

## **Visit of Chinese representatives of the International Research Centre for Karst (IRCK) to the CKH**

The International Research Center on Karst (IRCK) was formed in 2008 in Guilin, China under the Auspices of UNESCO as the category II centre on geosciences. It functions under sponsorship of the Institute of Karst Geology of Chinese Academy of Geological Sciences, which has around 200 active employees (more than half PhD or MS holders) and share same facilities in Guilin.



*Group of Chinese and international experts in front of the Institute of Karst Geology in Guilin and the statue of Xu Xiake the first Chinese traveller and geographer describing karst phenomena (16 Ct.)*

Since its establishment the IRCK conducted impressive work. IRCK has cooperated with the International Hydrological Program (IHP), International Association of Hydrogeologists (IAH) and International Geological Program (IGCP) seven times to organize various international symposia and training courses on karst hydrogeology, global climate change and the karst carbon cycle, with 288 participants (including hydrogeologists, geological engineers and young scientists) from 53 countries. IRCK has held five international training courses with a total of 87 trainees from 24 countries and more than 60 karst experts served as lectures. Until late 2013, total of 333 papers were published in China and abroad, of which 32 papers were in SCI-indexed journals. IRCK also sent 29 people abroad for academic exchanges, with 12 MOUs signed.



*Work of the Evaluation panel of IRCK and attendants of the international course in Xiangqiaoyan Karst national Geo-park, November 2013*

On 5 December, 2011 has been signed Memorandum of Understanding for scientific cooperation between the International Research Center on Karst under the Auspices of UNESCO (IRCK) from Guilin, China and Centre for Karst Hydrogeology (CKH) of the University of Belgrade. Since that time unfortunately not many common activities took place mostly due to limited funds of CKH.

In November 2013 Zoran Stevanović had travelled to Guilin and participated in the UNESCO Evaluation panel for assessing first 6-year of IRCK operation (2008-2013), in addition he provided lectures at by IRCK traditionally organised the International Training Course on Karst Hydrogeological Investigation, Dynamic Monitoring and Application in River Basin.

Between 11-15 June, 2014 the international conference “Karst Without Boundaries” was organised in Trebinje, Bosnia & Herzegovina in the framework of the DIKTAS project in partnership with the International Association of Hydrogeologists (IAH), in collaboration with the Hydropower System Trebisnjica (HET), and the University of Belgrade, Serbia and with support of UNESCO, the IGRAC Centre and GWP-Med. Taking this opportunity and visit of our region Chinese colleagues are invited to also visit Belgrade and CKH.



*Gala dinner in Trebinje on occasion of DIKTAS conference (from left: Jiang Yuchi, Neno Kukurić UN-IGRAC, Chair of the DIKTAS conference, Cao Jianhua and Zoran Stevanović)*

Prof. Jiang Yuchi, Director of IRCK and Dr Cao Jianhua have visited Belgrade between 15-18 June. Accompanying by CKH members Vesna Ristić Vakanjac, Branislav Petrović and Marina Čokorilo trip of Chinese colleagues to Belgrade was organised via Gatačko polje, Višegrad (dam site), Mečavnik - Mokra gora, Zlatibor providing opportunity for visiting some of the karstic terrains of Herzegovina and western Serbia.

On 16 June, at 10 AM the Dean of the Faculty of Mining & Geology (FMG) Dr Ivan Obradović organised reception for Chinese guests, Dr Petar Milanović who is the foreign member of IRCK Executive Board, and all members of CKH.

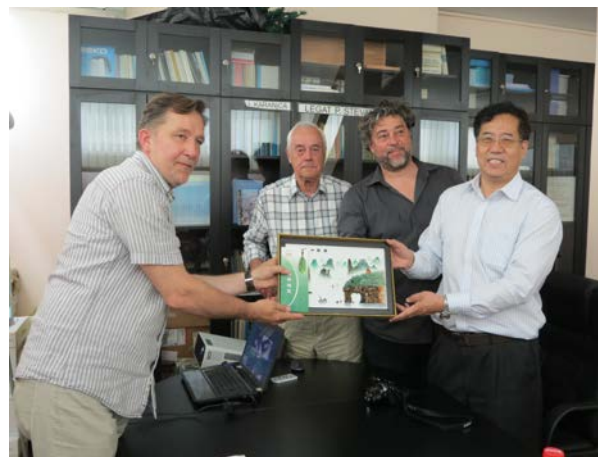
After visiting facilities and class rooms of the Department of Hydrogeology it was held working meeting with CKH staff. After Z. Stevanović presentations of the University, Faculty and Department curriculums, Sasa Milanović presented some recent projects and capability of the CKH. Then discussion on cooperation opportunities and common projects took place. As earlier planned Dr Yuchi and Dr Cao presented in brief some current activities of IRCK.



*Dean of the FMG Ivan Obradović with his guests and Dr Yuchi (right)*

Dr Cao have also presented tools and devices he brought from China to be installed at observation point in Serbia for analysing carbon cycle dynamics and its impact on karst process. S. Milanović and Lj. Vasić introduced geology and hydrogeology setup of the Beljanica karstic massif in Serbian Carpathian karst actually chosen for monitoring of groundwater and proposed for locating the carbon cycle observation point.

During the afternoon Chinese colleagues visited downtown and exhibition in the Serbian Academy of science and arts “From a stone to a stone” dedicated to the 100-anniversary of Petar Stevanovic, geologist.



*In CKH premises and receiving nice gift from the IRCK*

The field trip and installation of monitoring station took place on 17 June. On the way to Beljanica Mt. thermal well and Ždrelo spa centre were visited some 120 km from Belgrade. The field visit and in-field measurement of water quality covered main springs along the Beljanica foothills namely Vrelo Mlave, Belosavac, Krupaja, Veliko vrelo.

Visit to the heart of mountain and Busovata karstic blind valley have been organised by the two 4x4 vehicles. There, measurements of Busovata sinking water chemistry and demonstration of installation of CaCO<sub>3</sub> tablets took place.



*At Busovata ponor on Beljanica Mt.*



The colleagues from Municipality of Žagubica, the Directorate for Construction Works and the Belosavac Utility have organized common lunch at trout fishpond near the spring of Belosavac.



Field visit also included Resavska cave and waterfall of Veliko vrelo.





On 18 June before leave of Chinese colleagues visit of premises of Belgrade water source and Ranney wells at Ada ciganlija took place.

At the end of visit, it has been agreed that some other common projects such one for carbon cycle dynamics should be established. S. Milanović and Lj. Vasić will be in charge of CKH for establishing and maintaining observation stations on Beljanica Mt. Dr Cao will prepare the guideline for monitoring and study on karst process and carbon cycle in English.

S. Milanović and Lj. Vasić plan to visit Guilin, China in November, 2014 for lecturing and for participating the course, respectively. Other CKH researchers should also attend IRCK's training courses in coming years. Possible topics for common scientific paper have also been discussed, one of them would probably be comparative analysis of Dinaric and South China karst and impact of local climate conditions on karstic process and water resources budget and development.