



# Kuo-Hsin Yang, 楊國鑫

Geotechnical Engineering Program  
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## ACADEMIC APPOINTMENT

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### Professor

Department of Civil Engineering, National Taiwan University (NTU), 2019~Present

## EDUCATION

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**Philosophy of Doctor** in Civil, Architectural and Environmental Engineering, August 2009

University of Texas at Austin

Dissertation: Stress Distribution within Geosynthetic-Reinforced Soil Structures

Advisor: Prof. Jorge G. Zornberg

**Master of Science** in Civil and Environmental Engineering, December 2004

University of Michigan at Ann Arbor

Advisor: Prof. Roman D. Hryciw

**Bachelor of Science** in Bio-Environmental Systems Engineering, June 2000

National Taiwan University

Advisor: Prof. Fu-Chun Wu

## RESEARCH INTERESTS

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### Slope Stability and Earth Retaining Structures

Rainfall and earthquake induced landslide and debris flow, Earth retaining structures

### Application of Geosynthetics

Reinforced soil mechanics, Soil and reinforcement interaction, Geosynthetic-reinforced soil structures

### Geo-Environmental and Geo-Disaster Engineering

Unsaturated soil, Soil seepage and erosion, Disaster mitigation and protection

### Geotechnical Engineering Modeling

Computational soil mechanics, Hydro-mechanical coupled analysis, Finite element modeling, Limit equilibrium analysis

## PROFESSIONAL REGISTRATION

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Engineer in Training, Texas Registration # 39138

## **VISITING SCHOLAR**

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Visiting Scholar, Dept. of Civil and Environmental Engineering, University of Illinois Urbana-Champaign, USA. Research Supervisor: Prof. Tugce Baser, Focus: Renewable Energy Resources and Sustainable Geo-Energy Applications, 2023

Visiting Scholar, Dept. of Civil Engineering, Royal Military College, Ontario, Canada, Research Supervisor: Prof. Richard J. Bathurst, Focus: Design of Geosynthetic-Reinforced Soil Structures subjected to Lateral Loadings, 2015

Visiting Graduate Researcher, Dept. of Mining Engineering, Universidade Federal de Ouro Preto, Minas Gerais, Brazil, Research Supervisor: Prof. Christianne de Lyra Nogueira, Focus: Development and Implementation of A Self-Developed Finite Element Program, ANLOG, 2008

## **PROFESSIONAL EXPERIENCE**

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Associate Professor, Geotechnical Program in Dept. of Civil Engineering, National Taiwan University, 2017~2019

Associate Research Fellow, Center for Weather Climate and Disaster Research, National Taiwan University, 2018

Adjunct Associate Professor, Dept. of Civil and Construction Engineering, National Taiwan University of Science and Technology, 2017~2019

Associate Professor, Geotechnical Program in Dept. of Civil and Construction Engineering, National Taiwan University of Science and Technology, 2013~2017

Assistant Professor, Geotechnical Program in Dept. of Civil and Construction Engineering, National Taiwan University of Science and Technology, 2009~2013

Graduate Research and Teaching Assistant, Dept. of Civil, Architectural, and Environmental Engineering and Center for Transportation Research, University of Texas at Austin, Research Advisors: Prof. Jorge G. Zornberg and Stephen G. Wright, 2005~2008

Graduate Research Assistant, Dept. of Civil and Environmental Engineering, University of Michigan at Ann Arbor, Research Advisor: Prof. Roman D. Hryciw, 2004

Research Assistant, Dept. of Bio-Environmental Systems Engineering and Hydrotech Research Institute, National Taiwan University, Taiwan, Research Advisor: Prof. F-C Wu, 2002~2003

## **ADMINISTRATIVE EXPERIENCE**

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Associate Chair, Dept. of Civil Engineering, National Taiwan University, 2019~2022

Director of Geotechnical Laboratory, Dept. of Civil Engineering, National Taiwan University, 2019~2020

Department Special Assistant, Dept. of Civil and Construction Engineering, National Taiwan University of Science and Technology, 2014~2015

Chair of International Affair Committee, Dept. of Civil and Construction Engineering, National Taiwan University Science and Technology, 2013~2016

Director of Geotechnical Laboratory, Dept. of Civil and Construction Engineering, National Taiwan University Science and Technology, 2010~2016

## HONORS AND AWARDS

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### International Awards

- Most Highly Cited Author, Geosynthetics International, ICE Publishing, 高引用次數作者, 土工合成材國際期刊, 英國土木工程師學會出版, 2022
- Best Paper Award, *Transportation Infrastructures Geotechnology*, 最佳論文獎, 運輸基礎設施與大地工程國際期刊, 2021
- Second Best Paper Award, *Geosynthetics International*, 最佳論文獎第二名, 土工合成材國際期刊, 2020
- Best Paper Award, 5<sup>th</sup> China Geosynthetic Conference on Soil Reinforcement, 優良論文獎, 第5屆中國土工合成材料加筋土學術研討會, 2015
- The Young IGS Member Achievement Award, International Geosynthetics Society, 青年成就獎, 國際土工合成材學會, 2014
- Best Paper Award, 7<sup>th</sup> Asia Young Geotechnical Engineers Conference, ISSMGE, 最佳論文獎, 第七屆亞洲青年大地工程師研討會, 2012

### Research Awards

- Outstanding Young Scholar Research Project (3-year grant), Ministry of Science and Technology, Taiwan, 科技部 2030 跨世代年輕學者方案(優秀年輕學者)計畫, 科技部, 2021-2024
- Young Researcher Achievement Award, College of Engineering, National Taiwan University, 學術勵進獎, 國立臺灣大學工學院, 2020
- Outstanding Young Scholar Research Project (3-year grant), Ministry of Science and Technology, Taiwan, 優秀年輕學者計畫(三年期), 科技部, 2018-2021
- Young Scholar Research Award, National Taiwan University of Science and Technology, 年輕學者研究獎, 國立臺灣科技大學, 2016
- Outstanding Young Scholar Research Project (3-year grant), National Science Council, Taiwan, 優秀年輕學者計畫(三年期), 國科會, 2013-2016

### Paper Awards

- Best Paper Award, 33<sup>rd</sup> Conference on Military Engineering, 優良論文獎, 第三十三屆國軍軍事工程研討會, 2021
- Best Paper Award, Chinese Institute of Engineers, 工程論文獎, 中國工程師學會, 2021
- Best Paper Award, Journal of GeoEngineering, Taiwan Geotechnical Society, 大地工程傑出論文獎, 大地工程期刊, 2021
- Best Paper Award, Sino-Geotechnics, 109 年度優良論文獎, 土工技術, 2021
- Best Paper Award, 18<sup>th</sup> Taiwan Geotechnical Engineering Conference, 優良論文獎, 第十八屆大地工程研討會, 2020
- Best Paper Award, 29<sup>th</sup> Conference on Military Engineering, 優良論文獎, 第二十九屆國軍軍事工程研討會, 2017
- Best Paper Award, Journal of Disaster Management, Taiwan Disaster Management Society, 最佳論文獎, 災害防救科技與管理學刊, 2015
- Excellent Paper Award, Journal of GeoEngineering, Taiwan Geotechnical Society, 大地工程優良論文獎, 大地工程期刊, 2014

- Best Paper Award, Journal of Construction Management, Taiwan Construction Management Society, 營建管理論文獎, 營建管理季刊, 2012
- Best Paper Award, Journal of GeoEngineering, Taiwan Geotechnical Society, 大地工程傑出論文獎, 大地工程期刊, 2012
- Best Paper Award, 14<sup>th</sup> Taiwan Geotechnical Engineering Conference, 優良論文獎, 第十四屆大地工程研討會, 2011
- Top 10 Best Papers Award, Graduate Student Paper Competition, College of Engineering, The University of Texas at Austin, 2006
- Outstanding Undergraduate Research Award, Department of Bio-Environmental Systems Engineering, National Taiwan University, Taiwan, 2000

### **Teaching Awards**

- Dissertation Supervisor Award, College of Engineering, National Taiwan University, 論文指導獎, 國立臺灣大學工學院, 2022
- Outstanding Teaching Award, National Taiwan University, 教學傑出教師獎, 國立臺灣大學, 2022
- Excellent Teaching Award, National Taiwan University, 教學優良教師獎, 國立臺灣大學, 2021, 2019
- Senior and Excellent Teacher Award, Ministry of Education, Taiwan, 資深優良教師獎勵 (十年), 教育部, 2019
- Excellent Teaching Award, National Taiwan University of Science and Technology, 教學優良教師獎, 國立臺灣科技大學, 2016, 2012
- Supervisor of the Winner of the Undergraduate Research and Innovation Award, Ministry of Science and Technology, 103 年度科技部大專生研究創新獎指導老師, 科技部, 2015
- Outstanding Teaching Award, National Taiwan University of Science and Technology, 教學傑出教師獎, 國立臺灣科技大學, 2013
- Innovative Teaching Method and Material Award, National Taiwan University of Science and Technology, 創新教學模式與教材研發獎, 國立臺灣科技大學, 2012
- Supervisor of the Winner of the Undergraduate Research 1st place Award, National Taiwan University of Science and Technology, 最佳專題(第一名)指導老師, 國立臺灣科技大學, 2012
- Best Supervisor Award, National Taiwan University of Science and Technology, 優良導師獎, 國立臺灣科技大學, 2011

### **Taiwan Delegates**

- Taiwan Delegate, 18<sup>th</sup> Southeast Asian Geotechnical Conference-Young People Session, SEAGC, 第 18 屆東南亞大地工程研討會青年會議臺灣代表, 2013
- Taiwan Delegate, 7<sup>th</sup> Asia Young Geotechnical Engineers Conference, ISSMGE, 第 7 屆亞洲優秀青年大地工程師臺灣代表, 2012

### **Scholarships, Fellowships and Travel Grants**

- Graduate Student Professional Development Award, University of Texas at Austin, 2009
- Travel Grant for Encouraging Students to Participate in National and International Academic Conference and Art Performance, Ministry of Education, Taiwan, 2009~2008

Walter L. and Reta Mae Moore Graduate Fellowship in Civil Engineering, Department of Civil, Architectural and Environmental Engineering, The University of Texas at Austin, 2008~2007

North America Taiwanese Engineers Association Scholarship, 2007

2<sup>nd</sup> Place of Geo-Challenge Student Retaining Wall Competition, ASCE, Geo-Denver Conference, \*design paper was awarded the top ranked team and travel grant, 2007

Cockrell School of Engineering Scholarship, College of Engineering, The University of Texas at Austin, 2006

# Research

## PUBLICATION LIST

### Productivity Summary

| Publications             | Published | In Review/Preparation |
|--------------------------|-----------|-----------------------|
| Book                     | 0         | 1                     |
| Journal paper            | 65        | 4                     |
| International Conference | 54        | 0                     |
| Domestic Conference      | 29        | 0                     |
| Technical Reports        | 36        | 0                     |
| Newsletter               | 16        | 0                     |

205 Total

- Ⓢ indicates students or research assistants under my supervision  
⊠ indicates I am the corresponding author

### Book

1. Ou, C-Y., Ching, J., Chiou, J-S, Li, A-J, Liao, R-T., Lu, C-W., Teng, F-C., and Yang, K-H, (2023). *Fundamentals of Foundation Engineering*, Taylor and Francis, 400 pp.

### Journal Publications

1. Chou, N-S, Yang, K-H⊠, Ho, S-J, Wu, H-M<sup>Ⓢ</sup>, and Liu, C-N. “Application of Reinforced Soil Slope with Marginal Backfill in Flood Control – A Unique Case of Detention Pond within a Freeway Interchange in Taiwan”, *Geosynthetics International*, first review since October 2022.
2. 鄭世豪、廖洪鈞、王瑞祺、林士淵、謝旻希、楊國鑫 (2022) “臺北市貓空纜車 T16 塔柱下邊坡之長期觀測與維運管理作為”，*地工技術*，第 173 期。
3. 曾世傑<sup>Ⓢ</sup>、楊國鑫、蔡營寬、林詳恩 (2022) “後備部隊戰力防護之研究-以建構快速布放式抗爆震掩體為例”，*後備軍事半年刊*，第 172 期，66-95。
4. 曾世傑<sup>Ⓢ</sup>、楊國鑫、蔡營寬、玉璽 (2022) “1945 年硫磺島戰役日軍守備之研究-兼論不同土質條件之衰減曾抗爆震效能”，*陸軍工兵半年刊*，第 160 期，1-28。
5. 蔣榮<sup>Ⓢ</sup>、楊國鑫⊠、吳俊緯<sup>Ⓢ</sup>、洪勇善、阮仲如 (2022) “以柔性加勁基礎減緩逆斷層錯動引致之地表變形”，*地工技術*，第 172 期，73-84。
6. Yang, K-H⊠, Wu, H-M.<sup>Ⓢ</sup>, and Tseng, T-L.<sup>Ⓢ</sup>, Yoo, CK (2022) “Model Tests of Geosynthetic-Reinforced Soil Walls with Marginal Backfill subjected Rainfall”, *Geotextiles and Geomembranes*.
7. Cheng, S-H, Chen, S-S. and Yang, K-H (2022) “Self-Inspection System for Ground Anchor Monitoring on Long-Term Load Change”, *Transportation Geotechnics*, 36, 100825.
8. Zheng, S-J.<sup>Ⓢ</sup>, Yang, K-H⊠, Tsai, Y-K, and Teng, Fuchen. (2022) “Investigation of the Blast-Resistance Performance of Geotextile-Reinforced Soil”, *Geosynthetics International*.
9. Nguyen, T.S.<sup>Ⓢ</sup>, Yang, K-H⊠, Wu, Y-K<sup>Ⓢ</sup>, Teng, F-H, Chao, V.W, and Lee, W.L (2022). “Post-Failure Process and Kinematic Behavior of Two Landslides: Case Study and Material Point Analyses”, *Computers and Geotechnics*, 148, 104797.

