

Report from Korean National Group

Currently the Korean National Group is represented by the Korean Society for Rock Mechanics (KSRM, www.ksrm.or.kr) with over 1,200 individual members. Prof Jae-Dong Kim of Kangwon National University started his new 2 year term from the beginning of the year 2013, and Korean National Group intends to promote the activities of various technical commissions under KSRM. Korean National Group organizes two national symposia a year, which usually attract some 150 participants. KSRM publishes an official bi-monthly journal named 'Journal of Korean Society for Rock Mechanics (Tunnelling and Underground Space)' and bi-monthly electronic newsletter, 'U-Space'.

The most notable event from Korean national group in the period of May 2012 – July 2013 is the 7th Asian Rock Mechanics Symposium (ARMS7, www.arms7.com). A total of 314 participants from 32 countries, of which 167 were from overseas, enjoyed eight invited lectures, one special workshop, two short courses, and two technical tours. 169 papers including 41 posters were presented in 21 sessions that cover most of rock mechanics issues, and a special issue of this symposium was published in 'Geosystem Engineering' journal.



ARMS7 Scholarship Winners

Appendix. 1 More detailed account on ARMS7.

The 7th Asian Rock Mechanics Symposium (ARMS7) was held in 15-19 Oct in COEX, Seoul, South Korea, with the Korean Society for Rock Mechanics (KSRM, president: Dr Kong-Chang Han) as organizer. A total of 314 participants from 32 countries, of which 167 were from overseas, enjoyed eight invited lectures, one special workshop, two short courses, and two technical tours.

ARMS7 was preceded by 'Students' Night' sponsored by ISRM Young Members Presidential Group which is the first initiative by KSRM in order to encourage active participation by young members. This free-of-charge event was composed of Han River cruise followed by Korean rice wine party with 30 participants. ISRM VP for Australasia Dr David Beck (Beck Engineering, Australia) and Dr Luis Wong gave special lectures to young members to share their own experiences during the stages of career development.

ISRM commission on DDA arranged a special workshop prior to the ARMS7 and 25 participants interacted during the workshop on the state-of-the-art of the DDA. Two two-day short courses were arranged in Seoul National University with a total of 35 attendants; one on Reservoir Geomechanics given by Prof Maurice Dusseault of University of Waterloo and the other on Mining Geomechanics by Drs Bo-Hyun Kim from Itasca Consulting Group and Fidelis Suorineni from MIRARCO.

KSRM made a special initiative in providing a scholarship to eight young members from Asia. Four members were given full airfares, accommodations and registration waivers, and the other four were given registration waivers only. It is hoped that these young members will be future engines in Asian rock mechanics. KSRM sincerely hope that this can be an example for other conferences by a way of encouraging young members in rock mechanically less-developed countries. Two short essays by the Scholarship winners are appended in this report.

Keynote speeches invited for ARMS7 are as follows;

- Some New Developments in Modeling Failure, Fracture and Fragmentation of Rocks, Prof Robert Zimmerman (Imperial College, UK)
- The bonded-particle model as a tool for rock mechanics research and application - Current trends and future directions, Dr David Potyondy (Itasca Consulting Group, USA)
- Mechanism, prediction and mitigation of rock burst at deep tunnels, Prof Xia-Ting Feng (Chinese Academy of Science, China; ISRM President)
- Challenges to stress measurements in deep/unconsolidated rock formations for frontier rock engineering, Prof Takahashi Ito (Tohoku University, Japan)

- Experience of underground oil/gas storage in rock cavern, Dr So-Keul Chung (KIGAM, Korea)
- The present and future of rock testing: Highlighting the ISRM Suggested Methods, Prof Resat Ulusay (Hacettepe Univ, Turkey)
- Understanding coupled stress-flow-transport processes in fractured rocks, Prof Lanru Jing (KTH, Sweden)

169 papers including 41 posters were presented in 21 sessions including two special sessions on 'Reservoir Geomechanics' organized by ISRM Commission on Petroleum Geomechanics and 'Structural Geology'. The ARMS Best Paper Awards were given to Dr Tomofumi Koyama from Kyoto University in general category and Dr Sang-Hyuk Bang from Seoul National University in young member category. The ARMS best poster awards were given to Mr Tomoaki Matsushita from Saitama University and Xiangyuen Liu from CCFEB Engineering from China.

Two technical tours included the tour to the low- and intermediate level nuclear waste underground repository construction site in Gyeong-Ju and the first EGS (Enhanced Geothermal Systems) project site in Pohang, and the other tour to the KURT (KAERI Underground Research Tunnel) and Geological Museum in KIGAM (Korea Institute of Geosciences and Mineral Resources).

The ARMS7 was highly successful with many participants and a variety of programs. It was shown that Asia was becoming the center of rock mechanics activities with greater potential. This event was indeed a timely celebration of the past Asian rock mechanics activities since the inauguration of ARMS fifteen years ago in the same place, COEX in Seoul.

On behalf of Korean National Group, we thank all the participants and contributors who have helped the success of ARMS7. We look forward to the 8th ARMS which will take place in Sapporo in Japan in Oct 2014.



Korean Rice Wine Party during Students' Night



ARMS7 Scholarship Winners after award ceremony



Workshop by ISRM DDA Commission