

Introduction: EBSD at the 10th EMAS Regional Workshop on Electron Probe Microanalysis of Materials Today: Practical Aspects

The articles in this special section of *Microscopy and Microanalysis* represent the highlights of works presented at two meetings focused on Electron Backscatter Diffraction (EBSD), which took place at the same time on either side of the Atlantic—namely, the 10th EMAS Regional Workshop, which took place in Padua, Italy on June 17–20, 2012, and the EBSD–MAS Meeting, which took place in Pittsburgh, PA, USA on June 19–21, 2012.

The EMAS (European Microbeam Analysis Society) gathering in Padua saw the participation of 93 scientists from 17 different countries. Most were young researchers and post-docs who actively took part in the meeting with 24 oral presentations and 37 poster displays on various aspects of electron probe microanalysis, with an emphasis on EBSD applications, a special interest of the hosting institutions: the “Istituto di Geoscienze e Georisorse” of the Italian National Research Council (CNR) and the Department of Earth Sciences at the University of Padua.

Besides the scientific value of the latest EBSD results in many fields, including metals, cultural heritage, and geological applications, the meeting offered an added value to the participants in terms of the overall cultural experience because of the location. The city of Padua and its ancient University boast some of the most prominent episodes in the making of the Italian and European cultural panorama. This is where the very first anatomical theater in Europe was built (in 1595) for the direct study of the human body, by arguably the most famous medical school in Europe at that time. Having to cope with the suspicion of witchcraft by the Sacred Inquisition, the anatomical table in the theater was provided with an elaborate turn and flip-over mechanism (somewhat similar to a crystal flipper in a wavelength dispersive spectrometer or a sample changer in a scanning electron microscope) by which, in the event of a sudden inspection by the Inquisition, the corpse was made to disappear under the table and was dropped through a swing door in the floor boards, onto a boat floating on the canal beneath, to then be pulled quickly away from sight by a rope and pulley system. On the reverse side of the anatomical turntable would be a pig or other animal, well secured by leather straps, and ready for carrying on with the anatomical lecture.

Furthermore, as the convened were discussing the merits of some very new and particular kinds of “optical” principles and systems, their thoughts may have turned to Galileo Galilei who taught in Padua between 1593 and 1610. He discovered principles to rule the universe of his times with his observations through the first optical telescope. This was before his troubles with the law began in 1612 (exactly 400 years before our time). These troubles were finally solved when his condemnation sentence was revoked in 1992 (just 20 years ago) by Pope John Paul II. Too bad he could not make use of a turntable mechanism similar to the one described above, as regards his own experiments!

Now, for a taste of the scientific virtues of some of the latest EBSD experiments presented at the meeting, you'll have to read further within this issue.

Romano Rinaldi
Dipartimento di Scienze della Terra, Università di Perugia
Chairman of the International Scientific Committee EMAS 2012, Padua, Italy
Co-Guest Editor, Microscopy and Microanalysis