10. Nguyen, M-D., and Yang, K-H. (2022) “California Bearing Ratio Test on Reinforced Clay under As-compacted and Soaked Conditions”, *Journal of GeoEngineering*, 17(2), 73-87.
11. Li, A-J, Mburu, J.W., Chen, C-W, and Yang, K-H. (2022) “Investigation of Silty Soil Slopes under Unsaturated Conditions based on Strength Reduction Finite Element and Limit Analysis”, *KSCE Journal of Civil Engineering*, 26(3), 1095-1110.
12. 曾世傑<sup>Ⓞ</sup>、楊國鑫、蔡營寬 (2021) “地下結構物抗暴震研究-以加勁土衰減爆震波壓力之數值分析”，*陸軍工兵半年刊*，第 159 期，1-22。
13. Chiang, J<sup>Ⓞ</sup>, Yang, K-H<sup>Ⓞ</sup>, Chan, Y-S<sup>Ⓞ</sup> and Yuan C-L. (2021) “Finite Element Analysis and Design Method of Geosynthetic-Reinforced Soil Foundation subjected to Normal Fault Movement”, *Computers and Geotechnics*, 139, 104412.
14. Lin, Y-T, Chen, Y-K, Yang, K-H., Chen, C-S, and Han J-Y. (2021) “Integrating InSAR Observables and Multiple Geological Factors for Landslide Susceptibility Assessment”, *Applied Sciences*, 11, 7289.
15. 林彥廷、顏筱穎<sup>Ⓞ</sup>、張乃軒<sup>Ⓞ</sup>、林宏明<sup>Ⓞ</sup>、韓仁毓、楊國鑫、陳俊杉、鄭宏達、徐若堯 (2021) “結合時空因子與 InSAR 觀測資料之地表變位預測分析”，*中國土木水利工程學刊*，第 33 卷第 2 期，95-106。
16. Yang, K-H<sup>Ⓞ</sup>, Nguyen, T.S.<sup>Ⓞ</sup>, Rahardjo Harianto, and Lin, Der-Guey. (2021) “Deformation Characteristics of Unstable Shallow Slopes Triggered by Rainfall Infiltration”, *Bulletin of Engineering Geology and the Environment*. 80(1), 317-344.
17. Nguyen, T.S.<sup>Ⓞ</sup>, Yang, K-H<sup>Ⓞ</sup>, Ho, C-C, and Huang, F-C. (2021) “Post-Failure Characterization of Shallow Landslides using Material Point Method”, *Geofluids*, 2021, 8860517.
18. 楊國鑫、吳昱葵、鄧福宸、陳昭維、陳仁達 (2020)，“物質點法分析邊坡崩塌過程與運動機制：以貓空邊坡為例”，*土工技術*，第 166 期，79-92。\*2020 Best Paper Award.
19. Muntohar, A.S., Fata, N., Jotisanaka, A., and Yang, K-H. (2020) “Suction Monitoring and Stability of Volcanic Residual Soil slope during Rainfall”, *Civil Engineering Dimension*, 22(2), 68-74.
20. Chou, N.S., Yang, K-H<sup>Ⓞ</sup>, Barrett, B., Wu, H-M, and Liu, T-Y (2020) “Sustainable Characteristics of Reinforced Soil Structures – From Ancient Great Walls to Modern GRS Walls”, *Transportation Infrastructures Geotechnology*, 7(3), 445-460. \*2020 Best Paper Award
21. Yang, K-H<sup>Ⓞ</sup>, Chiang, J<sup>Ⓞ</sup>, Lai, Z-W.<sup>Ⓞ</sup>, Han, J., and Lin, M-L. (2020) “Performance of Geosynthetic- Reinforced Soil Foundations across a Normal Fault”, *Geotextiles and Geomembranes*. 48(3), 357-373.
22. Nguyen, M.D.<sup>Ⓞ</sup>, Yang, K-H., and Yalaw, W. M.<sup>Ⓞ</sup> (2020) “Compaction Behavior of Nonwoven Geotextile-Reinforced Clay”, *Geosynthetics International*. 27(1), 16-33.
23. Hung, W-Y, Yang, K-H<sup>Ⓞ</sup>, Nguyen, T.S.<sup>Ⓞ</sup>, and Pham, T.N.P.<sup>Ⓞ</sup> (2020) “Performance of Geosynthetic-Reinforced Soil Walls at Failure”, *Journal of GeoEngineering*. 15(1), 13-29. \*2020 Best Paper Award.
24. Yang, K-H<sup>Ⓞ</sup>, Wei, S-B, Adilehou, W. M.<sup>Ⓞ</sup>, and Ho, H-C, (2019) “Fiber-Reinforced Internally Unstable Soil against Suffusion Failure”, *Construction and Building Materials*, 222, 458-473.
25. Yang, K-H<sup>Ⓞ</sup>, Nguyen, T.S.<sup>Ⓞ</sup>, Lee, Y-H<sup>Ⓞ</sup>, and Leshchinsky, B, (2019) “Performance and Design of Geosynthetic-Reinforced Soil Slopes against Rainfall: Considering Regional Hydrological Conditions”, *Geosynthetics International*. 26(5), 451-473.
26. Yang, K-H<sup>Ⓞ</sup>, Thuo, J.N. <sup>Ⓞ</sup>, Chen, J-W<sup>Ⓞ</sup>, and Liu, C-N, (2019) “Failure Investigation of a Geosynthetic-Reinforced Soil Slope subject to Rainfall”, *Geosynthetics International*, 26(1), 42-65. \*2019 Second Best Paper Award.
27. Hung, C., Pang, X., Lin, G-W, Yang, K-H., and Uzuoka R. (2019) “The Role and Impact

of Geofluids in Geohazards", *Geofluids*, 7217489.

28. Yang, K-H<sup>✉</sup>, Thuo J.N.<sup>©</sup>, Huynh, V.D.A.<sup>©</sup>, Nguyen T.S.<sup>©</sup> and Portelinha, F.H.M, (2018) "Numerical Evaluation of Reinforced Slopes with Various Backfill-Reinforcement-Drainage Systems subject to Rainfall Infiltration", *Computers and Geotechnics*, 96, 25-39.
29. Hsiung, B-C, Yang, K-H, Aila, W. <sup>©</sup> and Ge, L., (2018) "Evaluation of Wall Deflections of a Deep Excavation in Central Jakarta using Three-Dimensional Modeling", *Tunnelling and Underground Space Technology*, 72, 84-96.
30. Yang, K-H<sup>✉</sup>, Nguyen T.S.<sup>©</sup> and Thuo J.N.<sup>©</sup>, (2018) "Discussion of Influence Factors involving Rainfall-Induced Shallow Slope Failure: Numerical Study", *International Journal of Geomechanics*, ASCE, 18(4), 07018003.
31. Yang, K-H<sup>✉</sup>, and Wang, J-Y<sup>©</sup>, (2018) "Closure to Discussion of Experiment and Statistical Assessment on Piping Failure of Soils with Different Gradations", *Marine Georesources and Geotechnology*, 36(3), 376-378.
32. Yang, K-H<sup>✉</sup>, Adilehou, W. M.<sup>©</sup>, Jian, S-T.<sup>©</sup> and Wei, S-B.<sup>©</sup>, (2017) "Hydraulic Response of Fiber-Reinforced Sand subject to Seepage", *Geosynthetics International*, 24(5), 491-507.
33. Yang, K-H<sup>✉</sup>, Uzuoka R., Thuo J.N.<sup>©</sup>, Lin G-L<sup>©</sup>, and Nakai T., (2017) "Coupled Hydro-Mechanical Analysis of Two Unstable Unsaturated Slopes subject to Rainfall Infiltration", *Engineering Geology*, 216, 13-30.
34. Yang, K-H<sup>✉</sup>, and Wang, J-Y<sup>©</sup>, (2017) "Experiment and Statistical Assessment on Piping Failure of Soils with Different Gradations", *Marine Georesources and Geotechnology*, 35(4), 512-527.
35. 周瑞生、楊國鑫、林婕瑩<sup>©</sup> (2016) "應用資料探勘技術暨啟發式演化組合模型預測離散纖維加勁土壤之剪力強度參數", *中國土木水利工程學刊*, 第 28 卷第 3 期, 205-218
36. Hsiung, B-C, Yang, K-H, Aila, W. <sup>©</sup> and Hung, C., (2016) "Three-Dimensional Effect of a Deep Excavation on Wall Deflections in Loose to Medium Dense Sands", *Computers and Geotechnics*, 80, 138-151.
37. Yang, K-H<sup>✉</sup>, Wu, J.T.H., Chen, R-H, and Chen, Y-S<sup>©</sup>, (2016) "Lateral Bearing Capacity and Failure Mode of Geosynthetic-Reinforced Soil Barriers subject to Lateral Loadings", *Geotextiles and Geomembranes*, 44, 799-812.
38. Yang, K-H<sup>✉</sup>, Nguyen, M.D<sup>©</sup>, Yalaw, W. M.<sup>©</sup>, Liu, C-N, and Gupta, R., (2016) "Behavior of Geotextile-Reinforced Clay under Consolidated-Undrained Tests: Reinterpretation of Porewater Pressure Parameters", *Journal of GeoEngineering*, 11(2), 45-57.
39. Tung, H., Chen H-Y, Hu, J-C, Chen, H., Yang, K-H, (2016) "Transient Deformation induced by Groundwater Change in Taipei Metropolitan Area revealed by High Resolution X-band SAR Interferometry", *Tectonophysics*, 692(B), 265-277.
40. Chou, J.S, Yang, K-H, and Lin J-Y.<sup>©</sup> (2016) "Peak Shear Strength of Discrete Fiber-Reinforced Soils computed by Machine Learning and Metaensemble Methods", *Journal of Computing in Civil Engineering*, ASCE, 30(6), 04016036.
41. Yang, K-H<sup>✉</sup>, Yalaw, W. M.<sup>©</sup> and Nguyen, M.D.<sup>©</sup>, (2016) "Behavior of Geotextile-Reinforced Clay with a Coarse Material Sandwich Technique under Unconsolidated-Undrained Triaxial Compression", *International Journal of Geomechanics*, ASCE, 16(3), 04015083.
42. Thuo, J.N.<sup>©</sup>, Yang, K-H<sup>✉</sup> and Huang, C-C, (2015) "Infiltration into Unsaturated Reinforced Slopes with Nonwoven Geotextile Drains sandwiched in Sand Layers", *Geosynthetics International*, 22(6), 457-474.
43. Chou, J-S, Yang, K-H, and Ren, T-C<sup>©</sup>, (2015) "Ex-post Evaluation of Preparedness Education in Disaster Prevention, Mitigation and Response", *International Journal of*



*Disaster Risk Reduction*, 12, 188-201.

44. Chou, J-S, Yang, K-H, Pampang J. P.<sup>©</sup>, and Pham, A.D., (2015) “Evolutionary Metaheuristic Intelligence to Simulate Tensile Loads in Reinforcement for Geosynthetic-Reinforced Soil Structures”, *Computers and Geotechnics*, 66, 1-15.
45. 邱建國、楊國鑫、陳道平、蔡長銘、邱子熙, (2015) “臺北市企業防災推動機制研究”, 災害防救科技與管理學刊, 第4卷第1期, 49-75。\*2015 Best Paper Award.
46. Liu, C-N, Yang, K-H<sup>©</sup>, and Nguyen, M.D.<sup>©</sup>, (2014) “Behavior of Geogrid-Reinforced Sand and Effect of Reinforcement Anchorage under Large-Scale Plane Strain Compression”, *Geotextiles and Geomembranes*, 42, 479-493.
47. 林俊佑<sup>©</sup>、楊國鑫<sup>©</sup>, (2014) “低滲透非塑性土壤內不織布排水效果與改善措施之試驗研究”, 中國土木水利工程學刊, 第26卷第2期。
48. Mohamed, S.<sup>©</sup>, Yang, K-H<sup>©</sup> and Hung, W-Y, (2014) “Finite Element Analyses of Two-Tier Geosynthetic-Reinforced Soil Walls: Comparison Involving Centrifuge Tests and Limit Equilibrium Results”, *Computers and Geotechnics*, 61, 67-84.
49. Wu, J.T.H., Yang, K-H, Mohamed, S.<sup>©</sup>, Pham, T., and Chen R.-H., (2014) “Suppressing Dilation of Soil-A Reinforcing Mechanism of Soil-Geosynthetic Composites”, *Transportation Infrastructure Geotechnology*, 1(1), 68-82.
50. Mohamed, S.<sup>©</sup>, Yang, K-H<sup>©</sup>, and Hung, W-Y, (2013) “Limit Equilibrium Analyses of Geosynthetic-Reinforced Two-Tiered Soil Walls: Calibration from Centrifuge Tests”, *Geotextiles and Geomembranes*, 41, 1-16.
51. Yang, K-H<sup>©</sup>, Utomo, P.<sup>©</sup>, and Liu, T-L.<sup>©</sup>, (2013) “Evaluation of Force-Equilibrium and Deformation-Based Design Approaches for Predicting Reinforcement Tension within Geosynthetics-Reinforced Soil Structures”, *Journal of GeoEngineering*, 8(2), 41-54. \*2013 Excellent Paper Award.
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### Journal Publications in Progress

1. Chiang, J.®, Michel, E.®, Yang, K-H, and Zornberg, J.G. "Performance of Soil Foundation reinforced by Geosynthetic Encased Granular Columns to Mitigate Reverse Faulting", *Geotextiles and Geomembranes*.
2. Wu, H-M.®, Lin, Jia-Jin®, and Yang, K-H. "Model Tests of Geosynthetic-Reinforced Soil Walls Subjected to Flood as River Bank Protection", *Geosynthetics International*.
3. Teng, F-H, Hsiung, B.C., Agung, M.D., and Yang, K-H "Simulations of Time-Dependent Behavior based on Wall Deflection of Deep Excavations in Jakarta", *KSCE Journal of Civil Engineering*, in preparation.
4. Nguyen, T.S., Pham V.A., Nguyen, B.V., and Yang, K-H. "Establishing Thresholds for Rainfall-Induced Shallow using Fully Coupled Hydro-Mechanical Model", *Environmental Geotechnics*, in preparation.

