

Curriculum vitae with track record (for researchers)

Personal information

First name, Surname:	Gyu-Hyun Go		
Date of birth:	12.Feb.1986	Sex:	M
Nationality:	South Korea		
Researcher unique identifier(s)	Google scholar: https://scholar.google.com/citations?user=QRRNoEYAAAAJ&hl=ko		
URL for personal website:	https://www.gyuhyungo-geosystemlab.com/		

Education

Year	Faculty/department - University/institution - Country
2016 (dissertation defended)	Ph.D. in civil and environmental engineering – KAIST, S.Korea
2011	B.S. in civil and environmental engineering, Hanyang University, S.Korea

Positions - current and previous

(Academic sector/research institutes/industrial sector/public sector/other)

Year	Job title – Employer - Country
2026-Curent	Professor, Kumoh National Institute of Technology, S.Korea
2023 -2026	Associate Professor, Kumoh National Institute of Technology, S.Korea
2018-2023	Assistant Professor, Kumoh National Institute of Technology, S.Korea
2016-2018	Senior Researcher, Korea Institute of Civil Engineering and Building Technology (KICT), S.Korea

Project management experience

(Academic sector/research institutes/industrial sector/public sector/other. Please list the most relevant.)

Year	Project owner - Project - Role - Funder
2025-2028	Kumoh National Institute of Technology, S.Korea – Multi-Hazard Assessment of Repurposing Underground Coastal Facilities for Safe and Cost-efficient Underground Hydrogen Storage– Project manager – NFR, S.Korea
2022-2027	Kumoh National Institute of Technology, S.Korea – Development of optimization technology for artificial ground freezing at challenging tunnel construction sections with groundwater flow – Project manager – NFR, S.Korea
2024	Kumoh National Institute of Technology, S.Korea – Sensitive analysis of ground behavior associated with explosions in underground hydrogen storage and construction of minimum safe distance dataset – Project manager – KICT, S.Korea

2023	Kumoh National Institute of Technology, S.Korea – Study on the dynamic characteristics of the ground due to hydrogen gas explosion vibration of an underground hydrogen storage facility – Project manager – KICT, S.Korea
2022	Kumoh National Institute of Technology, S.Korea – Optimization study through thermo-hydraulic-mechanical (THM) coupled simulation– Project manager – KICT, S.Korea
2019-2021	Kumoh National Institute of Technology, S.Korea – Prediction and prevention technology of frost heave in freezing soils in preparation for the Inter-Korean railway connection – Project manager – NFR, S.Korea

Supervision of students

(Total number of students)

Master's students	Ph.D. students	Undergraduate students(Research Intern)	University/institution - Country
4	3	3	Kumoh National Institute of Technology, S.Korea

Track record

- A total of 55 peer-reviewed journal publications during my career.
- H-index = 19, i10-index =29, citations = 1361 at google scholar
(https://scholar.google.com/citations?hl=ko&user=QRRNoEYAAAAJ&view_op=list_works&sortby=pupdate)

