

Preface

It is a pleasure for the Geological Survey of Austria to host The GELMON conference for the 3rd time here in Vienna.

We are honoured to welcome around 100 international scientists from 17 countries, not only from Europe but also from around the world, like from South Korea, Canada, Russia and Mexico.

It is now for the 3rd time that this conference takes place. As this book of abstracts shows, the method of geoelectrical monitoring has significantly emerged as one of the most innovative methods in applied geosciences since the first workshop in 2011. This success honours the work performed by all of the individual contributors, but also highlights the effectiveness of international cooperation established over the recent years. It is not least the merit of the GELMON conference, that several small working groups, sparsely distributed all over the world, came together and have developed a close international cooperation network, leading to a combined research effort which would not have been possible within each individual group alone.

As the topics of the contributions to this conference show, geoelectric monitoring can contribute to many of the key challenges society faces today, especially in the areas of sustainable environmental development, societal protection and of developing resilience to climate change. The applications of geoelectrical monitoring presented at GELMON 2015 span over a wide range of different themes like monitoring of contamination, landslides, permafrost, CO₂ injection, dikes and dams, tracer movements, infrastructure, mine areas and saline intrusions. However as the importance of the underlying process monitored by geoelectrics, i.e. variations in the subsurface water content and salinization, suggests, the demand for further applications of the method will significantly grow over the next decade. Therefore, it is also the goal and commitment of the GELMON conference to coordinate the future development of the geoelectrical method by fostering international cooperation and to establish geoelectrical monitoring as a reliable, commonly accepted methodology for monitoring of subsurface processes.

The excellent scientific contributions, summarized in this abstract book, and held in the form of outstanding talks and poster presentations at the GELMON 2015 conference, as well as the vivid and stimulating discussions were of paramount importance for making this conference a great success. Therefore we wish that the ideas developed during the discussions might develop, thus leading to a significant progress in the application of the geoelectrical method within the years to come.

Finally we would like to acknowledge the support of the Korea Institute of Geoscience and Mineral Resources (KIGAM), the Earth Observation and Geohazard Expert Group (EOEG) of EuroGeoSurveys, the Austrian Academy of Science (ÖAW), the Federal Ministry of Science, Research and Economy (BMWFV), the Austrian Geophysical Society (AGS) and last but not least of Stefanie Gruber, who did most of the preparation work...

...and we hope to welcome you again at the 4th edition of GELMON in 2017.

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