### International Conference Publications

1. Chiang, J.®, Yang, K-H, Zornberg, J.G., Michel, E. and Wu, C-H. (2023) "Model Tests for Various Types of Geosynthetic-Reinforced Soil Foundation subjected to Reverse Fault Movement", *Proceedings of the 12<sup>th</sup> International Conference on Geosynthetics, 12 ICG 2023*, Roma, Italy, September 2023.
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Large Soil Strain Conditions”, ASCE Geo-Congress 2012, Oakland, California, March 2012, *Geotechnical Special Publication*, GSP 225, 461-470.

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### Domestic Conference Publications

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2. 彭逸蘋<sup>◎</sup>, 楊國鑫, 郭治平, 汪俊彥, 陳昭維. (2022) "以物質點法探討估華崩塌地滑動面深度", *Proceedings of the 19<sup>th</sup> Conference of Taiwan Geotechnical Engineering, GeoTaiwan 2022*, 第 19 屆臺灣大地工程研討會, New Taipei, Taiwan, September 2022.
3. 吳昕明<sup>◎</sup>, 楊國鑫, 曾婷苓<sup>◎</sup>, 林佳靜<sup>◎</sup> (2021) "降雨作用下加勁擋土牆破壞機制與改善工法", *Proceedings of 2021 Soil and Water Conservation Conference*, 水土保持研討會, December 2021. \*Best Paper Award from this conference.
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10. Yang, K-H (2015), “Summary Report of Awarded Work of Young IGS Award Winners 2014”, *IGS Newsletter*, 31(2), August 2015
11. Ni, S-H, Hsiung B. and Yang, K-H (2015), “Report of International Distinguished Lectures in Taiwan and the Visit of Dr. Kenneth Stokoe”, *SEAGS-AGSSEA Newsletter*, August 2015
12. Yang, K-H and Hsiung B. (2015), “Report of International Distinguished Lectures in Taiwan and the Visit of Dr. Guy Houlsby”, *SEAGS-AGSSEA Newsletter*, February 2015
13. 倪勝火、楊國鑫、熊彬成 (2015) 「Dr. Sotoke 教授訪台與 Terzaghi Lecture 報導」，中華民國大地工程學會會訊，第十八卷第二期，中華民國 104 年 4 月。
14. 楊國鑫、熊彬成、張德文 (2015) 「Dr. Houlsby 教授訪台與 Rankine Lecture 報導」，中華民國大地工程學會會訊，第十八卷第二期，中華民國 104 年 4 月。
15. 楊國鑫 (2014) 「大地工程職涯規劃座談會報導」，中華民國大地工程學會會訊，第十八卷第一期，中華民國 103 年 7 月。
16. 楊國鑫 (2014) 「傑出好教師報導」，臺科校園誌，第七期，*Taiwan Tech Magazine*, 07, 中華民國 103 年 6 月。

## TECHNICAL PRESENTATIONS

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### Keynote Lecture

1. Keynote Lecture, “Post-Failure Process and Kinematic Behavior of Landslides: Case Study and Material Point Analyses”, Annual National Conference, Indonesian Society for Geotechnical Engineering, Jakarta, Indonesia, November 2022
2. Keynote Lecture, “Performance of Geosynthetic-Reinforced Low Permeable Soil improved by Sandwiching Reinforcement in Thin Layers of Sand”, Taiwan Geosynthetic Society Annual Meeting, 中華地工材料協會年會，Taipei Taiwan, March 2015

3. Keynote Lecture, “Finite Element Modeling of Geotechnical Engineering” and “Application and Design of Geosynthetics”, Geotechnical Short Course organized by the Center for Geotechnical Hazards, Parahyangan Catholic University, Bandung Indonesia, August 22 -23, 2014
4. Keynote Lecture, “Stress Distribution within Geosynthetic-Reinforced Soil Structures”, Taiwan Geosynthetic Society Annual Meeting, 中華地工材料協會年會, Taipei Taiwan, March 2010

### Webinar

1. Invited Presentation, “Failure Investigation of a Geosynthetic-Reinforced Soil Slope subjected to Rainfall”, *Chulalongkorn University and University of Bengkulu Joint Seminar under World Class Professor 2021*, October 2021.
2. Invited Presentation, “Failure Investigation of a Geosynthetic-Reinforced Soil Slope subjected to Rainfall”, *The Geotechnical Engineering Technical Division of the Institution of Engineers Malaysia Webinar, GETD-IEM Webinar*, September 2021.
3. Invited Presentation, “Failure Investigation of a Geosynthetic-Reinforced Soil Slope subjected to Rainfall”, *The International Geosynthetics Society - Indonesian Chapter, Ina-IGS Webinar*, July 2021.
4. Invited Presentation, “Graduate Program and Internationalization efforts in NTUCE”, *Higher Degree Education for Civil and Environmental Engineering, The 1<sup>st</sup> InfraSPHERE ICE Conference, BrainKorea 21 Education and Research Program*, July 2021.
5. Invited Presentation, “Application of Geosynthetic-Reinforced Soil Foundations as A Mitigation Measure against Surface Faulting Hazards”, *The 1<sup>st</sup> Chinese Taipei Geotechnical Society Webinar, CTGS Webinar*, March 2021.

### Workshops and Short Courses

1. Course title, “Sharing of Academic Writing Experience”, Academic Writing Summer Program in Geotechnical Engineering, organized by Taiwan Geotechnical Society, 大地工程英文論文寫作營, 中華民國大地工程學會主辦, Taipei Taiwan, August, 2022
2. Course title, “Post-Failure Process and Kinematic Behavior of Landslides”, Continued Education and Training Program for Engineer Staff from the Sinotech Engineering Services. LTD, 中興工程教育訓練課程, 中興工程顧問公司主辦, Taipei Taiwan, August, 2022
3. Course title, “Advance Topics on Geosynthetics-Reinforced Walls”, IGS Geosynthetics Education Training Program, hosted by IGS Education Committee and Chinese Taipei Chapter, 國際地工合成材料學會教育推廣研習營, 國際地工合成材料學會教育委員會與中華台北分會主辦, Pingtung Taiwan, November 2020.
4. Course title “Design and Failure Investigation of Geosynthetic-Reinforced Soil Structures subjected to Rainfall”, organized by Gold-Joint Industry, 盟鑫工業公司教育訓練, 盟鑫工業公司主辦, Taichung Taiwan, October 2020
5. Course title “Design and Failure Investigation of Geosynthetic-Reinforced Soil Structures subjected to Rainfall”, held by Hualien Branch, Soil and Water Conservation Bureau, Council of Agriculture, 加勁擋土牆於防災應用與破壞案例分析探討, 大規模崩塌教育訓練, 花蓮水土保持局主辦, Hualien Taiwan, November 2019
6. Course title “Application of Geosynthetics to Mitigation, and Remediation of Landslide Disaster”, International Training Courses on Landslide Disaster Reduction, held by Department of International Cooperation and Science Education, MOST, 地工合成材應用於坡地防災與修護之設計與應用, 坡地災害國際訓練營, 科技部科教發展與國際合作司主辦, Taipei Taiwan, November 2019
7. Course title “Introduction of Geosynthetics: Application to Construction, Disaster Mitigation, and, Natural Protection”, Special Lecture, held by Soil and Water

- Conservation Bureau, Council of Agriculture, 淺談地工合成材應用-以工程、防災與自然環境保護為例, 水保局主管會報專題演講, 水土保持局主辦, Nantou Taiwan, September 2019
8. Course title “Introduction and Application of Geosynthetics”, Military engineering materials: Innovation and Practical Application, held by Chung Cheng Institute of Technology, National Defense University, 地工合成材之介紹: 應用於工程、防災與自然環境保護, 國軍工程材料創新與應用實務講習班, 國防大學理工學院主辦, Taoyuan Taiwan, July 2019
  9. Course title “Disaster Prevention Specialist and Disaster Prevention System in Taiwan”, Disaster Prevention Specialist Program, held by Taipei City Fire Department, Taipei City Government, 防災士職責與任務與我國防災體系與運作, 防災士培訓課程, 臺北市政府消防局主辦, Taipei Taiwan, 2019
  10. Course title “Recent Disaster Experience and Characteristics in Taiwan”, Disaster Prevention Specialist Program, held by Taipei City Fire Department, Taipei City Government, 我國近年災害經驗與災害特性, 防災士培訓課程, 臺北市政府消防局主辦, Taipei Taiwan, 2019
  11. Course title “Acquirement and Application of Disaster Management Information and Disaster Resilience Community Plan”, Disaster Prevention Specialist Program, held by Taipei City Fire Department, Taipei City Government, 資訊掌握、運用與社區防災計畫, 防災士培訓課程, 臺北市政府消防局主辦, Taipei Taiwan, 2019
  12. Course title “Disaster Prevention Specialist and Resilience Community”, Continued Education and Training Program for Disaster Prevention, held by Taipei City Fire Department, Taipei City Government, 防災士與韌性社區課程, 臺北市政府消防局主辦, Taipei Taiwan, 2018
  13. Course title, “Geosynthetic-Reinforced Soil Structures: Application for Natural Disaster Mitigation and Failure Case Study”, organized by Land Engineering Consultants, 加勁擋土牆防災應用與破壞案例分析探討, 青山工程顧問公司主辦, Taipei Taiwan, June 11, 2018
  14. Course title, “Standard Test Method for Geosynthetics”, organized by Water Resources Agency, Ministry of Economic Affairs, 地工合成材試驗規範, 經濟部水利署主辦, Taichung Taiwan, April 24, 2018
  15. Course title, “Numerical Analysis on Slope Stability and Application of Green Reinforced Structures to Slope Stabilization”, organized by Taiwan Power Company, 工程地質專業人力資源庫專題演講, 台灣電力公司主辦, Taipei Taiwan, December 9, 2016
  16. Course title, “Geosynthetics for Engineering Applications, Natural Disaster Mitigation and Environmental Protection”, Short course for Students from La Trobe University, Australia, organized by National Taiwan University of Science and Technology, 澳洲拉籌伯大學短期來台遊學, 國立臺灣科技大學主辦, Taipei Taiwan, July, 2016
  17. Course title, “Coupled Hydro-Mechanical Analysis of Unsaturated Slopes subjected to Rainfall Infiltration: Case Study on Two Instable Slopes adjacent to Taipei Maokong Gondola”, Workshop on application of Finite Element Modeling in Deep Excavation and Slope Engineering”, organized by Taiwan Geotechnical Society and National Taiwan University of Science and Technology, 有限元素法於大地工程應用技術研討會-深開挖與邊坡工程, 中華民國大地工程學會與國立臺灣科技大學主辦, Taipei Taiwan, April, 2016
  18. Course title “Awareness and Prevention of Debris Flow and Landslide Disasters”, Taipei Xinyi District Office Emergency Operations Center Personnel Training Program, held by Taipei City Government 臺北市信義區災害應變中心編組人員課程, 臺北市信義區公所主辦, Taipei Taiwan, 2015
  19. Course title, “Design of Geosynthetic-Reinforced Soil Structures under Static and Seismic Loadings”, organized by Gold-Joint Industry and National Chi Nan University, 綠色工程精英培育課程, 盟鑫工業公司與國立暨南國際大學主辦, Taichung Taiwan, March, 2015
  20. Course title, “Finite Element Analyses: Introduction, Theory and Case Study”, Continued Education and Training Program for Engineer Staff from the Sinotech Engineering

