

## 2017 Quality Assurance Workshop at the Goldschmidt Conference in Paris

### Reliability of Geochemical Data: How do we know?



This workshop was given by Thomas Meisel, professor in Geochemistry in the Department of General and Analytical Chemistry, at the Montanuniversität, Leoben, Austria. He teaches courses including aquatic chemistry, analytical geochemistry and analytical chemistry. As a trained petrologist and analytical chemist and, as member of the ISO/REMCO (reference materials committee) as well as previous member of the certification advisory board of the IRMM, he understands the problems in earth sciences as well as metrological aspects of analytical chemistry. He has an extensive knowledge of TIMS, ICP-MS, XRF, INAA as well as in proficiency testing programmes, and has successfully led several IAG quality assurance workshops at previous Goldschmidt conferences.

### Workshop Goals

Discuss the latest practices for the production of “reliable” geochemical data that are associated with small measurement uncertainties

- Provide an overview of current understanding of metrological traceability and the proper use of reference materials
- Describe the role of measurement uncertainty and how it is affected by such issues as sample preparation, sample heterogeneity and data acquisition. Highlight the role of the IAG and its support of the geoanalytical community

### Specific Topics Covered

- Recent trends in sampling and sample preparation. Proper IUPAC terminology and recent ISO guidelines
- Reference materials for quality control and method development
- The role of proficiency testing within overall data quality assurance
- The production of new certified reference materials