International publications

1. Van-Hoa Cao, Gyu-Hyun Go*, Sinhang Kang (2026) "Influence of topsoil depth and rock block content on the stability of soil–rock mixture slopes" Engineering Geology, Vol. 371, pp. 108887. (SCIE) <https://doi.org/10.1016/j.enggeo.2026.108887>
2. Dinh-Viet Le, Gyu-Hyun Go* Sayali Pangavhane, Chang Kyoonyoo (2026) Developing Fully Convolutional Networks with Permittivity-Based Class Mapping for Tunnel Lining Defects Detection in Ground Penetration Radar Scan Data, Engineering Applications of Artificial Intelligence, Vol 166, Part B, PP. 113670. (SCIE) <https://doi.org/10.1016/j.engappai.2025.113670>
3. Hee Woon Kim, Dinh-Viet Le, Gyu-Hyun Go* (2026) Development of an ANN-Based Model for Predicting Unfrozen Water Content in Sandy Soils: Insights from Experimental Data and GUI Implementation, KSCE Journal of Civil Engineering, Vol 20, 100438 (SCIE) <https://doi.org/10.1016/j.kscej.2025.100438>
4. Dinh-Viet Le, Gyu-Hyun Go*, (2025) "Application study on conditional Generative Adversarial Network (cGAN) to Generate Ballast Particles for Discrete Element Method Simulation", Case Studies in Construction Materials, Vol 23, e04987 (SCIE) <https://doi.org/10.1016/j.cscm.2025.e04987>
5. Gyu-Hyun Go, Dinh-Viet Le (2025) "Optimization study on artificial ground freezing in elliptical tunnel construction: a comprehensive analysis of groundwater flow and thermodynamic parameters of soil", Tunnelling and Underground Space Technology, Vol. 163, pp. 106774. (SCIE) <https://doi.org/10.1016/j.tust.2025.106774>
6. Sayali Pangavhane, Dinh-Viet Le, Gyu-Hyun Go* (2025) "Advanced cavity detection in GPR B-scan image using fully convolutional networks", Geomechanics and engineering, Vol. 41(1), 21-31. (SCIE) <https://doi.org/10.12989/gae.2025.41.1.021>
7. Van-Hoa Cao, Gyu-Hyun Go* (2025) "Stability analysis of random soil–rock mixture slope using an energy-based failure criterion and Monte Carlo simulation", Engineering Failure Analysis, Vol. 171, 109346 (SCIE) <https://doi.org/10.1016/j.engfailanal.2025.109346>

8. Gyu-Hyun Go, Hyunwoo Jin, Jangguen Lee*, Young-Jae Kim, Hyu-Soung Shin (2025) "Electromagnetic–Thermal Coupled Modeling for Optimizing the Microwave Sintering of Homogeneous Block of KLS-1 Lunar Regolith Simulant", *International Communications in Heat and Mass Transfer*, Vol. 161, 108544 (SCIE) <https://doi.org/10.1016/j.icheatmasstransfer.2024.108544>
9. Gyu-Hyun Go, Dinh-Viet Le, Jangguen Lee (2024) "Evaluation of artificial ground freezing behavior considering the effect of pore water salinity", *Geomechanics and engineering*, Vol. 39(1), pp. 73-85. (SCIE) <https://doi.org/10.12989/gae.2024.39.1.073>
10. Van-Hoa Cao, Gyu-Hyun Go* (2024) "A Novel Approach to Stability Analysis of Random Soil-Rock Mixture Slopes Using Finite Element Method in ABAQUS", *Natural Hazards*, Vol. 120, 14381-14407. (SCIE) <https://doi.org/10.1007/s11069-024-06771-2>
11. Seok Yoon, Gyu-Hyun Go* (2024) "Numerical Analysis Study on Determination of Unfrozen Water Saturation Curve for Sandy Soil" *International Communications in Heat and Mass Transfer*, Vol. 154, 107418 (SCIE) <https://doi.org/10.1016/j.icheatmasstransfer.2024.107418>