- Services. LTD, 中興工程教育訓練課程, 中興工程顧問公司主辦, Taipei Taiwan, November 5, 2014
21. Course title, “Finite Element Modeling for Geotechnical Engineering” and “Application and Design of Geosynthetics”, organized by the Center for Geotechnical Hazards, Parahyangan Catholic University, Bandung Indonesia, August 22 -23, 2014
  22. Course title, “Design of Geosynthetic-Reinforced Soil Structures under Static and Seismic Loadings”, organized by Gold-Joint Industry and National Chi Nan University, 綠色工程精英培育課程, 盟鑫工業公司與國立暨南國際大學主辦, Taichung Taiwan, March 22, 2014
  23. Course title, “Geosynthetic-Reinforced Soil Structures: Application, Construction and Design”, organized by Kaohsiung Professional Civil Engineers Association, 土工合成材料設計應用工程實務課程, 高雄市土木技師公會主辦, Kaohsiung Taiwan, Feb 15, 2014
  24. Course title, “Finite Element Analyses of Two-Tiered Geosynthetic-Reinforced Soil Walls: Comparison with Centrifuge Tests and Limit Equilibrium Results”, Finite Element Workshop on Geotechnical Engineering”, organized by Taiwan Geotechnical Society and National Taiwan University of Science and Technology, 有限元素法在大地工程之應用課程, 中華民國大地工程學會與國立臺灣科技大學主辦, Taipei Taiwan, November 14, 2013
  25. Course title “Introduction of Major Disaster Potentials and Evacuation Shelter in Taipei City, Business Disaster Prevention Program, held by Taipei City Fire Department, Taipei City Government, 南港軟體園區企業防災講座課程, 臺北市政府消防局, July 29, 2013
  26. Course title “Community Environmental Assessment and Disaster Prevention”, Community Disaster Prevention Program, held by Taipei City Fire Department, Taipei City Government, 臺北市社區防災課程, 臺北市政府消防局, 2013
  27. Course title, “Finite Element Analyses: Introduction, Theory and Application”, Continued Education and Training Program for Engineer Staff from the Huan-Hsin Technology and Engineering Services. LTD, 環興科技教育訓練課程, 環興科技公司主辦, Taipei Taiwan, February 23, 2013
  28. Course title, “Finite Element Analyses and Verification of Geosynthetic-Reinforced Soil Structures”, Workshop on Advanced Geotechnical Finite Element Modeling in Analyses of Underground Construction”, organized by Taiwan Geotechnical Society and National Taiwan University of Science and Technology, 高階有限元素法在地下工程分析上之實務應用課程, 中華民國大地工程學會與國立臺灣科技大學主辦, Taipei Taiwan, June 20, 2012
  29. Course title, “Geosynthetics for Engineering Applications, Natural Disaster Mitigation and Environmental Protection”, Continued Education and Training Program for Faculty from the Zhejiang Institute of Technology, China, organized by National Taiwan University of Science and Technology, 浙江高等職業技術學院(校)師資培訓專業課程, 國立臺灣科技大學主辦, Taipei Taiwan, June 15, 2012
  30. Course title “Awareness, Monitoring and Engineering Solution for Landslide Disasters”, Community Disaster Prevention Program, held by Taipei City Fire Department, Taipei City Government, 臺北市社區防災課程, 臺北市政府消防局, 2012
  31. Course title “Current Geotechnical Research Activities in National Taiwan University of Science and Technology”, Continued Education and Training Program, held by Fu Tsu Construction Co., Ltd, 互助營造教育訓練課程, 互助營造公司, July 30, 2011
  32. Course title “Awareness, Monitoring and Engineering Solution for Landslide Disasters”, Community Disaster Prevention Program, held by Emergency Operations Center, Taipei City Government, 臺北市社區防災課程, 臺北市政府災害防救中心, 2011
  33. Course title “Introduction of Major Disaster Potentials in Taipei City, Taipei Military Instructor Summer Workshop, held by Department of Education, Taipei City Government, 臺北市軍訓教官暑假工作研習課程, 臺北市政府教育局, July 6, 2011
  34. Course title “Introduction of Major Disaster Potentials in Taipei City, Continued Education and Training Program, held by Emergency Operations Center, Taipei City Government,,

臺北市政府各局處與區應變中心教育訓練課程，臺北市政府災害防救中心，May 26 and June 13, 2011

35. Course title “Awareness, Monitoring and Engineering Solution for Landslide Disasters”, Community Disaster Prevention Program, held by Emergency Operations Center, Taipei City Government, 臺北市社區防災課程，臺北市政府災害應變中心，2010

## RESEARCH GRANT AND FUNDING

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### Ministry of Science and Technology

- PI, “Development and Integration of Multiple Investigation, Analyses, and Improvement Methods for Shallow Landslide Disasters”, funded by Ministry of Science and Technology, 淺層災崩災害多元化調查、分析與整治工法之發展與整合研究，科技部整合型專題研究計畫，總主持人，MOST111-2625-M-002-013-，NT\$1,564,000, August 2022-July 2023.
- PI, “Performance and Design Methods of Geosynthetic-Reinforced Soil Structures subjected to Reverse Fault: A Faulting Hazard Mitigation Measure”, funded by Ministry of Science and Technology, 加勁構造物在逆斷層作用下之力學行為與設計方法：抗斷層錯動減災工法，科技部 2030 跨世代年輕學者方案(優秀年輕學者)計畫(三年期), 主持人，MOST110-2628-E-002-003-，NT\$3,990,418, August 2021-July 2024. \*Outstanding Young Scholar Research Project
- PI, “Behavior and Design Methods of Geosynthetic-Reinforced Soil Walls subjected to Rainfall ”, funded by Ministry of Science and Technology, 降雨作用下加勁擋土牆力學行為與設計方法之研究，科技部優秀年輕學者計畫(三年期), 主持人，MOST107-2628-E-002-003-MY3, NT\$2,706,000, August 2018-July 2021. \*Outstanding Young Scholar Research Project
- PI, “Experimental Model Tests on Fiber-Reinforced Soil Embankment”, funded by Ministry of Science and Technology, 纖維加勁土堤之物理模型試驗研究，科技部專題研究計畫，主持人，MOST106-2221-E-011-046, NT\$866,000, August 2017-July 2018.
- PI, “Hydraulic Conductivity and Piping Resistance of Fiber-Reinforced Soil”, funded by Ministry of Science and Technology, 纖維加勁土壤之水力行為研究，科技部專題研究計畫，主持人，MOST105-2221-E-011-038, NT\$733,000, August 2016-July 2017.
- PI, “Improvement of Permeability and Strength of Geosynthetic-Reinforced Low Permeable Soil: by Sandwiching Reinforcement in Thin Layers of Sand”, funded by National Science Council, 利用薄砂層改善低滲透性加勁土壤之透水性與力學行為，國科會優秀年輕學者計畫(三年期), 主持人，NSC102-2221-E-011-057-MY3, NT\$2,098,000, August 2013-July 2016. \*Outstanding Young Scholar Research Project
- PI, “Experimental Study of Reinforced Soil Behavior: A New Approach to Measure Mobilization and Distribution of Reinforcement Loads”, funded by National Science Council, 加勁土壤力學行為之試驗研究：以新方法探討加勁材應力發展與分佈，國科會專題研究計畫，主持人，NSC101-2221-E-011-112, NT\$769,000, August 2012-July 2013.
- PI, “Study on Failure Mechanism and Critical Hydraulic Conditions in Soil Piping”, funded by National Science Council, 土壤管湧破壞機制與其臨界條件之研究，國科會專題研究計畫，主持人，NSC100-2221-E-011-115, NT\$510,000, August 2011-July 2012.
- PI, “Determination of Reinforcement Loads in Geosynthetic-Reinforced Soil Structures: Comparison of Various Design Methods and Proposal of an Optimized Design”, funded by National Science Council, 加勁擋土牆內加勁材強度之評估：各項設計方法比較與最佳化設計，國科會新進人員研究計畫，主持人，NSC99-2218-E-001-006, NT\$575,000, May 2010-July 2011.

## Industry-Government-Academia Collaboration Project

### Principal Investigator

- PI, “Study on the Application of Diversified Retaining Walls and Facilities on Hill Land Area”, funded by Soil and Water Conservation Bureau, Council of Agriculture. 山坡地多元擋土設施運用研究, 農委會水土保持局委託研究案, 主持人, NT\$2,700,000, March 2020-Dec 2020.
- PI, “Community-based Disaster Management Program in Hill Land Communities in Taipei City”, funded by Taipei City Geotechnical Engineering Office. 107 年度臺北市山坡地住宅自主防災, 臺北市大地工程處委託研究案, 主持人, NT\$3,520,000, March 2018-Dec 2018.
- PI, “Experimental Evaluation of the Effect of Ground Improvement Admixture (HSC301) Conditioner on Improving Soil Shear Strength”, funded by Taiwan Construction Research Institute, 水泥系處理劑(HSC301)阻水性能複校分析研究, 臺灣營建研究院委託研究案, 主持人, NT\$300,000, June 2015-Dec 2015.
- PI, “Preliminary Study on Business Disaster Prevention Plan in Taipei City”, funded by Taipei City Fire Department, 臺北市企業防災推動機制, 臺北市政府消防局委託研究案, 主持人, NT\$600,000, April 2013-Sep 2013.
- PI, “Evaluation of Filtration and Drainage Efficiency of Hybrid System Composed of Granular Soil and Nonwoven Textile Layers”, funded by Tree-Garden Co., Ltd., 粗顆粒土壤與不織布複層之過濾排水效果評估, 樹花園有限公司委託研究案, 主持人, NT\$150,252, April 2013-March 2014.
- PI, “Establishment of Key Geotechnical Properties and Numerical Methods for Deep Excavation in Jakarta”, funded by CECI Engineering Consultants, Inc., 雅加達地區大地工程基本參數及深開挖分析模式建立, 臺灣世曦工程顧問公司委託研究案, 主持人, NT\$585,480, Jan 2013-Dec 2013.

### Co-Principal Investigator

- Co-PI, “Experimental and Numerical Studies on the Improvement of the Blast-Resistance Performance of Protective Shelters:”, funded by National Chung-Shan Institute of Science and Technology, 提升國軍抗炸掩體防護性能之數值模擬與試驗研究, 國家中山科學研究院委託研究案, 共同主持人, June 2022-June 2024.
- Co-PI, “Maintenance and Management Guidelines for Railway Slopes Geotechnical Facilities”, funded by Railway Bureau, Ministry of Transportation and Communications. 鐵路邊坡維護與管理規範, 交通部鐵道局委託研究案, 共同主持人, NT\$3,800,000, April 2022-Oct 2023.
- Co-PI, “Disaster Prevention and Protection Project of Taipei City (5/5)”, funded by Taipei City Fire Department, 臺北市災害防救深耕計畫第三期, 臺北市政府消防局委託研究案, 協同主持人, Jan 2022-Dec 2022.
- Co-PI, “Landslide Susceptibility Analysis using InSAR Monitoring Data (2/2)”, funded by CECI Engineering Consultants, Inc., 結合時空因子與 InSAR 觀測資料之地表變位分析與預測, 臺灣世曦工程顧問公司委託研究案, 協同主持人, NT\$900,000, Jan 2021-Dec 2021.
- Co-PI, “Community-based Disaster Management Program in Hill Land Communities in Taipei City”, funded by Taipei City Geotechnical Engineering Office. 110-111 年度臺北市山坡地住宅自主防災, 臺北市大地工程處委託研究案, 共同主持人, Jan 2021-Dec 2022.
- Co-PI, “Disaster Prevention and Protection Project of Taipei City (4/5)”, funded by Taipei City Fire Department, 臺北市災害防救深耕計畫第三期, 臺北市政府消防局委託研究案, 協同主持人, Jan 2021-Dec 2021.



- Co-PI, “Landslide Susceptibility Analysis using InSAR Monitoring Data (1/2)”, funded by CECI Engineering Consultants, Inc., 結合時空因子與 InSAR 觀測資料之地表變位分析與預測, 臺灣世曦工程顧問公司委託研究案, 協同主持人, NT\$900,000, Jan 2020-Dec 2020.
- Co-PI, “Community-based Disaster Management Program in Hill Land Communities in Taipei City”, funded by Taipei City Geotechnical Engineering Office. 109 年度臺北市山坡地住宅自主防災, 臺北市大地工程處委託研究案, 共同主持人, NT\$3,642,000, February 2020-Dec 2020.
- Co-PI, “Disaster Prevention and Protection Project of Taipei City (3/5)”, funded by Taipei City Fire Department, 臺北市災害防救深耕計畫第三期, 臺北市政府消防局委託研究案, 協同主持人, NT\$5,152,000, March 2020-Dec 2020.
- Co-PI, “Community-based Disaster Management Program in Hill Land Communities in Taipei City”, funded by Taipei City Geotechnical Engineering Office. 108 年度臺北市山坡地住宅自主防災, 臺北市大地工程處委託研究案, 共同主持人, NT\$2,540,000, March 2019-Dec 2019.
- Co-PI, “Disaster Prevention and Protection Project of Taipei City (2/5)”, funded by Taipei City Fire Department, 臺北市災害防救深耕計畫第三期, 臺北市政府消防局委託研究案, 協同主持人, NT\$5,152,000, March 2019-Dec 2019.
- Co-PI, “Community-based Disaster Management Program in Land Hill Communities in Taipei City”, funded by Taipei City Geotechnical Engineering Office. 106 年度臺北市山坡地住宅自主防災, 臺北市大地工程處委託研究案, 協同主持人, NT\$3,000,000, March 2017-Dec 2017.
- Co-PI, “Disaster Prevention and Protection Project of Taipei City (1/5)”, funded by Taipei City Fire Department, 臺北市災害防救深耕計畫第三期, 臺北市政府消防局委託研究案, 協同主持人, NT\$4,700,000, March 2018-Dec 2018.
- Co-PI, “Guidelines of Construction and Safety Improvement of Hand-Dug Pile Walls”, funded by Institute of Labor, Occupational Safety, and Health, Ministry of Labor. 人工擋土柱開挖施工安全改善實物及指引編撰, 行政院勞動部勞動及職業安全衛生研究所委託研究案, 協同主持人, NT\$1,650,000, January 2018-November 2018.
- Co-PI, “Assessment of Efficiency and Feasibility of Applying Green Technique to Protect the Dredged Debris as Backfill against River Erosion”, funded by Soil and Water Conservation Bureau, Council of Agriculture. 清淤土石再利用綠色工法之效益及可行性評估, 行政院農委會水土保持局委託研究案, 協同主持人, NT\$2,950,000, March 2017-Dec 2017.
- Co-PI, “Community-based Disaster Management Program in Hill Land Communities in Taipei City”, funded by Taipei City Geotechnical Engineering Office. 106 年度臺北市山坡地住宅自主防災, 臺北市大地工程處委託研究案, 協同主持人, NT\$3,000,000, March 2017-Dec 2017.
- Co-PI, “Development of A Rockfall Prevention Fence with Active Warning System”, funded by China Engineering Consultants, Inc. and Raiteku Co., LTD.. 邊坡防護警示柵欄工法之開發, 中華顧問工程公司及托爾斯公司委託研究案, 協同主持人, NT\$2,000,000, Dec 2016-Dec 2017.
- Co-PI, “Community-based Disaster Management Program in Hill Land Communities in Taipei City”, funded by Taipei City Geotechnical Engineering Office. 105 年度臺北市山坡地住宅自主防災, 臺北市大地工程處委託研究案, 協同主持人, NT\$2,850,000, March 2016-Dec 2016.
- Co-PI, “Disaster Prevention and Protection Project of Taipei City (3/3)”, funded by Taipei City Fire Department, \*received “Excellent Project Execution Award” from national-wide

evaluation. 臺北市災害防救深耕計畫第一期, 臺北市政府消防局委託研究案, 協同主持人, NT\$10,550,000, Feb 2012-Dec 2012. \*獲全國深耕計畫評鑑優等.

