

Zhanyu Grace Huang

EIT, MASCE, DFI Student Member

Contact

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Address: 1720 Patrick Henry Drive, #8
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Education

Virginia Tech, Blacksburg, Virginia, USA

Ph.D., Civil and Environmental Engineering - Geotechnical (Expected December 2018)

M.S., Civil and Environmental Engineering - Geotechnical (December 2015)

Cumulative GPA 4.0/4.0

University of Toronto, Toronto, Canada

B.A.Sc. Honours, Civil and Environmental Engineering (June 2011)

Minor in Sustainable Energy Systems

Cumulative GPA 3.88/4.0

Research Interests

- Geosynthetic contribution to stability of column-supported embankments; numerical analysis and design methods
- Rock toppling and rock falls

Awards and Honors

Geosynthetic Institute Fellowship (2015 – 2016)

Anchor Shoring & Caisson Ltd. Scholarship (2010 – 2011)

General Motors Environmental Engineering Award (2010 – 2011)

UMA Scholarship in Civil Engineering (2009 – 2010)

Franceschini Foundation Scholarship (2008 – 2009)

University of Toronto Faculty of Applied Science and Engineering Award (2007 – 2008)

Schaeffer Fred Scholarship in Civil Engineering (2007 – 2008)

Skrok Christopher Memorial Scholarship (2007 – 2008)

Academic Experience

Graduate Research Assistant (August 2014 – Present)

Department of Civil and Environmental Engineering, Virginia Tech, Blacksburg, VA, USA

- Numerical analysis of geosynthetic contribution to stability of column-supported embankments using FLAC3D

Lecturer (January 2016 – Present)

Department of Civil and Environmental Engineering, Virginia Tech, Blacksburg, VA, USA

- CEE 4534: Earth Pressures and Foundation Structures
- CEE 5544: Foundation Engineering II

Professional Experience

Geotechnical Consultant (January 2015 – Present)

- Assisted Dr. George Filz in a variety of ground improvement consulting projects, in areas of slope stability and deep cement soil mixing

Engineering Intern (EIT) and Software Developer (May 2011 – June 2014)

Rocscience Inc., Toronto, Canada

- Developed the first commercial limit equilibrium rock toppling analysis software (RocTopple) through engineering research, numerical analyses and interface design using MFC C++
- Validated finite element modelling for jointed rock slopes (compared UDEC and Phase2 models), resulting in numerical models being published in book chapter of *Innovative Numerical Modelling in Geomechanics*
- Wrote software tutorials and help files
- Provided technical support and numerical analysis recommendations for clients
- Developed marketing strategies
- Translated English to Mandarin Chinese and vice versa during meetings with clients

Professional Development

Future Professoriate Graduate Certificate (Expected December 2017)

Graduate School at Virginia Tech, Blacksburg, Virginia, USA

- GRAD 5104: Preparing the Future Professoriate
- GRAD 5114: Pedagogical Practices in Contemporary Contexts
- GRAD 5204: Citizen Scholar Seminar

Publications

Author – RocTopple V.1.0 Theory Manual and Documentation (February 2013)

Rocscience Inc., Toronto, Canada

- http://www.rocscience.com/help/roctopple/webhelp/pdf_files/theory/RocTopple_Theory.pdf

Contributor – Textbook Chapter Model Examples and Results (December 2011)

Rocscience Inc., Toronto Canada

- Riahi, A., Curran, J., Hammah, R. “Application of Continuum-Interface Computational Methods in Analysis of Jointed Rock Problems.” *Innovative Numerical Modelling in Geomechanics*, Ed. Ribeiro e Sousa, L., Vargas, E. Jr., Fernandes, M., Azavedo, R. London: CRC Press, 2012. 317-332. Print.

Author – Phase2 Joint Network Verification Manual (May – July 2011)

Rocscience Inc., Toronto, Canada

- http://www.rocscience.com/help/phase2/webhelp/pdf_files/verification/Phase2_Joint_Network_Verification.pdf

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Editor – Various Publications (June 2008 – December 2014)

Department of Mechanical Engineering, Shanghai University, Shanghai, China

- Helped non-English speakers successfully publish their research in English-written international journals by elevating the level of readability and language proficiency
- Publications available upon request

Leadership

Senior Advisor (January 2017 – present)

Geotechnical Student Organization, Virginia Tech, Blacksburg, Virginia, USA

- Advised the geotechnical student council on procedures and decision making
- Acted as liaison between council and faculty

Education Chair (October 2015 – December 2016)

Geotechnical Student Organization Council, Virginia Tech, Blacksburg, Virginia, USA

- Organized field trips and presentations given by industry professionals for geotechnical students
- Participated in outreach events at local and out-of-state schools to engage youth in engineering and to promote field of study

Event Coordinator (September 2010 – May 2011)

Engineering Chinese Club, University of Toronto, Toronto, Canada

- Organized Alumni Night to provide club members with opportunity to network with faculty of engineering alumnus
- Planned and assisted in Professional Experience Year Seminar, Graduate School Seminar, Mid-Autumn Moon Festival event and Chinese New Year event

Other Interests

Piano performance (1999 – present)

Royal Conservatory of Canada, Toronto, Canada

- Working towards the Royal Conservatory of Canada professional performance diploma
- Completed courses in rudiments, music history and harmony