Ruidong Li (Francis)

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EDUCATION BACKGROUND

Hong Kong University of Science and Technology, Hong Kong September 2022 – Present

- Ph.D. in Civil Engineering (in progress); Program of Geotechnical Engineering
- Receiving postgraduate studentship and Redbird PhD scholarship from HKUST
- Area of Research:
  - Unsaturated Soil Mechanics, Cone Penetration Tests (CPT), Numerical Modelling (MPM), Centrifuge Modelling
- Supervisor: Prof. Anthony Leung (ceanthony@ust.hk); Co-supervisor: Prof. Alba Yerro-Colom (ayerro@vt.edu)

Virginia Tech, Blacksburg, USA August 2017 – December 2018

- M.S. in Civil Engineering; Program of Geotechnical Engineering
- Graduation committee member: Prof. Alba Yerro-Colom (ayerro@vt.edu)
- Receiving assistantship as graduate teaching assistant

Virginia Tech, Blacksburg, USA August 2013 – May 2017

- B.S. in Civil Engineering

WORK EXPERIENCE

Shenzhen Geokey Group (Shenzhen, China) – Geotechnical Engineer March 2021 – February 2022

- Conduct geotechnical analyses for soil strength evaluation, deep excavation support (ESL), and soil improvement design
- Prepare design and calculation report and construction drawings with AutoCAD
- Core designer of three large-scale ELS projects (5 to 15 m deep) constructed in Shenzhen
  - Types of ESL designed primarily include internal bracing, sheet pile and tie-back anchored wall
- Perform technical literature reviews to support ELS and tie-back anchor design improvement

Geopier Foundation Company (Davidson, USA) – Associate Project Engineer January 2019 – January 2021

(Design-Build Specialty Contractor)

- Review site investigation report and perform settlement, slope stability, and bearing capacity analyses
  - Limit equilibrium and finite element method
- Deliver 30+ commercial and industrial project report for ground improvement and slope reinforcement solutions
  - Report includes construction guidance and calculation background
- Contribute to R&D on SRT (Patented plate pile slope reinforcement technology)
  - Evaluate the existing design methodology, update design charts to improve cost efficiency of the final design
  - Standardize the design procedure and provide technical note to facilitate the workflow
    (Shorten design cycle by 50%; still in use internally)
- Co-author academic research regarding aggregate pier-supported wall journal paper

Froehling & Robertson (Roanoke, USA) – Summer Internship May 2018 – August 2018

(Engineering Consulting / Testing Firm)

- Perform in-situ soil sampling and standard penetration test (SPT)
- Perform soil characterizations based on in-situ soil investigation
- Provide soil stratification drawing and compile site investigation report

RELEVANT ACTIVITIES

- **Geopier Foundation Company Internal Annual Conference** (Salt Lake City, USA) Feb. 2020
  - Presentation on the design of aggregate pier-supported wall
- **Collaborated Research at Virginia Tech** (Blacksburg, USA) Nov. 2023 – Dec. 2023 & Oct. 2024 – Dec. 2024
  - Development of numerical model for cone penetration Test (CPT) in unsaturated soil
    (supported by HKUST oversea exchange research award)
- **Geotechnical engineering international conference** (Barcelona, Spain) June 2024
  - Presentation on published conference paper

PROFESSIONAL SKILLS

- **Numerical Modeling:** Anura3D (MPM), Plaxis2D and Abaqus (FEM)
- **Geotechnical Analysis:** Slide2, Slope/W, Settle3D, Lpile
- **Drafting:** AutoCAD
- **Languages:** English (fluent), Mandarin (native)

SELECTED PUBLICATIONS

VandenBerge, D. R., Reed, E. C., & **Li, R**. (2021). Mobilized Bearing Capacity Analysis of Global Stability for Walls Supported by Aggregate Piers. *Journal of Geotechnical and Geoenvironmental Engineering*, 147(6), 04021034.

Li, R., Leung, A. K., Yerro, A., Yu, C., & Jiang, Z. (2024). A review of laboratory cone penetration test (CPT) in unsaturated soil. *Proceedings of the 7th International Conference on Geotechnical and Geophysical Site Characterization* (eds M. Arroyo & A. Gens), Barcelona, Spain, pp. 218-225.

Li, R., Leung, A. K., Zhu, J., Yerro, A., & Jiang, Z. (2026). A new interpretation method for matric suction correction to cone penetration test results in unsaturated sand. *Canadian Geotechnical Journal,* 63, 1-14.