Co-PI, “Disaster Prevention and Protection Project of Taipei City (2/3)”, funded by Taipei City Fire Department, \*received “Excellent Project Execution Award” from national-wide evaluation. 臺北市災害防救深耕計畫第一期, 臺北市政府消防局委託研究案, 協同主持人, NT\$10,600,000, Feb 2011-Dec 2011. \*獲全國深耕計畫評鑑優等.

### **International Collaboration Project**

PI, “Influence of Climate Change on Slope Stability: Considering Soil Coupled Thermo-Hydraulic Constitutive Relationships”, Short-Term Research Abroad Project funded by Ministry of Science and Technology, 氣候變遷對邊坡穩定之影響: 考量土壤熱-水力耦合關係, 科技部國外短期研究計畫, 主持人, MOST112-2918-I-011-006, NT\$451,360, January 2023-June 2023.

PI, “Trilateral academic and cultural exchange activity of civil engineering students, funded by National Taiwan University, 台日韓三校土木系學生學術交流活動, 臺大重點姊妹校合作計畫, 主持人, NT \$180,000, August 2018.

PI, “The International Geotechnical Lecture in Taiwan by Dr. William Powrie”, Short-Term International Visiting Scholar Project funded by Ministry of Science and Technology, 科技部邀請國際科技人士短期訪問計畫, 主持人, MOST105-2912-I-011-522, NT\$90,592, November 2016.

PI, “Numerical Analyses of Combined Geohazards induced Failures by Earthquake and Heavy Rainfall (2/2)”, Collaboration Program between the National Taiwan University of Science and Technology and the University of Tokushima, funded by the National Taiwan University of Science and Technology, 地震與降雨引致複合災害之數值分析研究第二期, 臺科大-德島大學雙邊學術合作研究, 主持人, NT \$200,000, July 2015-July2016.

PI, “Lateral Bearing Capacity and Failure Model of Geosynthetic-Reinforced Soil Barriers”, Short-Term Research Abroad Project funded by Ministry of Science and Technology, 加勁擋土壁壘側向承載力與破壞模式之研究, 科技部國外短期研究計畫, 主持人, MOST104-2918-I-011-006, NT\$270,950, July 2015-September 2015.

PI, “The 54<sup>th</sup> Rankine Lecture in Taiwan by Dr. Guy Houlsby”, Short-Term International Visiting Scholar Project funded by Ministry of Science and Technology, 科技部邀請國際科技人士短期訪問計畫, 主持人, MOST103-2912-I-011-523, NT\$52,084, December 2014.

PI, “Numerical Analyses of Combined Geohazards induced Failures by Earthquake and Heavy Rainfall (1/2)”, Collaboration Program between the National Taiwan University of Science and Technology and the University of Tokushima, funded by the National Taiwan University of Science and Technology, 地震與降雨引致複合災害之數值分析研究第一期, 臺科大-德島大學雙邊學術合作研究, 主持人, NT \$250,000, July 2014-July2015.

### **Intramural Research Project**

PI, “Performance and Design Methods of Geosynthetic-Reinforced Soil Structures subjected to Reverse Fault: A Faulting Hazard Mitigation Measure”, Laurel Research Project, funded by National Taiwan University, 加勁構造物在逆斷層作用下之力學行為與設計方法: 抗斷層錯動減災工法, 臺大學術研究生涯發展計畫-桂冠型研究計畫, 主持人, August 2021-July 2024.

PI, “Development of Disaster Mitigation Techniques for Landslide Geohazards (Visiting Research in Kyoto University), Faculty Exchange Program, funded by National Taiwan University, 發展山崩防減災技術(京都大學研究訪問), 臺大交換教授研究計畫, 主持人, August 2020.

- PI, “Behavior of Geosynthetic-Reinforced Soil Walls subjected to Rainfall”, Laurel Research Project, funded by National Taiwan University, 降雨作用下加勁擋土牆力學行為與設計方法之研究, 臺大學術研究生涯發展計劃-桂冠型研究計畫, 主持人, NT \$650,000, January 2019-June 2021.
- PI, “Model Tests on Retaining Walls subjected to Heavy Rainfall”, New Faculty Star-up Research Project, funded by National Taiwan University, 強降雨下擋土構造物物理模型試驗, 臺大頂尖大學計畫-新進教師創始研究計畫, 主持人, NT \$250,000, January 2018-June 2018.
- PI, “Investigation on the Behavior and Failure Mechanism of Geosynthetic-Reinforced Soil”, New Faculty Start-up Research Project, funded by National Taiwan University of Science and Technology, 加勁土壤力學行為與破壞機制之研究, 臺科大頂尖大學計畫-新進教師啟動教學研究計畫, 主持人, NT \$250,000, April 2011-August 2011.

# Teaching

## INSTRUCTION

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### Courses at National Taiwan University (NTU)

- CIE5048-*Application of Geosynthetics* 土工合成材料之應用, (Graduate level), Introduction of the type, function and application of geosynthetics, properties and test methods of geosynthetics, soil-geosynthetic interaction, design method and theory, construction and quality control, analysis and performance of reinforced soil structures under static and seismic conditions.
- CIE7003-*Geotechnical Engineering Seminar* 大地工程專題討論, (Graduate level), A series of lectures on the current issues of geotechnical engineering in academic research or industrial practice. Compilation of effective summary reports and abstracts, evaluation of motivations and objectives in geotechnical research, scope and organization of research reports, critical evaluation of the literature, presentation of research results, analysis of results, compilation of conclusions.
- CIE3026-*Soil Mechanics* 土壤力學, (Undergraduate level), Basic characteristics of geological materials, soil classifications, physical, mechanical, and hydraulic properties, the effective stress principle, seepage, consolidation, stress distribution, settlement analysis, shear strength.
- CIE3028-*Foundation Engineering* 基礎工程, (Undergraduate level), Geotechnical design of shallow foundations, retaining structures, deep excavations and deep foundations. Coverage includes analyses of bearing capacity, settlement, pressure diagram and field tests of various foundation types.
- CIE2006-*Mechanics of Materials* 材料力學, (Undergraduate level), Tension, compression, and shear, axial loaded members, torsion, shear forces and bending moments, stresses in beams, deflections of beams, statistically indeterminate beams, columns, analysis of stress and strain.
- CIE2012-*Engineering Materials and Soil Mechanics Lab* 工程材料與土壤力學試驗, (Undergraduate level), Laboratory tests on physical and engineering properties of construction material including steel, concrete and soil.
- CIE2024-*Keystone Project – Earth Dam Monitoring* 原型實踐-土壩監測, (Undergraduate level), Application of the knowledge and technology on soil behavior and water flow that students learned in the courses Soil mechanics, Fluid mechanics, and the relevant laboratories: 1) to investigate the dam failure using simple calculations and small-scale model tests; 2) to conduct large scale earth dam failure monitoring; 3) to propose and evaluate the remedial measures to improve the performance and stability of the earth dam
- CIE3051-*Civil Engineering Practice and Summer Intern* 土木工程實務與暑期實習, (Undergraduate level), A series of lectures for students to prepare and understand the practice in the civil engineering industry.
- CIE4023-*Civil Engineering Professional Intern* 土木工程專業實習, (Undergraduate level), Guidance and arrangement for students to participate in the professional intern in the in the civil engineering industry.
- CIE1003- *Student Service Education – Civil Engineering Buddy Program* 服務學習-國際學生學伴服務, (Undergraduate level), This course is to organize student volunteers to help international students quickly adapt to the lives in Taiwan and immerse in NTU's study environment. Through the planning and implementation of inter-cultural activities, the interaction between local and international students would be (re)activated, students' global perspective would be broadened, the spirit and attitude towards service learning could be developed, and managerial and leadership abilities would be cultivated.
- BSE5064 –*Soil and Water Conservation Engineering* 水土保持工程, (Undergraduate level), Lecture three hours on the slope stability and stabilization, including the definition of factor of safety, fundamentals of limit equilibrium analyses, infinite slope

analyses, finite slope analyses, ordinary method of slices, simplified Bishop method, Spencer's method, computer-aided analysis, slope monitoring, stabilization and remediation.

### **Courses at National Taiwan University of Science and Technology (Taiwan Tech)**

- CT5608- *Advanced Foundation Engineering* 高等基礎工程, (Graduate level), Geotechnical design of shallow and deep foundations, including spread footings, mats, driven piles and drilled shafts. Coverage includes analyses of bearing capacity, settlement, group effects, lateral load capacity, wave equation and dynamic approaches, and field tests.
- CT5806-*Design of Reinforced Earth Retaining Structures* 加勁擋土結構物設計, (Graduate level), Design and analysis of earth retention walls and slopes. Coverage includes the selection, design and performance evaluation of earth retaining structures, theory involving earth pressure and soil-reinforcement interaction, design properties and test methods of geosynthetics, stability analysis under static and seismic conditions
- CT6501-*Numerical Methods in Geotechnical Engineering* 大地工程數值分析, (Graduate level), Application of various numerical concepts and methods to geotechnical engineering. Coverage includes computational soil mechanics, soil constitutive models, finite element method and simulation to the issues and problems of geotechnical engineering.
- CT5509-*Case Studies in Geotechnical Engineering* 大地工程個案分析, (Graduate level, Co-Instruction with other Geotech faculty) A series of lectures on current geotechnical engineering issues in academic research or industrial practice.
- CT5901-*Civil and Construction Engineering Seminar* 專題討論, (Graduate level), A series of lectures on current construction and civil engineering issues in academic research or industrial practice.
- CT3410-*Soil Mechanics* 土壤力學, (Undergraduate level), Basic characteristics of geological materials, soil classifications; physical, mechanical, and hydraulic properties, the effective stress principle, seepage, consolidation, stress distribution, settlement analysis, shear strength.
- CT3707-*Soil Mechanics Lab* 土壤力學試驗, (Undergraduate level), Geotechnical laboratory tests on soil physical and engineering properties.
- CT3409-*Intermediate Soil Mechanics* 中等土壤力學, (Undergraduate level), Soil compaction, soil stress-strain-volume relations, stress path, slope stability analyses, soil liquefaction assessment.
- CT3403-*Foundation Engineering* 基礎工程, (Undergraduate level), Geotechnical design of shallow foundations, retaining structures, deep excavations and deep foundations. Coverage includes analyses of bearing capacity, settlement, pressure diagram and field tests of various foundation types.
- CT3403-*Design of Foundation and Hillside-Special Projects* 基礎與山坡地設計(實務專題), (Undergraduate level, Co-Instruction with other faculty and professional engineers), Conduct a special geotechnical projects from planning of site investigation, methods of soil testing, simplification of field conditions for design , selection of geotechnical structures, design and analysis of selected structures and introduction of construction facilities.
- HC1010-*Introduction to Science and Technology* 科技概論, (Undergraduate level, Co-Instruction with other faculty), Introduction to the development and application of science and technology in various current practical fields.

### **Courses at the University of Texas at Austin (UT-Austin)**

- CE357- *Introduction to Geotechnical Engineering*, (Undergraduate level, The University of Texas at Austin), Geotechnical laboratory tests on soil physical and engineering properties.

I also have been the teaching assistant or grader for the courses of “CE357-*Earth Retaining Structures* (Graduate level)”, “CE387M.1-*Stability of Earth Slopes* (Gradual level)”, and “*Undergraduate Research Experience Program* (Undergraduate level)” in the University of Texas at Austin.

