

# Earth Remote Sensing Achievements Recognised



The U.S. Geological Survey and NASA have presented the 2012 William T. Pecora Awards for achievements in Earth remote sensing to Gilberto Câmara of Brazil's National Institute for Space Research (INPE) and Leung Tsang of the University of Washington in Seattle, USA.

Câmara was recognised for his contributions to remote-sensing leadership as a scientist, programme director, manager and agency head. Tsang is one of the world's leading experts on the theory of microwave remote sensing for geophysical environments. Câmara received his award at a meeting of the Group on Earth Observations in Foz do Iguaçu, Brazil, 22 November, while Tsang received his award on Tuesday at the American Geophysical Union meeting in San Francisco.

USGS director Marcia McNutt said that along with the immensely successful Landsat programme, the Pecora awards are a testament to the very high value both the U.S. Geological Survey and NASA place in Earth remote sensing. As our planet's water, soil, and ecosystems continue to be stressed by a growing population and changing climate, it is essential we continue into a fifth decade of Earth observation time series and recognise the excellence of remote-sensing experts, she added.

NASA and the Department of the Interior present individual and group Pecora Awards to honour outstanding contributions in the field of remote sensing and its application to understanding Earth. The award was established in 1974 to honour the memory of William T. Pecora, former USGS director and undersecretary of the Department of the Interior. Pecora was influential in the establishment of the Landsat satellite programme, which created a continuous, 40-year record of Earth's land areas.

Astronaut John Grunsfeld, NASA's associate administrator for the Science Mission Directorate, commented that he was sure Dr Pecora would be pleased if he were at the presentation today and could see how his vision for innovative remote-sensing technology has been realised in the work of the individuals being recognised this year.

As the former director general of Brazil's National Institute for Space Research, Câmara championed broad, open data-sharing policies and practices within the institute that have significantly influenced other domestic and international organisations to emulate this approach. Câmara has advanced the linkages between and among remote-sensing technologies and Geographic Information System technologies and applications.

Câmara also supported programmes within the institute to link moderate-resolution imagery from the China-Brazil Earth Resources Satellite, Landsat, and other Earth observation missions with the policy needs of the Brazilian government, most notably policies on forestation and deforestation in the Amazon.

Tsang's contributions to microwave remote sensing have laid the groundwork for improved data analysis analyses of remote sensing data and designs of new measurements and satellite observational systems. His work has resulted in with numerous societal benefits, including monitoring climate change, improving hydrological predictions, and improving management of water and agricultural resources. His original and pioneering discoveries have resulted in the publication of more than 260 journal articles and four books.

Tsang also made major advances in rough surface scattering theory and applications to microwave remote sensing of soil and vegetated surfaces. He developed an improved modelling framework for rough surface and vegetation scattering with fast computational methods that can be directly applied to both active and passive microwave remote sensing of soil moisture.

For an interview with Gilberto Câmara in *GIM International*, July 2011, please click [here](#).