

NAME: Zuyu CHEN

NATION: People's Republic of China

DATE OF BIRTH: February 13, 1943

OCCUPATION: Senior Engineer, Member of  
Technical Council, China Institute of Water  
Resources and Hydropower Research (IWHR).



### **Correspondence informations**

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### **Experience**

1982- Present

Research engineer, China Institute of Water Resources and  
Hydropower Research.

1979- 1981

Visiting scholar to the University of Alberta, Canada, working in  
collaboration with Dr. N. R. Morgenstern.

1967- 1979

Engineer, the Second Engineering Bureau, Ministry of Water

Resources and Electric Power.

1960- 1966

Undergraduate Studies, Department of Hydraulic Engineering,  
Tsinghua University.

### **Technical Activities**

- President of Chinese Institution of Soil Mechanics and  
Geotechnical Engineering.

- Vice Present of Chinese Society of Rock Mechanics and  
Engineering

### **Contribution to international geotechnical societies**

Prof. Chen has been actively promoting various academic and  
technical exchanges among the international geotechnical societies  
by:

(1) Presenting keynote and general lecturers in the International  
Symposiums sponsored by ISSMGE and ISRM

- In 1995, Chen gave a general report: 'Earth structures and  
underground geotechnique' at the 10th Asian Regional Conference on  
Soil Mechanics and Foundation in Beijing.

- In 1995, Chen gave a keynote lecture: 'Recent developments in  
slope stability analysis' at the 8th International Congress on Rock

Mechanics in Tokyo.

- In 1999, Chen gave a theme report co-authored with Lee, H. Y: 'Soil structures and slopes', at the 11th Asian Regional Conference on Soil Mechanics and Foundation Engineering in Seoul.

- In 1999, Chen gave a keynote lecture: 'Limit analysis for slopes: theory, methods and applications' on the International Symposium on Slope Stability Engineering' in Matsuyama, Japan, which is under the auspices of TC 12/ISSMGE.

- In 2000, Chen gave a keynote lecture co-authored with Hoek, Read, and Karzulovic: 'Rock slopes in Civil and Mining engineering' at GeoEng'2000 jointly organized by ISSMGE, ISRM and IAEG in Melbourne.

- In 2005, Chen gave a keynote lecture co-authored with Yin, J. H., and Y. J. Wang: 'Advances in Earth Structures, Research to Practice' at GeoShanghai, an international Symposium jointly organized by ASCE and CCES.

- In 2006, Chen gave a keynote lecture co-authored with Zhang. Wang and Xing: 'Centrifuge modelling for rock slopes', at the International Symposium on Modelling in Geotechnics organized by TC10/ISSMGE in Hong Kong.

(2) Working as an active member of the sub-committees of ISSMGE and ISRM.

- Since 1999, he has been member of JTC 1 (formerly TC 12/ISSMGE). He succeeded in the campaign for hosting the 10<sup>th</sup> International Symposium on Landslide and Engineered Slopes in 2004. Since then, as Chairman of the Organizing Committee, he spent tremendous efforts in making the Symposium a great success in Xian, China from June 30 to July 4, 2008.

- From 2002 to 2006, he worked as Chairman of the Commission on Case Histories in Rock Engineering of ISRM

- From 2007, he has been a core member of JTC2.

### **Academic Achievements**

Prof. Chen has been made great contributions in the area of slope stability analysis.

- In 1983, Chen and Morgenstern published a new generalized slope stability method that offered an analytical solution to the force and moment equations and the boundary conditions for the inter slice forces based on the principle of complimentary shear stresses.

- In 1996, Donald and Chen presented a two-dimensional upper bound slope stability method based on the 'method on inclined slices'. For the first time, the 'method of slices' can accurately produce theoretical solutions provided by the slip-line field method and in particular, the Prandtl's solution, on which the modern principle for

bearing capacity calculation has been founded.

- Following these two-dimensional works, Chen and his coauthors presented their three-dimensional Spencer and upper-bound methods respectively in 2001 and 2003.

- In 2004, Chen presented a generalized solution to the rock wedge failure analysis. For the first time, he pointed out that the conventional method actually involves an assumption that the shear forces on the two failure planes are parallel to the line of intersection. The new formulation releases this limitation.

All the work mentioned above has been documented in the Canadian Geotechnical Journal and the International Journal of Rock Mechanics and Mining Sciences.