12. Hyeon-Jae Woo, Gyu-Hyun Go* (2024) "Mechanical behavior assessment of retaining wall structure due to frost heave of frozen ground" *International Journal of Geo-Engineering*, Vol. 15(7), 1-16. (ESCI) <https://doi.org/10.1186/s40703-024-00210-8>
13. Gyu-Hyun Go, Van-Hoa Cao, YoungSeok Kim, Hyun-Jun Choi, Se-Wook Oh, Min-Jun Kim (2023) "Evaluation of the Dynamic Stability of Underground Structures Assuming a Hydrogen Gas Explosion Disaster in a Shallow Underground Hydrogen Storage Facility" *Applied Science*, Vol.13, No.22, pp.12317. (SCIE) <https://doi.org/10.3390/app132212317>
14. Seok Yoon, Gi-Jun Lee, Gyu-Hyun Go* (2022) "Linear thermal expansion behavior of compacted bentonite buffer materials" *Case Studies in Thermal Engineering*, Vol. 32, 101889. (SCIE) <https://doi.org/10.1016/j.csite.2022.101889>
15. Hyunwoo Jin, Gyu-Hyun Go, Byung Hyun Ryu, Jangguen Lee* (2021) "Experimental and numerical investigation of closure time during artificial ground freezing with vertical flow" *Geomechanics and Engineering*, Vol. 27(5), pp. 433–445. (SCIE) <https://doi.org/10.12989/gae.2021.27.5.433>
16. Seok Yoon, Dinh-Viet Le, Gyu-Hyun Go* (2021) "Artificial Neural Network-Based Model for Prediction of Frost Heave Behavior of Silty Soil Specimen" *Applied Science*, Vol. 11, 10834. (SCIE) <https://doi.org/10.3390/app112210834>
17. BaHuu Dinh, Gyu-Hyun Go, Young-Sang Kim (2021) "Performance of a horizontal heat exchanger for ground heat pump system: effects of groundwater level drop with soil-water thermal characteristics" *Applied thermal engineering*, Vol. 195, pp.117203. (SCIE) <https://doi.org/10.1016/j.applthermaleng.2021.117203>
18. Gyu-Hyun Go, Jangguen Lee, Taeil Chung, Byung Hyun Ryu, Hyunwoo Jin, Li Zhuang, Hyu Soung Shin, Jae Hyun Kim, Tae Sup Yun (2021) "Controlling soil disturbance of a lunar regolith simulant bed during depressurization in a vacuum chamber" *Scientific reports*, Vol. 11(1878), pp. 1-8. (SCI) <https://doi.org/10.1038/s41598-021-81317-1>
19. Sinhang Kang, Sung-Eun Cho, Byungmin Kim, Gyu-Hyun Go* (2020) "Effects of Two-Phase Flow of water and air on shallow slope failures induced by rainfall insights from slope stability assessment at a regional scale" *Water*, Vol. 12(3), 812. (SCIE) <https://doi.org/10.3390/w12030812>
20. Gyu-Hyun Go, Jangguen Lee, Hyu Soung Shin, Byung Hyun Ryu, Hyun Woo Jin, Deuk Woo Kim (2019) "Evaluation of one-dimensional freezing behavior for ice-rich sandy soil" *International Journal of Heat and Mass Transfer*, Vol. 130, pp.960–967. (SCI) <https://doi.org/10.1016/j.ijheatmasstransfer.2018.11.017>
21. Tan Manh Do, Gyeong-O Kang, Gyu-Hyun Go, Young-Sang Kim (2019) "Evaluation of coal ash–based CLSM made with cementless binder as a thermal grout for borehole heat exchangers" *Journal of Materials in Civil Engineering*, Vol. 31(6) pp.1–11. (SCIE) [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0002691](https://doi.org/10.1061/(ASCE)MT.1943-5533.0002691)

