google Maps