GEOPHYSICISTS

Honors

PAGE 350

Tom Beer, a senior scientist with Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO), assumed the presidency of the International Union of Geodesy and Geophysics (IUGG) on 25 July. An expert on environmental risk, particularly greenhouse gas and air quality issues, Beer is a stream leader in the Transport Theme of the Energy Transformed Flagship of CSIRO and a former IUGG vice president. His presidency will last until 2011.

The American Institute of Physics appointed **Louis J. Lanzerotti** as the new chair of AIP's governing board effective March 2008. Lanzerotti, a physics professor at the New Jersey Institute of Technology, is the founding editor of AGU's journal *Space Weather: The International Journal of Research and Applications*.

MEETINGS

Electromagnetic Induction in the Earth

18th International Workshop on Electromagnetic Induction in the Earth, El Vendrell, Spain, 17–23 September 2006

PAGE 351

Measurements of electrical properties of the Earth using electromagnetic induction (EM) can elucidate geological structures and processes ranging from meter to mantle scale. The 18th International Workshop on Electromagnetic Induction in the Earth (EMIW) highlighted how recent theoretical and instrumental advances are being applied in high-quality EM induction studies from around the world, at lithospheric, crustal, and near-surface scales.

Important aspects of the lithospheric and crustal studies presented included the demonstration of the increased resolution provided by dense two-dimensional magnetotelluric (MT) profiles and three-dimensional grids, the common use of the improved impedance tensor decomposition method to correct regional MT responses, widespread consideration of implicitly anisotropic materials within multidimensional MT models, and, in the numerical modeling field, the increased use of unstructured meshes. Review papers provided an overview of the large-scale EM surveys and spatial variations in the European lithosphere and addressed the role of EM in monitoring seismic and volcanic crustal processes.

The need to characterize the near-surface of the Earth has motivated the application of EM induction methods at a smaller scale. The EMIW included papers on the investigation of multiple processes including (1) saline intrusion due to groundwater resource depletion, (2) contaminant flow and transport from industrial sites threatening soil and groundwater resources, and (3) carbon gas releases to the atmosphere. EM instrumentation is evolving fast to cater to this new measurement scale, and EMIW papers described recent methodological developments in radio magnetotellurics. The environmental EM review paper summarized theoretical and empirical relationships between electrical properties and hydraulic properties governing groundwater flow and illustrated how hydrogeophysicists are developing noninvasive approaches to imaging the distribution of hydraulic conductivity.

The rapid expansion of marine EM methods in oil and gas exploration was reflected at the EMIW by a number of papers from this field. Papers showed that many of the instrumental challenges of marine EM work have been overcome and that marine EM data processing methods are becoming increasingly sophisticated. Other papers, including one examining resolution of resistive layers by different sources, and another parameterizing the effects of the air layer above the ocean, advanced the basic science involved.

One way of improving the accuracy of EM interpretations is through application of joint inversion strategies whereby multiple geophysical data sets are used to constrain estimated Earth models. A review paper on the integration of larger-scale MT EM responses with other data sets presented examples of reductions in model nonuniqueness, as well as reduced sensitivity bias, through the inversion of MT data with other geophysical data, and showed how joint inversion interpretations enhance the definition of geological structures and geometry, allowing inferences to be made on properties of the crust and mantle, and permit quantitative definition of Earth processes such as crustal melting.

The El Vendrell EMIW was attended by 264 scientists and students, and 319 papers were presented by authors from 44 countries, attesting to global growth of the EM community.

The full text of this meeting report can be found in the electronic supplement to this *Eos* edition (http://www.agu.org/eos_elec/).

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ABOUT AGU

More About AGU's Digital Library

PAGE 351

Many members and institutions have asked when they will have electronic access to AGU journals published before the mid-1990s. The answer is 2008.

AGU's digital library, which will come online in 2008, will include all articles published in 11 AGU journals from 1896 (for the predecessor to the *Journal of Geophysical Research*) through 2002 as well as articles from several hundred books that were published before 2003. AGU has not granted permission to any other organization to make this material available electronically in any form.

Features of the AGU digital library include

- references linked to abstracts of cited AGU articles and in some cases abstracts of other cited publications;
- related articles such as comments, replies, and corrections linked to and from the original articles;
- supplementary material once available only on microfiche and videotape; and
- full-text searching.

AGU is investing more than $1.5 million in creating the library. Much of the expense is for quality control.

Institutions will be able to subscribe to the full library, to only journals, or to only books. To be eligible to subscribe to the digital library, the institution must also subscribe to at least one of AGU's scientific journals in either electronic or printed format. Prices can be found at http://www.agu.org/pubs/Institution_Rates_2008.pdf.

This would be an excellent time to urge your institution to subscribe to the AGU digital library.

—JUDY C. HOLOVIAK, Director of Publications