22. Gyu-Hyun Go, Seung-Rae Lee, Young-Sang Kim (2016). "A reliable model to predict thermal conductivity of unsaturated weathered granite soils" *International Communications in Heat and Mass Transfer*, Vol. 74, pp. 82–90. (SCIE) <https://doi.org/10.1016/j.icheatmasstransfer.2016.01.009>
23. Gyu-Hyun Go, Seung-Rae Lee, Seok Yoon, Min-Jun Kim (2016). "Optimum design of horizontal ground-coupled heat pump systems using spiral-coil-loop heat exchangers" *Applied Energy*, Vol. 162, pp. 330–345. (SCI) <https://doi.org/10.1016/j.apenergy.2015.10.113>
24. Min-Jun Kim, Seung-Rae Lee, Seok Yoon, Gyu-Hyun Go (2016). "Thermal Performance Evaluation and Parametric Study of a Horizontal Ground Heat Exchanger" *Geothermics*, Vol. 60, pp. 134–143. (SCIE) <https://doi.org/10.1016/j.geothermics.2015.12.009>
25. Gyu-Hyun Go, Seung-Rae Lee Han-Byul Kang, Seok Yoon, Min-Jun Kim (2015). "A novel hybrid design algorithm for spiral coil energy piles that considers groundwater advection" *Applied Thermal Engineering*, Vol. 78, pp. 196–208. (SCIE) <https://doi.org/10.1016/j.applthermaleng.2014.12.060>
26. Gyu-Hyun Go, Seung-Rae Lee, Nikhil N.V., Seok Yoon (2015). "A new performance evaluation algorithm for horizontal GCHPs (ground coupled heat pump systems) that considers rainfall infiltration" *Energy*, Vol. 83, pp. 766–777. (SCI) <https://doi.org/10.1016/j.energy.2015.02.086>
27. Seok Yoon, Seung-Rae Lee, Yun-Tae Kim, Gyu-Hyun Go (2015). "Estimation of saturated hydraulic conductivity of Korean weathered granite soils using a regression analysis" *Geomechanics and Engineering*, Vol. 9(1), pp. 101–113. (SCIE) <https://doi.org/10.12989/gae.2015.9.1.101>
28. Seok Yoon, Seung-Rae Lee, Gyu-Hyun Go, Skhan Park (2015). "An experimental and numerical approach to derive ground thermal conductivity in spiral coil type ground heat exchange" *Journal of the Energy Institute*, Vol. 88(3), pp. 229–240. (SCIE) <https://doi.org/10.1016/j.joei.2014.10.002>
29. Seok Yoon, Seung-Rae Lee, Gyu-Hyun Go (2015). "Evaluation of thermal efficiency in different types of horizontal ground heat exchangers" *Energy and Buildings*, Vol. 105, pp.100–105. (SCIE) <https://doi.org/10.1016/j.enbuild.2015.07.054>
30. Seok Yoon, Seung-Rae Lee, Jianfeng Xue, Kai Zosseder, Gyu-Hyun Go, Hyunku Park (2015). "Evaluation of the thermal efficiency and a cost analysis of different types of ground heat exchangers in energy piles" *Energy Conversion and Management*, Vol. 105, pp.393–402. (SCIE) <https://doi.org/10.1016/j.enconman.2015.08.002>
31. Gyu-Hyun Go, Seung-Rae Lee, Seok Yoon, Han-Byul Kang (2014). "Design of spiral coil PHC energy pile considering effective borehole thermal resistance and groundwater advection effects" *Applied Energy*, Vol. 125, pp. 165–178. (SCI) <https://doi.org/10.1016/j.apenergy.2014.03.059>
32. Gyu-Hyun Go, Seung-Rae Lee, Young-Sang Kim, Hyun-Ku Park, Seok Yoon (2014). "A new thermal conductivity estimation model for weathered granite soils in Korea" *Geomechanics and Engineering*, Vol. 6(4), pp. 359–376. (SCIE) <https://doi.org/10.1016/j.apenergy.2014.03.059>
33. Gyu-Hyun Go, Seung-Rae Lee, Seok Yoon, Hyunku Park, Skhan Park (2014). "Estimation and experimental validation of borehole thermal resistance" *KSCE Journal of Civil Engineering*, Vol. 18(4), pp. 992–1000. (SCIE) <https://doi.org/10.1007/s12205-014-0454-x>
34. Seok Yoon, Seung-Rae Lee, Gyu-Hyun Go (2014). "A numerical and experimental approach to the estimation of borehole thermal resistance in ground heat exchangers" *Energy*, Vol. 71, pp. 547–555. (SCI) <https://doi.org/10.1016/j.energy.2014.04.104>
35. Seok Yoon, Seung-Rae Lee, Gyu-Hyun Go, Jianfeng Xue, Hyunku Park, Dowon Park (2014). "Thermal transfer behavior in two types of W-shape ground heat exchangers installed in multilayer soils" *Geomechanics and Engineering*, Vol. 6, No. 1, pp. 79–98. (SCIE) <https://doi.org/10.12989/gae.2014.6.1.079>
36. Do-Won Park, Seung-Rae Lee, Nikhil N. V., Seok Yoon, Gyu-Hyun Go (2014). "Quantitative assessment of landslide susceptibility on a regional scale using geotechnical database developed from GIS-based maps" *Disaster Advances*, Vol. 7, No. 5, pp. 26–38.