## STUDENT SUPERVISION

### Student Supervision Summary

|                                | Completed | In Progress |
|--------------------------------|-----------|-------------|
| Ph.D. Student                  | 5         | 6           |
| Master Student                 | 44        | 7           |
| Undergraduate Student          | 12        | 0           |
| International Exchange Student | 4         | 0           |
|                                |           | 78 In Total |

### Student Awards

Michel Edwige (2022), Ph.D. student in NTU, received “Graduate Student Scholarship”, Chung Hsing Surveying Co., Ltd, 111 年度優秀研究生獎學金, 中興測量有限公司頒發。

吳俊緯 (2022), Master student in NTU, received “Master Student Scholarship”, Sinotech Engineering Consultants, Inc., 111 年度優秀研究生獎學金, 中興工程顧問社頒發。

吳昕明 (2022), Ph.D. student in NTU, received “Ph.D. Student Research Abroad Grant”, National Science and Technology Council, 111 年度補助博士生赴國外研究(千里馬)計畫, 國科會頒發。

林佳靜 (2022), master student in NTU, received “Student Paper Contest Award”, The 19<sup>th</sup> Conference of Taiwan Geotechnical Engineering, 學生論文競賽獎, 第 19 屆台灣大地工程研討會頒發。

蔣榮 (2022), Ph.D. student in NTU, received “Dean’s Award for Graduate Student”, College of Engineering, National Taiwan University, 111 年度臺大工學院研究生院長獎, 國立臺灣大學工程學院頒發。

林佳靜 (2022), master student in NTU, received “Dean’s Award for Graduate Student”, College of Engineering, National Taiwan University, 111 年度臺大工學院研究生院長獎, 國立臺灣大學工程學院頒發。

Sukrityranjan Samanta (2022), Master student in NTU, received “NTU Outstanding International Graduate Student Scholarship”, National Taiwan University, 臺大傑出國際研究生獎學金, 國立臺灣大學頒發。

吳昕明 (2021), Ph.D. student in NTU, received “Best Student Paper Award”, Taiwan Soil and Water Conservation Conference, 110 年度水土保持研討會學生論文獎第一名, 中華水土保持學會頒發。

吳昕明 (2021), Ph.D. student in NTU, received “Ph.D. Student Scholarship”, Sinotech Foundation for Research and Development of Engineering Sciences and Technologies, 109 年度博士班研究生獎學金, 中興工程科技研究發展基金會頒發。

吳昱葵 (2020), master student in NTU, received “Geotechnical Engineering Master Thesis Award”, Taiwan Geotechnical Society, 109 年度大地工程碩士論文獎, 中華民國大地工程學會頒發。

- 蔣榮 (2020), Ph.D. student in NTU , received “Ph.D. Student Research Abroad Grant”, Ministry of Science and Technology, 109 年度補助博士生赴國外研究(千里馬)計畫, 科技部頒發。
- 蔣榮 (2020), Ph.D. student in NTU , received “Ph.D. Student Scholarship”, Sinotech Foundation for Research and Development of Engineering Sciences and Technologies, 109 年度博士班研究生獎學金, 中興工程科技研究發展基金會頒發。
- 蔣榮 (2020), Ph.D. student in NTU , received “Ph.D. Scholarship”, Center for Earthquake Engineering Research, National Taiwan University, 109 年度博士班研究生獎學金, 國立臺灣大學工程學院地震工程中心頒發。
- 呂昕臻 (2019), master student in NTU , received “Geotechnical Engineering Master Thesis Award”, Taiwan Geotechnical Society, 108 年度大地工程碩士論文獎, 中華民國大地工程學會頒發。
- 賴兆偉 (2018), master student in Taiwan Tech , received “Geotechnical Engineering Master Thesis Award”, Taiwan Geotechnical Society, 107 年度大地工程碩士論文獎, 中華民國大地工程學會頒發。
- Nguyen Thanh Son (2018), Ph.D. student in Taiwan Tech, was selected as one of the 10 young outstanding members to present his research paper in the IGS Young Members Forum in the 11<sup>th</sup> International Conference on Geosynthetics in Seoul, Korea, 獲選參加國際地工合成材研討會青年會議, 並受邀上台進行研究論文簡報, 參加晚宴及頒獎典禮, 國際地工合成材協會頒發。
- 陳均維 (2017), master student in Taiwan Tech , received “Geotechnical Engineering Master Thesis Honorable Mention”, Taiwan Geotechnical Society, 106 年度大地工程碩士論文佳作, 中華民國大地工程學會頒發。
- 呂育德, 黃慶瑜 (2015), undergraduate students in Taiwan Tech, received “Undergraduate Research and Innovation Award”, Ministry of Science and Technology, 103 年度大專生研究創新獎, 科技部頒發。
- 呂育德, 黃慶瑜 (2015), undergraduate students in Taiwan Tech, received “3<sup>rd</sup> Place Prize of the Undergraduate Research Award”, Department of Civil and Construction Engineering, National Taiwan University of Science and Technology, 實務專題第三名, 國立臺灣科技大學營建工程系頒發。
- Joseph Nganga Thuo (2014), master student in Taiwan Tech, was selected as one of the 10 young outstanding members to present his research paper in the IGS Young Members Session and invited to join the festive dinner in the 10<sup>th</sup> International Conference on Geosynthetics in Berlin, Germany, 獲選參加國際地工合成材研討會青年會議, 並受邀上台進行研究論文簡報, 參加晚宴及頒獎典禮, 國際地工合成材協會頒發。
- 葉力瑜, Christian Haussner (2014), undergraduate students in Taiwan Tech, received “2<sup>nd</sup> Place Prize of the Undergraduate Research Award”, Department of Civil and Construction Engineering, National Taiwan University of Science and Technology, 實務專題第二名, 國立臺灣科技大學營建工程系頒發。
- 林瑞鈞, 陳毅修, 藍子軒 (2013), master students in Taiwan Tech, received “3<sup>rd</sup> Place Prize of the Student English Competition”, Department of Construction Engineering, National Taiwan University of Science and Technology. 學生英語競賽第三名, 國立臺灣科技大學營建工程系頒發。
- 林俊佑 (2012), master student in Taiwan Tech, received “Excellent Youth Award”, College of Engineering, National Taiwan University of Science and Technology, 臺科大工學院優秀青年獎, 國立臺灣科技大學工學院頒發。
- 劉玳伶(2012), master student in Taiwan Tech, received “International Geosynthetics Society Student Award”, from the International Geosynthetics Society-Taiwan Chapter, and also received travel grant to the 2012 Geosynthetics Asia Conference in Bangkok, Thailand.

國際地工合成材學生獎-臺灣代表，國際地工合成材協會頒發。

Erick Y. Kencana (2012), master student in Taiwan Tech, received “International Geosynthetics Society Student Award”, from the International Geosynthetics Society-Indonesia Chapter, and also received travel grant to the 2012 Geosynthetics Asia Conference in Bangkok, Thailand. 國際地工合成材學生獎-印尼代表，國際地工合成材協會頒發。

徐梓隆，陳世焯 (2011), undergraduate students in Taiwan Tech, received “1<sup>st</sup> Place Prize of the Best Undergraduate Research Award”, Department of Construction Engineering, National Taiwan University of Science and Technology. 最佳專題(第一名)獎，國立臺灣科技大學頒發。

### **Undergraduate Research Grants**

1. 林勁儒 (2016), undergraduate students in Taiwan Tech, received Undergraduate Students Research Grant, Ministry of Science and Technology, topic: “Triaxial Unconfined-Compression Tests on Fiber-Reinforced Cemented Silt for Soil Improvement.” 以三軸無圍壓縮試驗探討加勁纖維對粉土剪力強度之影響，科技部大專學生研究計畫，NSC105-2815-C-011-008-E, NT\$48,000, July 2016-Feb 2017.
2. 呂育德 (2014), undergraduate students in Taiwan Tech, received Undergraduate Students Research Grant, Ministry of Science and Technology, topic: “Geotechnical Ecological Engineering: The Influence of Unsaturated Soil Shear Strength on the Intertidal Habitat and Bivalve Behavior.” 不飽和土壤剪力強度對潮間帶生物棲地之影響研究，科技部大專學生研究計畫，NSC103-2815-C-011-012-E, NT\$47,000, July 2014-Feb 2015.
3. 葉力瑜 (2013), undergraduate students in Taiwan Tech, received Undergraduate Students Research Grant, National Science Council, topic: “Drainage and Mechanical Behavior of Low Permeable Reinforced Soil and Its Improvement Measures: Application to design of reinforced retaining structures under typhoon and heavy rainfall conditions”. 低滲透性加勁土壤排水行為與改善措施之研究：應用於颱風豪雨下加勁擋土結構物之設計，國科會大專學生研究計畫，NSC102-2815-C-011-034-E, NT\$47,000, July 2013-Feb 2014.

### **Ph.D. Supervision in Progress**

1. Michel Bethie Emerson Edwige (2021-2025 Expected), Potential Research Direction: “Large-scale landslides”, NTU.
2. 盧瑜典 (2020-2024 Expected), Potential Research Direction: “Large-scale landslides”, NTU.
3. 施嘉昌 (2019-2023 Expected), Potential Research Direction: “Efficiency and Optimum Design of Subsurface Drainage Systems for Slope Stabilization”, NTU.
4. 吳昕明 (2019-2023 Expected), Potential Research Direction: “Performance of Geosynthetic-Reinforced Soil Structures under Rainfall and Flood”, NTU.
5. 蔣榮 (2017-2021 Expected), Potential Research Direction: “Performance of Geosynthetic-Reinforced Soil Foundation across Fault”, NTU.
6. 曾世傑 (2016~2020 Expected), Potential Research Direction: “Use of Reinforced Earth for Protection against Blast Loads, Taiwan Tech.

### **Ph.D. Supervision Completed**

1. Nguyen Thanh Son (2020), Potential Research Direction: “Deformation Characteristics of Unstable Shallow Slopes triggered by Rainfall Infiltration: from Pre-Failure to Post-Failure



- Stages”, Taiwan Tech.
2. Williams Mathieu Adilehou (2017), Dissertation: “Hydraulic Responses of Fiber-Reinforced Soil Susceptible to Piping and Suffusion Failures”, Taiwan Tech.
  3. Joseph Nganga Thuo (2017), Dissertation: “Hydro-Mechanical Coupled Analysis of Unsaturated Nature and Reinforced Soil Slopes”, Taiwan Tech.
  4. Suliman Badawi Mohamed (2014), Dissertation: “Numerical Analyses and Design Considerations of Geosynthetic-Reinforced Two-Tier Structures”, Taiwan Tech.
  5. Duc Minh Nguyen (2014), Dissertation: “Shear Behavior of Geosynthetic- Reinforced Granular and Cohesive Soils”, Co-supervised with Dr. S.H. Lee, Taiwan Tech.

### **Master Student Supervision Completed**

1. Richard Litanes (2021), Thesis: “Determination of Soil Properties and Numerical Analyses of Deep Excavations in Jakarta Clay”, NTU.
2. 張乃軒 (2021), Thesis: “Landslide Susceptibility Assessment and Slope Displacement Threshold based on PSInSAR – Case Study of Landslides along Pu-Tun-Pu-Nas River Area”, NTU.
3. 顏筱穎 (2021), Thesis: “Establishment of Slope Displacement Relationships between PSInSAR and Inclinometer Measurement – Case Study of Taipei Maokong Slope”, NTU.
4. 吳昱葵 (2020), Thesis: “Material Point Method Analysis of Post-Failure Process and Kinematic Behavior of Landslides”, NTU.
5. 曾婷苓 (2020), Thesis: “Model Test o the Performance of Geosynthetic- Reinforced Soil Walls with Marginal Backfill subjected to Rainfall”, NTU.
6. 詹于萱 (2020), Thesis: “Finite Element Analysis and Design Method of Geosynthetic-Reinforced Soil Foundation subjected to Normal Fault Movement”, NTU.
7. Mark Gonzaga (2019), Thesis: “Influence of Backfill Fines Content on the Performance of Geosynthetic-Reinforced Soil Walls under Rainfall Infiltration”, NTU.
8. 呂昕臻 (2019), Thesis: “Evaluation of Improved Methods for Geosynthetic-Reinforced Soil Walls with Marginal Backfills subjected to Rainfall”, NTU.
9. 吳健鈞 (2019), Thesis: “Three Dimensional Finite Element Analysis of Deep Excavation in Taichung Gravel Deposit”, NTU.
10. 駱建澄 (2019), Thesis: “Numerical Evaluation of A Multi-tier Geosynthetic-Reinforced Soil Slope for Mudstone Slope Protection”, NTU.
11. Tatag Yufitra Rus (2018), Thesis: “3D Finite Element Analysis of Deep Excavation in Central Jakarta using Total and Effective Shear Strength Properties”, Taiwan Tech.
12. 李亦新 (2018), Thesis: “Performance and Design of Geosynthetic-Reinforced Soil Slopes subjected to Rainfall: Considering Regional Hydrological Conditions”, Taiwan Tech.
13. 賴兆偉 (2018), Thesis: “Model Tests on Geosynthetic-Reinforced Soil Foundations across a Normal Fault”, Taiwan Tech.
14. 白名旋 (2018), Thesis: “Model Tests on Fiber-Reinforced Sandy Embankments subjected to Seepage”, Taiwan Tech.
15. 張瑞勳 (2017), Thesis: “Three-Dimensional Finite Element Modeling of Geosynthetic-Reinforced Soil Structures subject to Lateral Loadings”, Taiwan Tech.
16. 陳均維 (2017), Thesis: “Hydro-Mechanical Coupled Analysis of A Multi-tier

