

Tamisiea Receives 2007 Geodesy Section Award

Mark Tamisiea received the Geodesy Section Award at the 2007 AGU Fall Meeting in San Francisco, Calif. The award is given in recognition of major advances in geodesy.

Mark Tamisiea has made significant and original advances in solid Earth geophysics and has begun to be an important leader in the geodesy community. He has actively applied models of glacial isostatic adjustment and gravity data from the GRACE mission to address practical problems in ice sheet history, sea level variation, and short- and long-term solid Earth deformation.

After his undergraduate training in physics at Grinnell College, Mark completed a Ph.D. with John Wahr at the University of Colorado. He was a postdoctoral fellow with Jerry Mitrovica at the University of Toronto and a geophysicist at the Harvard Smithsonian Observatory with Jim Davis. At present, he is a research scientist at Proudman Oceanographic Laboratory.

Much of Mark's research has been to develop and apply innovative approaches in geodesy to infer the sources of global sea level change. For example, Mark developed a technique to determine robust estimates of the annual amplitude and trend of the surface mass of glacier complexes, reducing the uncertainty in estimates of their contribution to recent sea level rise. He has applied this technique to glacier complexes in Alaska and Patagonia, confirming the rapid rate of their melting and demonstrating a new method to obtain results from relatively small scale features using GRACE data.

Recently, Mark used results from GRACE to constrain ancient Laurentide ice geometries, providing conclusive evidence that the ice sheet was composed of two domes. This work resolved a long-standing debate about the morphology of the ice sheet and has put tighter constraints on how the ice sheet developed and evolved. More significantly, Mark isolated changes in the gravity field due to mantle convection and was able to test the hypothesis that the continental tectosphere is neutrally buoyant.

In addition, Mark actively serves the geodetic community in several aspects. He is a respected member of the GRACE Science Working Team. He was meeting cochair of the UNAVCO annual meetings for 2 years and has been a member of the Stable North American Reference Frame (SNARF) Working Group.

Mark Tamisiea has made impressively creative and noteworthy contributions to geodesy and is most deserving of this award.

—ERIC LEULIETTE, NOAA, Silver Spring, Md.

Response

I greatly appreciate receiving this award and would like to thank all of those involved in the process. I am very fortunate to be working at the boundary between geophysical modeling and geodesy at a time when both the sources and the number of geodetic data have been increasing so quickly. A prime example of this is new data from the Gravity Recovery and Climate Experiment (GRACE) satellite mission. I benefited considerably from finishing my Ph.D. while



Mark Tamisiea

John Wahr's group was studying the ability of a gravity mission to monitor the motion of water over the surface of the Earth. The GRACE data give unique insight into the temporal variability of length scales between those of the point-position information provided by GPS and absolute gravity observations and the very longest wavelengths revealed by earlier gravity missions, such as LAGEOS. Aided by modeling to assist in interpretation, the GRACE data have given us a better understanding of the current integrated mass balance of the glaciers and ice sheets, as well as the geometry and continuing impact of the late Pleistocene/early Holocene ice sheets.

However, I believe sea level studies most clearly demonstrate the strength of combining geodetic data and modeling studies. My appreciation of the challenges of studying sea level more fully developed during my postdoctoral fellowship with Jerry Mitrovica and later working with Jim Davis. Geodesy plays a vital role in quantifying the changes in sea level, while modeling gives a means to integrating and interpreting the observations. As each of the measurement types is affected differently by a geophysical process, such as melting ice sheets or glacial isostatic adjustment, exploiting all of the data types simultaneously will give us greater ability to identify the relative contributions of each process. Incorporating oceanographic models and data into the analysis will give much better insight into all of the processes contributing to sea level rise. Thus I am looking forward to working with my new colleagues at the Proudman Oceanographic Laboratory to continue studying sea level variations. I would like to thank all my collaborators for their assistance and patience over the years, especially John, Jerry, and Jim; everyone involved in data collection and processing, particularly the GRACE mission team; as well as my friends and family for their support.

—MARK TAMISIEA, Proudman Oceanographic Laboratory, Liverpool, U.K.

Foufoula-Georgiou Receives 2007 Hydrologic Sciences Award

Efi Foufoula-Georgiou received the 2007 Hydrologic Sciences Award at the 2007 AGU Fall Meeting in San Francisco, Calif. The award is given in recognition of major advances in hydrology.

It is my great pleasure today to introduce the recipient of the 2007 AGU Hydrologic Sciences Award, Efi Foufoula-Georgiou.

Efi took her Ph.D. at the University of Florida (environmental engineering), and she has been at the University of Minnesota for a number of years where she is the McKnight Distinguished Professor in the Department of Civil Engineering. Efi is codirector of NCED, the National Science Foundation Science and Technology Center dealing with Earth-surface dynamics.

Efi has been an associate editor for both *Water Resources Research* and *Journal of Geophysical Research* (among others), and she has served on numerous committees in support of the profession; she currently is on the executive committee of the Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI).

She has been honored for her work previously, as you might imagine. She is a Fellow of AGU and the American Meteorological Society, and she is a member of the European Academy of Sciences. In 2002 she was awarded the John Dalton Medal by the European Geophysical Society.

The report of the selection committee for the Hydrological Sciences Award makes it clear why we are presenting this award to Efi today:

"Efi Foufoula-Georgiou has established a truly outstanding record of scholarship and leadership in hydrology. She has pioneered important developments in space-time rainfall modeling and significantly advanced our understanding of rainfall processes over a wide range of scales. In particular, Efi was the first to introduce a multi-scale analysis framework using wavelets to capture precipitation variability across a range of scales. More recently, Efi has led the effort to develop new metrics for the verification of numerical weather prediction and climate models. This includes an important recent contribution that introduces the Forecast Quality Index. Efi's recent contributions also include important work on geomorphological signatures of river basins and scaling in floods, including an extended hydraulic geometry relationship that captures important scale dependencies. All of these contributions have had significant impacts on the field and have established Efi as an important intellectual leader. In addition to her truly outstanding scholarship, Efi has also held many positions of leadership, including positions within AGU, AMS, and CUAHSI. Her leadership in both research and in service makes Efi an outstanding choice for this year's Hydrologic Sciences Award, and the committee enthusiastically recommends her for the 2007 AGU Hydrologic Sciences Award."

I am pleased to present Efi with the award for important and far-reaching contributions to space-time rainfall modeling and scaling analysis in hydrology.

—GEORGE M. HORNBERGER, University of Virginia, Charlottesville

Response

Thank you, George, for the generous introduction. Such occasions offer the opportu-