국내 KCI 저널 (최근 5 년 이내)

1. 이종기, 고규현* (2026) "수치해석을 통한 상변화물질(PCM) 혼입 콘크리트 포장의 도로살얼음 예방 효과 분석" 한국지반공학회논문집, 제 42 권 1 호, pp. 167-173.
2. 김민준, 고규현*, 이종원, 박의섭, 정용복, 김명선 (2026) "액화수소 지하저장시스템 근계 암반에서의 장기 온도분포 평가 수치해석 연구" 한국지반공학회논문집, 제 42 권 1 호, pp. 105-114.
3. 고규현, 양수웅, 고기은, 우석윤 (2025) "지하수 흐름 조건에서의 인공동결시스템의 동결거동 평가 및 원도우 발생에 대한 임계 유속 평가" 한국지반공학회논문집, 제 41 권 6 호, pp. 99-105.
4. 우현재, 고규현*, 이재민, 김성겸 (2025) "PCM 혼입 모르타르 패널 적용에 따른 옹벽 배면 동결영역 저감 효과에 대한 수치해석 연구" 한국지반공학회논문집, 제 41 권 4 호, pp. 31-39.
5. Gi-Jun Lee, Seok Yoon*, Gyu-Hyun Go, Seong-Won Lee (2025) "Effects of Thermal Treatment at 105°C and Conditions of Injected Water" Journal of Nuclear Fuel Cycle and Waste Technology, Vol.23 No.1 pp.11-23.
6. 장병수, 고규현, 김영석, 김세원, 최현준, 윤희구 (2024) "Oversampling 기법 및 이상치 제거 방법을 통한 데이터 구축 연구" 한국지반공학회논문집, 제 40 권 5 호, pp. 93-101.
7. 고규현, 우현재, Van-Hoa Cao, 김희원, 김영석, 최현준 (2024) "저심도 지하 수소저장소에서의 가스 폭발 진동에 대한 지반공학적 인자들의 민감도 분석 연구" 한국지반공학회논문집, 제 40 권 4 호, pp. 169-178.
8. 이득환, 고규현*, 이기준, 윤석 (2024) "다양한 실험조건에 따른 경주 벤토나이트 완충재 블록의 팽윤 거동 해석" 한국지반공학회논문집, 제 40 권 2 호, pp. 29-40.
9. 김희원, 고규현*(2023) "간극수 염분농도에 따른 동결 사질토의 부동수분곡선 산정 및 검증 연구" 한국지반공학회논문집, 제 39 권 11 호, pp. 53-62.
10. 김희원, 고규현*(2023) "다양한 실험조건을 고려한 동결 사질토의 열전도도 산정에 대한 연구" 한국지반공학회논문집, 제 39 권 9 호, pp. 5-11.
11. 고규현, 전준서, 김영석, 김희원, 최현준 (2022) "저심도 지중 수소저장시설에서의 수소가스 누출에 따른 불포화 지반의 수리-역학적 거동 예측 연구", 한국지반공학회논문집, 제 38 권 11 호, pp. 107-118.
12. 진현우, 고규현, 이장근, 신휴성, 김영재 (2022) "한국형 인공월면토(KLS-1) 마이크로파 소결을 위한 전기장-열 연계해석 모델 평가", 한국지반공학회논문집, 제 38 권 5 호, pp. 35-46.
13. 고규현, 이성진 (2021) "터널 라이닝 공동에 대한 GPR 신호 특성 분석을 위한 수치해석 연구, 한국지반공학회논문집", 제 37 권 10 호, pp. 65-76.
14. 고규현, 이성진 (2021) "자갈도상 지반에서의 파울링층 식별을 위한 수치해석연구, 한국지반공학회논문집", 제 37 권 9 호, pp. 13-24.
15. 진현우, 이장근, 유병현, 고규현* (2020) "물의 흐름을 고려한 인공동결 시스템의 열-수리 거동 연구" 한국지반공학회논문집, 제 36 권 12 호, pp. 17-25.
16. 고규현, 이장근, 김민섭 (2020) "민감도 분석을 기반으로 한 시료의 동결 특성에 미치는 영향인자 분석" 한국지반공학회논문집, 제 36 권 8 호, pp. 49-60.
17. 고규현, 이장근, 신휴성 (2019) "달 지하 얼음 층 존재 가능조건 검토를 위한 달 지반 온도 프로파일 산정 연구" 대한토목학회논문집, 제 39 권 6 호, pp.801-809.
18. 윤석, 고규현, 이재완, 김건영 (2019) "온도 변화를 고려한 압축 벤토나이트 완충재의 수분흡입력 평가" 한국지반공학회논문집, 제 35 권 11 호, pp. 7-14.