- Geosynthetic-Reinforced Soil Slope subject to Rainfall Infiltration”, Taiwan Tech.
17. 魏韶邦 (2017), Thesis: “Fiber-Reinforced Gap-Graded Soil against Suffusion”, Taiwan Tech.
  18. Ndey Awa Ndure (2017), Thesis: “Shear Behavior and Pore Water Pressure Generation of Fiber-Reinforced Silt under Consolidated-Undrained Compression”, Taiwan Tech.
  19. 郭哲睿(2017), Thesis: “Failure Investigation of a Four Tier Geosynthetic- Reinforced Soil Slopes with Marginal Backfill”, Taiwan Tech.
  20. 簡碩廷(2016), Thesis: “Experimental and Numerical Study of Hydraulic Responses of Fiber-Reinforced Sand subject to Seepage”, Taiwan Tech.
  21. 李俊葦 (2016), Thesis: “Unconfined Compression Tests on Fiber-Reinforced Cemented Silt: Effect of Cement on Fiber Bonding Strength”, Taiwan Tech.
  22. 林庭妤(2016), Thesis: “Numerical Analyses of Geosynthetic-Reinforced Soil Walls with Flexible Wrapped Facings”, Taiwan Tech.
  23. Aila Wahyuning (2016), Thesis: “Establishment of Geotechnical Properties and 3D Numerical Models for Deep Excavation in Central Jakarta”, Taiwan Tech.
  24. Anh Huynh Vo Duyen (2016), Thesis: “Geotextile- and Geogrid-Reinforced Soil Slopes with Various Backfills and Sand Cushion Thickness Subject to Rainfalls”, Taiwan Tech.
  25. 唐嘉禧 (2015), Thesis: “Finite Element Analyses of Acceleration-Amplified Response within Geosynthetic-Reinforced Soil Structures”, Taiwan Tech.
  26. 林渝朋 (2015), Thesis: “Evaluation of Suitability of Limit Equilibrium Analysis for Geosynthetic-Reinforced Soil Wall Design”, Taiwan Tech.
  27. 林冠良 (2015), Thesis: “Hydro-mechanical Coupled Analyses of Rainfall induced Instabilities of Two Unsaturated Slopes”, Taiwan Tech.
  28. Joseph Nganga Thuo (2014), Thesis: “Numerical Study of Infiltration into Unsaturated Clay Slopes with Nonwoven Geotextile Drains Sandwiched in Sand Cushions: Featuring Capillary Barrier Effect”, Taiwan Tech.
  29. 藍子軒 (2014), Thesis: “Investigation on Acceleration Amplification within Geosynthetic-Reinforced Soil Structures under Dynamic Loading”, Taiwan Tech.
  30. 陳毅修 (2014), Thesis: “Finite Element Study on Lateral Bearing Capacity and Failure Mode of Geosynthetic-Reinforced Soil Barriers”, Taiwan Tech.
  31. 林瑞鈞 (2014), Thesis: “Experimental Evaluation of Filtration and Drainage Efficiency of Double Filter System Composed of Granular Soil and Nonwoven Textile Layers”, Taiwan Tech.
  32. Wubete Y. Mengist (2014), Thesis: “Behavior of Geotextile Reinforced Clay and Improvement with Sand-Sandwich Technique under Unconsolidated Undrained Tests”, Taiwan Tech.
  33. 張維洋 (2013), Thesis: “Influence of Reinforcement Stiffness on the Behavior of Reinforced Sand under Triaxial Compression Tests”, Taiwan Tech.
  34. 林俊佑(2013), Thesis: “Experimental Study on Drainage Efficiency and Improvement Measures of Low Permeable Soil with Geosynthetic Drainage Layers”, Taiwan Tech.
  35. 楊智皓 (2013), Thesis: “Reliability-Based Analysis for Internal Stabilities of Geosynthetic-Reinforced Soil Structures incorporating Model Uncertainties”, Taiwan Tech.
  36. Ayesha Avanti (2013), Thesis: “Numerical Analyses of Jakarta MRT Deep Excavation Project”, Taiwan Tech.

37. Bondan Ciptoprakoso (2013), Thesis: “The Influence of Existing Foundations on Adjacent Deep Excavation: A Parametric Study using Finite Element Method”, Taiwan Tech.
38. Rizkiyati A. Zhuraida (2013), Thesis: “Limit Equilibrium Analyses of Multi-Tiered Geosynthetic-Reinforced Structures”, Taiwan Tech.
39. 汪俊彥 (2012), Thesis: “Experimental Study on Seepage Failure of Uniform and Gap-Graded Soils”, Taiwan Tech.
40. 劉玳伶 (2012), Thesis: “Evaluation of Various Design Methods for Predicting Reinforcement Loads within Flexible and Rigid Facing Geosynthetics-Reinforced Soil Structures”, Taiwan Tech.
41. 尤嘉倫 (2012), Thesis: “Reliability-Based Analysis for Internal Stabilities of Geosynthetic-Reinforced Soil Structures: Considering Earth Pressure and K-Stiffness Methods and Their Model Uncertainty”, Taiwan Tech.
42. Erick Y. Kencana (2012), Thesis: “Evaluation of Acceleration Amplified Response and Mobilized Reinforcement Loads within Geosynthetics-Reinforced Structures under Dynamic Loading”, Taiwan Tech.
43. 蔡明宏 (2011), Thesis: “Behavior of Reinforced Soil and the Mobilization of Reinforcement Strains using Triaxial Compression Tests”, Taiwan Tech.
44. Panji Utomo (2011), Thesis: “Evaluation of Various Design Methods for Predicting Reinforcement Tension within Geosynthetics-Reinforced Soil Structures”, Taiwan Tech.

### **Master Student Supervision in Progress**

1. 傅雅萱 (2021~2023 Expected), Potential Research Direction: “Undecided”, NTU.
2. 陳柏鈞 (2021~2023 Expected), Potential Research Direction: “Undecided”, NTU.
3. 吳俊緯 (2021~2023 Expected), Potential Research Direction: “Undecided”, NTU.
4. Sukrityranjan Samanta (2021~2023 Expected), Potential Research Direction: “Undecided”, NTU.
5. 彭逸蘋 (2020~2022 Expected), Potential Research Direction: “Evaluation of the failure mechanism and improvement measures of Kuang-Hwa Landslide using MPM Analyses”, NTU.
6. 張洹瑜 (2020~2022 Expected), Potential Research Direction: “Effect of Earth Berm on Wall Deflections of a Deep Excavation in Gravel Ground”, NTU.
7. 林佳靜 (2020~2022 Expected), Potential Research Direction: “Model Test on the Performance of Geosynthetic-Reinforced Soil Structures subjected to Flood”, NTU.

### **Undergraduate Student Research Program Completed**

1. 許嘉峻 (2022) Topic: “Landslide Susceptibility Assessment based on PSInSAR”, NTU.
2. 黃強 (2021), Topic: “Effect of Buttress Walls the Deep Excavation”, NTU.
3. 張祐齊 (2018), Topic: “Model Tests on Rainfall-Induced Shallow Landslide Failure”, NTU.
4. 林劭儒 (2016), Topic: “Triaxial Unconfined-Compression Tests on Fiber -Reinforced Cemented Silt for Soil Improvement”, Taiwan Tech.
5. 呂育德 (2014), Topic: “Geotechnical Ecological Engineering: The Influence of Unsaturated Soil Shear Strength on the Intertidal Habitat and Bivalve Behavior”, Taiwan Tech.

6. 黃慶瑜 (2014), Topic: “Geotechnical Ecological Engineering: The Influence of Unsaturated Soil Shear Strength on the Intertidal Habitat and Bivalve Behavior”, Taiwan Tech.
7. 葉力瑜 (2013), Topic: “Drainage Efficiency and Improvement Measure of Low Permeable Reinforced Soils: Application to GRS structures design under typhoon and heavy rainfall conditions”, Taiwan Tech.
8. Christian Haussner (2013), Topic: “Drainage Efficiency and Improvement Measure of Low Permeable Reinforced Soils: Application to GRS structures design under typhoon and heavy rainfall conditions”, Taiwan Tech.
9. 徐梓隆 (2010), Topic: “Experimental Study on Failure Mechanism and Hydraulic Conditions of Soil Piping”, Taiwan Tech.
10. 陳世焯 (2010), Topic: “Experimental Study on Failure Mechanism and Hydraulic Conditions of Soil Piping”, Taiwan Tech.
11. 章紹騏 (2010), Topic: “Investigation on Potential Disaster Area and the Prevention Solutions”, Taiwan Tech.
12. 郭彬彬 (2009), Topic: “Investigation on Potential Disaster Area and the Prevention Solutions”, Taiwan Tech.

### **International Exchange Student Program**

1. 楊惠(2018), Topic: “Research on Geosynthetic-Reinforced Soil Structure subjected to Rainfall”, Department of Geology, Northwest University (西北大學), China.
2. Julia Mazet-Sonilhac (2017), Topic: “Research on Application of Geosynthetics”, Department of Civil Engineering, French for School of High Studies in Engineering (HEI Lille), France.
3. Veronika Špedlová (2016), Topic: “Research on Drilled Shaft Design”, Department of Civil Engineering, Czech Technical University in Prague, Czech.
4. 姚峰(2011), Topic: “Research on Tunneling-induced Ground Settlement”, Department of Underground Engineering, College of Civil and Architectural Engineering, Beijing Jiaotong University (北京交通大學), China.

# Service

## SERVICE IN PROFESSIONAL REVIEW

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### Editorial Board Member

Editor-in-Chief, “Journal of GeoEngineering”, Taiwan Geotechnical Society, 總編輯, 大地工程期刊, 2021-Present

Editor-in-Chief, “TGS Geotechnical Special Publication”, Taiwan Geotechnical Society, 總編輯, 大地工程學會特刊, 2019-2021

Executive Editor, “Journal of GeoEngineering”, Taiwan Geotechnical Society, 執行編輯, 大地工程期刊, 2011-2020

Editorial Board Member, “Geotextiles and Geomembranes”, published by Elsevier, 編輯委員, 國際期刊, 2021-Present

Editorial Board Committee, “Journal of GeoEngineering”, 編輯委員, 大地工程期刊, 2021-Present

### Guest Editor

Special Column on “Introduction of New Geotechnical Book”, *Sino-Geotechnics.*, 新書介紹專欄編輯, 地工技術, 2018

Special Issue on “The Role and Impact of Geofluids in Geohazards: Editorial”, *Geofluids*, 2018

### Book Proposal Review

Book title: “Geomembranes for Lining Canals”, published by Taylor & Francis. 2016

Book title: “Geosynthetic Reinforced Soil Walls”, published by John Wiley & Sons, 2019

### Book Review

Book title: “The Slopeland Disaster Prevention Warning and Monitoring System” and “Management of Man-Made Slopes”, published by the Geotechnical Engineering Office, Taipei City Government, 『山坡地防災預警與監測系統』及『人工邊坡管理實務』, 臺北市政府大地工程處出版

Book title: “Highway Slopes Design Guidelines” and “Maintenance and Management Guidelines for Highway Slopes Geotechnical Facilities”, published by the Ministry of Transportation and Communications, 『104年公路邊坡工程設計規範』及『104年公路邊坡大地工程設施維護與管理規範』, 行政院交通部出版

Book title: “Manual of Adjacent Building Protections of Deep Excavation” and “Manual of Design and Monitoring of Deep Excavation” published by the Ministry of Interior, 『建築物基礎施工大地監測計畫手冊』及『建築物深開挖鄰房保護設計手冊』, 行政院內政部建築研究所出版

## SERVICE IN PROFESSIONAL SOCIETIES

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### International Society

Technical Committee, Reinforced Fill Structures (TC218), International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), 2020-Present

Technical Committee, Slope Stability in Engineering Practice (TC208), International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), 2020-Present

Asian Technical Committee, Urban GeoEngineering (ATC6), International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), 2013-Present

Technical Committee (TC-R), Soil Reinforcement, International Geosynthetics Society, 2012-Present

### Chinese National Standard

Technical Committee (TC1), on Civil Eng. and Architecture, National Bureau of Standards, Metrology & Inspection, 土木工程及建築國家標準技術委員, 經濟部標準檢驗局

### Chinese Institute of Civil Engineering

Vice Chair of Academic and Educational Committee, and Committee Members of Geotechnical Engineering, International Affair, Young Engineer, and Student Activity Committee, Chinese Institute of Civil and Hydraulic Engineering, 中國土木水利工程學會 曾任學術與教育學委員會副主委, 大地工程、國際關係、青年工程師、與學生活動委員會委員

Working Group, for Sustainable Development – Green Construction Part of Civil Engineering Industry White Paper, Chinese Institute of Civil and Hydraulic Engineering, 土木產業白皮書 - 對國家建言, 中國土木水利工程學會永續發展綠營建部分工作小組, 2014

### Taiwan Geotechnical Society

Council Committee Member, Chair of Young Geotechnical Engineer Delegates Committee, and Geotechnical Special Publication, Vice Chair of Journal Editorial Board, and Member Service Committee, Taiwan Geotechnical Society, 中華民國大地工程學會 曾任理事, 優秀青年大地工程師評選委員會主委, 特刊委員會主委, 學刊委員會副主委, 會員委員會副主委

Committee Member on Slope Monitoring Guidelines, Taiwan Geotechnical Society, 中華民國大地工程學會山坡地監測準則編修委員

Committee Member on Building Foundation Design Specifications, Taiwan Geotechnical Society, 中華民國大地工程學會建築物基礎構造設計規範編修委員

