Runqiu Huang

Prof. Runqiu Huang is a leading Chinese scientist in engineering geology, geological hazards and rock mechanics, who has greatly contributed to the advancement of engineering geology in China. Due to his extraordinary research achievements and great support to the Chinese government in geo-hazard and risk reduction, he has been appointed as **Deputy Minister at the Ministry of Environmental Protection of the P.R.C.**, and as Chief Science Communication Specialist of the China Association for Science and Technology in 2016. The Chinese national group is very proud to see our colleague reaching such an important position in China and making huge impacts from the central governmental level in Environment Protection and Geohazard Prevention.

One of Prof. Huang's outstanding contributions is the establishing of the "**State Key Laboratory of Geohazard Prevention and Geoenvironment Protection (SKLGP)**", which is **the only national level laboratory**, center of excellence **for geohazards and engineering geology in China**. Under his leadership, the SKLGP has become a world-class research institute, making high international impact in research. The SKLGP plays an important role in the construction of China's mega projects and provides great scientific support to local and central government. Furthermore, prof. Huang has been among the most active engineering geologists in China and has made great contributions to the research collaboration between China and the international engineering geological community.

Prof. Runqiu Huang's achieved fundamental results in several fields of engineering geology:

1. Development of systematic methods to solve complicated geological problems in major high-dam construction projects

With the implementation of China's Western Development Strategy, a number of major infrastructures has been constructed, particularly 200-300 m high dams for large-scale hydropower stations. Due to the complex geoenvironmental conditions, these construction projects faced very challenging geological problems. Prof. Huang has devoted his research to this field since 1983. He has been involved in more than 30 construction projects of high dams in China so far, including the Three Gorges Hydropower Plant, and has made important scientific achievements in various methodological issues that have been widely applied in major hydropower station construction projects all over China, including: the detailed geotechnical

description of the geological structure of rock masses; the evolution of geostress in deeply incised valleys; the epigenetic deformation and strong unloading mechanics of rock masses; the deformation mechanism and stability assessment of high rock slopes and wide-span underground powerhouses. For these important contributions, **he has been awarded "The First Prize for Chinese National Science and Technology Achievements" in 2005** (*the top scientific prize in China*).

2. Research on failure mechanism, monitoring and early warning of large-scale landslides

Prof. Huang has been in charge of the investigation of more than 30 catastrophic large-scale landslides since the 1980's, and has carried out research on landslide formation controlling factors, failure mechanism, early identification, monitoring and early warning methods. His research results have been widely applied by the Chinese government in landslide hazard mitigation and management. **In 2017, prof. Huang's research group successful forecasted two loess landslides in northwestern China and saved hundreds of people's lives by sending early warning signals to local government.**

3. Contribution to research on landslides induced by the 2008 Wenchuan earthquake

Prof. Huang led a team that performed extensive landslide field investigations and mapping, and published the first inventory of landsides triggered by the 2008 Wenchuan earthquake, including about 15,000 landslides. Meanwhile, he has developed a failure mechanism model for co-seismic landslides, which can successfully explain the large size, steep and long back-scarps and other special phenomena of earthquake-induced landslides. The team, under his leadership, made a great contribution to the emergency response, mitigation and risk reduction of coseismic and post-seismic geohazards, and has been awarded "The First Prize for National Science and Technology Achievements" in 2014. **He is the only Chinese geoscientist whose team was honored with this highest award in China twice (in 2005 and 2014).**

To summarize, Prof. Huang is an engineering geologist with international reputation and very high impact. He has contributed to the profession through more than **400 scientific publications**, among which about **170 in ISI journals (**including 2 papers in "Nature Geoscience") **with more than 5900 citations so far**, **24 monographs** and about 90 international conference proceedings. **He is one of the most-cited Chinese scientists in Engineering Geology.**

Prof. Huang has been invited to give keynote and plenary lectures in about 70 international conferences and universities. Thanks to his great contribution to promote the collaboration on landslide research between China and Japan, **he was awarded the "International Collaboration Prize" in 2012 by the Japan Landslide Society (JLS)**. He is the second person being awarded this prize after Robert L. Schuster. He has also played a significant role in mentoring younger professionals in his area of expertise. He has supervised near 60 PhD dissertations and 90 MSc theses. Most of them have become leading professors or senior engineering geologists in industry. Thanks to his great contribution in education, he has been awarded **"National Prize for Excellent Teacher" in 2007**.