Committee Member on Review for the Construction adjacent to MRT System and Railway, Taiwan Geotechnical Society, 中華民國大地工程學會大眾捷運系統暨鐵路兩側禁限建範圍內列管案件審查作業委員

### Taiwan Geosynthetics Society

Council Committee Member, Chair of Academic Committee, and Member Service Committee, and Vice Chair of International Liaison Committee, Taiwan Geosynthetics Society, 中華土工材料協會 曾任理事, 學術委員會主委, 委員會主委與國際事務委員會副主委

## **Sino-Geotechnics Research and Development Foundation**

Committee Member of Academic Committee, and TORSA Development and Promotion Committee, Sino-Geotechnics Research and Development Foundation, 財團法人地工技術研究發展基金會 學術委員會委員與 TORSA 研究與推廣委員會委員

Sponsor Member, Sino-Geotechnics Research and Development Foundation, 財團法人地工技術研究發展基金會 贊助會員

## **SERVICE IN GOVERNMENTAL AGENCIES**

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### **Council of Agriculture**

Reviewer, Review for Simplified Soil and Water Conservation Proposal, designated by the Soil and Water Conservation Bureau, Council of Agriculture, 簡易水土保持計畫書, 審查委員, 農委會水土保持局, January 2022

Reviewer, Review for Design of Large-Scale Landslide Stabilization Project, designated by the Soil and Water Conservation Bureau, Council of Agriculture, 大規模崩塌區治理工程, 審查委員, 農委會水土保持局, 2020-2021

Reviewer, Review for Design and Construction of Soil and Water Conservation Facility, designated by the Soil and Water Conservation Bureau, Council of Agriculture, 水土保持設施設計施工, 審查委員, 農委會水土保持局, February 2019

### **Ministry of Examination**

Examination Committee Member, Civil Service Senior Examination – Level 2, designated by the Ministry of Examination, 公務人員高等考試二級, 命題與閱卷委員, 考選部, 2018

Examination Committee Member, Fundamental Examination for Professional Geotechnical Engineers, designated by the Ministry of Examination, 大地工程技師第一階段考試, 命題委員, 考選部, 2017

### **Ministry of Education**

Panelist, Review of High School Student Learning Portfolio, designated by the Ministry of Education, 教育部學習歷程檔案審議計劃, 大學教授與談者, 教育部, September 2020

Evaluator, Evaluation of Campus Disaster Prevention Project, designated by the Ministry of Education, 教育部防災校園建置計劃, 訪視學者, 教育部, June 2016

### **Ministry of Science and Technology**

Reviewer, Second Review for Research Project Proposal, designated by the Ministry of Science and Technology, 科技部專題研究計劃, 複審委員, 科技部, since 2020

Reviewer, Preliminary Review for Research Project Proposal, designated by the Ministry of Science and Technology, 科技部專題研究計劃, 初審委員, 科技部, since 2012

Reviewer, Preliminary Review for Undergraduate Student Research Project Proposal, designated by the Ministry of Science and Technology, 科技部大專生研究計劃, 初審委員, 科技部, since 2021

Reviewer, Review for Graduate Student Travel Grant to International Conference, designated by the Ministry of Science and Technology, 科技部研究生出席國際會議, 審查委員, 科技部, 2016

## **Ministry of Transportation and Communication**

- Reviewer, Review for Inspection and Maintenance Manual for Railway Slopes, designated by the Ministry of Transportation and Communications, 『台鐵邊坡養護手冊』, 審查委員, 交通部, January 2022
- Evaluator, Evaluation of Project Execution of Carbon Footprint Analysis of Applications of Geosynthetics to Infrastructures and Highway, designated by the Ministry of Transportation and Communications, 『碳足跡應用於快速公路地工合成材料之研究』, 審查委員, 交通部, September 2016
- Reviewer, Review for Design and Maintenance Guidelines for Highway Slopes, designated by the Ministry of Transportation and Communications, 『公路邊坡工程設計規範』及『公路邊坡大地工程設施維護與管理規範』, 複審委員, 交通部, June 2015
- Working Group, Forensic Investigation on Catastrophic Landslide at Keelung-Sijhih Section (3K+100) of National Freeway No. 3, designated by the Ministry of Transportation and Communications, 國道三基隆汐止路段(3K+100)走山事故調查小組, 交通部, 2010

## **City and County Government**

- Judge and Supervisor, “55<sup>th</sup> Taipei Primary and Secondary School Science Fair”, designated by the Education Department of Taipei City Government, 第 55 屆臺北市中小學科學展覽, 評審委員與輔導教授, 臺北市政府教育局, March 2022
- Reviewer, Evaluation for the T Taoyuan MRT Green Line GC03 Underground Section between G07 Station~North Daylighting Civil Construction Turnkey Project, designated by the Public Work Department of New Taipei City Government, 桃園捷運綠線計畫潛通穿越中山高速公路施工計畫書, 審查委員, 桃園市政府捷運局, October 2021
- Expert Consultant, Consultation for the Landslide Stabilization Project, designated by the designated by the Water Resources Bureau of Kaohsiung City Government, 高雄崩塌治理工程, 專家學者, 高雄市政府水利局水土保持科, April 2021
- Reviewer, Evaluation for the Project Execution of Intelligent Disaster Prevention Community in the Hill Land Area of New Taipei City, designated by the Public Work Department of New Taipei City Government, 新北市山坡地智慧防災社區計畫, 審查委員, 新北市政府工務局, February 2020
- Reviewer, Consultation for the Assessment of the Long Term Soil Water Conservation Project for Debris Flow Susceptible Area, designated by the Water Resources Department of Yilan County Government, 宜蘭縣土石流特定水土保持區長期水土保持計畫通盤檢討工作, 審查委員 宜蘭縣政府水利資源處, October 2018
- Expert Consultant, Consultation for the Assessment of the Long Term Soil Water Conservation Project for Landslide Susceptible Area, designated by the Agriculture Department of New Taipei City Government, 新北市崩塌地特定水土保持區長期水土保持計畫通盤檢討工作, 專家學者, 新北市政府農業局, October 2017
- Reviewer, Evaluation for the Project Execution of Monitoring and Inspection of Manmade Retaining Structures in Taipei City, designated by the Public Work Department of Taipei City Government, 臺北市人工邊坡巡檢工作, 審查委員, 臺北市政府工務局大地工程處, April 2017
- Expert Consultant, Consultation for the Project of Assessment of Soil Liquefaction Potentials in Taipei City, designated by the Public Work Department of Taipei City Government, 臺北市土壤液化潛勢區分析評估工作, 專家學者, 臺北市政府工務局, July 2016



## SERVICE IN ORGANIZATION OF TECHNICAL EVENTS

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### Conference

- Academic Committee, “2021 Conference on Computer Applications in Civil and Hydraulic Engineering (CCACHE 2021)”, organized by Chinese Institute of Civil and Hydraulic Engineering, and National Central University, 2021 電子計算機於土木水利工程應用研討會, 中國土木水利工程學會與國立中央大學主辦, Taoyuan, Taiwan, 2021
- Organizing Committee, “7<sup>th</sup> Asian Regional Conference on Geosynthetics (IGS GeoAsia 2021)”, organized by Taiwan Geosynthetics Society, 第 7<sup>th</sup> 屆亞洲地工合成材研討會, 中華地工材料協會主辦, Taichung Taiwan, 2021
- Conference Committee, “16<sup>th</sup> Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, (16 ARC)”, organized by Taiwan Geotechnical Society, 第 16 屆亞洲大地工程研討會, 中華民國大地工程學會主辦, Taipei Taiwan, 2019
- Scientific Committee, “The 2<sup>nd</sup> International Symposium on Asia Urban GeoEngineering, (2<sup>nd</sup> ISAUG)”, organized by International Society for Soil Mechanics and Geotechnical Engineering ATC6, Changsha China, 2017
- Working Group, “17<sup>th</sup> Conference on Current Researches in Geotechnical Engineering in Taiwan, (17 GeoTaiwan)”, organized by Taiwan Geotechnical Society, 第 17 屆臺灣大地工程研究討論會, 中華民國大地工程學會主辦, Taipei Taiwan, 2017
- Advisory Committee and Session Chair,, “2015 International Forum on Advanced Technologies (IFAT2015)”, organized by The University of Tokushima, Tokushima Japan, 2015
- Organizing Committee, “Chinese Institute of Civil and Hydraulic Engineering Annual Meeting”, organized by Chinese Institute of Civil and Hydraulic Engineering and National Taiwan University of Science and Technology, 中國土木水利工程學會年會, 中國土木水利工程學會與國立臺灣科技大學主辦, Taipei Taiwan, 2013

### Session Chair

- Session Chair, “Geosynthetics” and “Urban GeoEngineering”, *The 16<sup>th</sup> Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, 16ARC 2019*, Taipei, Taiwan, October 2019.
- Session Chair, “Landslide”, *The 5<sup>th</sup> Conference on Geotechnical Engineering for Disaster Mitigation and Rehabilitation*, 5<sup>th</sup> GEDMAR, Taipei, Taiwan, September 2017.
- Session Chair, “Impact of desiccation cracking and tensile strength on the stability and performance of slopes and embankments” for Geo-Congress 2013, Geo-Institute, American Society of Civil Engineers, San Diego, CA, 2013.

### Lecture and Workshop

- Organizing Committee, “International Scholar Lecture by Dr. William Powrie on Recent Developments in the Design and Understanding the Performance of Embedded Retaining Walls, organized by Taiwan Geotechnical Society and National Taiwan University of Science and Technology, 大地工程國際學者演講, Dr. William Powrie 主講, 中華民國大地工程學會與國立臺灣科技大學主辦, Taipei Taiwan, 2016
- Organizing Committee, “International Scholar Lecture by Dr. John McCartney on Design of Energy Piles considering Soil-Structure Interaction, organized by Taiwan Geotechnical

Society and National Taiwan University of Science and Technology, 大地工程國際學者演講, Dr. John McCartney 主講, 中華民國大地工程學會與國立臺灣科技大學主辦, Taipei Taiwan, 2015

Organizing Committee, “The 54<sup>th</sup> Rankine Lecture by Dr. Guy Houlby on Interactions in Offshore Foundation Design, organized by Taiwan Geotechnical Society and National Taiwan University of Science and Technology, 第 54 Rankine 演講, Dr. Guy Houlby 主講, 中華民國大地工程學會與國立臺灣科技大學主辦, Taipei Taiwan, 2014

Organizing Committee, “International Scholar Lecture by Dr. James Mitchell’s Lecture on GeoTech Tools - an Interactive Web-Based Information and Guidance System for Ground Improvement Technologies”, organized by Taiwan Geotechnical Society and National Taiwan University of Science and Technology, 大地工程國際學者演講, Dr. James Mitchell 主講, 中華民國大地工程學會與國立臺灣科技大學主辦, Taipei Taiwan, 2013

Organizing Committee, “The 52<sup>th</sup> Rankine Lecture by Dr. Malcolm Bolton on Performance-Based Design in Geotechnical Engineering”, organized by Taiwan Geotechnical Society and National Taiwan University of Science and Technology, 第 52 Rankine 演講, Dr. Malcolm Bolton 主講, 中華民國大地工程學會與國立臺灣科技大學主辦, Taipei Taiwan, 2012

Organizing Committee, “International Scholar Lecture by Dr. Lu Ning’s Lecture on Unsaturated Soil”, organized by Taiwan Geotechnical Society and National Taiwan University of Science and Technology, 大地工程國際學者演講, 盧寧教授主講, 中華民國大地工程學會與國立臺灣科技大學主辦, Taipei Taiwan, 2012

Organizing Committee, “International Scholar Lecture by Dr. David Muir-Wood on Magic of the Sand”, organized by Taiwan Geotechnical Society and National Taiwan University of Science and Technology, 大地工程國際學者演講, Dr. David Muir-Wood 主講, 中華民國大地工程學會與國立臺灣科技大學主辦, Taiwan, 2010

## **SERVICE TO UNIVERSITY**

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### **Service to University and College**

獎助學金暨優秀青年審查委員會  
校務及院務會議教師全院互選代表選舉工作小組  
工學院希望組戊組入學審查委員  
工學院學士班甄選入學共同命題委員  
工學院環安衛小組委員  
工學院地震工程研究中心捷運影響評估審查委員  
工學院地震工程研究中心特殊結構審查委員

### **Service to Department**

#### 系務行政

土木系副系主任

#### 系務襄助

土木系中華工程教育認證(IEET)會談與實驗室參訪導覽老師  
土木系海峽兩岸論壇聯絡人  
參與至越南河內土木大學(NUCE, Hanoi, Vietnam)招生與研究交流活動

### 系招生

土木系碩博士班甄試評審委員  
土木系碩士班命題、閱卷委員  
土木系大學部國際學生面試委員

### 系委員會

土木系招生委員  
土木系國際事務委員  
土木系環境安全衛生委員  
土木系教學與課程委員  
土木系博士班研究生指導委員  
土木系博士班資格考委員

### 學生事務

土木系關懷導師  
土木系椰林菁英計畫學生活動辦理老師  
土木系系學會國際部成立  
土木系大地組研究生學術寫作營  
台日韓三方(台大、首爾大學、東京大學)土木系學生學術交流活動(Trilateral Student Activity, TSA) 指導教授  
TSA 土木系學生學術交流活動大地組指導教授  
土木系大學部導師  
土木系系學會學生留學座談會經驗分享  
土木系系學生國際職場移動力座談會