

CURRICULUM VITAE – ASSISTANT PROFESSOR KRITIKA TRAKOOLNGAM

Department of Geotechnology, Faculty of Technology, Khon Kaen University
123/2002 Mittraphab Rd., Nai Muang Sub-district, Muang Khon Kaen District, Khon Kaen Province, 40002, Thailand
Mobile: +66(90)031-3927, E-mail: krittr@kku.ac.th, Website: <http://krittr.wixsite.com/academic>

1. Personal Data

- 1.1 Date of Birth: October 21, 1977
- 1.2 Nationality: Thai

2. Education

- 2.1 2016, Ph.D. Geotechnology, Khon Kaen University, Khon Kaen, Thailand.
- 2.2 2005, MSc Geo-Environmental Engineering, Pennsylvania State University, University Park, PA, USA.
- 2.3 1999, BSc Geology, Chulalongkorn University, Bangkok, Thailand.

3. Awards and Honors

- 3.1 MSc - Ph.D. Scholarship, Royal Thai Government, 2002.
- 3.2 Summa cum laude (top of class), Department of Geology, College of Science, Chulalongkorn University, Thailand, 1999.
- 3.3 Scholarship Award, Siam Cement Group, Bangkok, Thailand, 1998.
- 3.4 Scholarship Award, the Department of Geology, Chulalongkorn University, Thailand, 1998.
- 3.5 Scholarship Award, Unocal Thailand, Ltd, 1997.
- 3.6 Scholarship Award, the Petroleum Authority of Thailand, 1996.

4. Language Ability

- 4.1 English: Excellent (First Language) - listening, speaking, reading, writing.
- 4.2 Thai: Excellent (Mother's Tongue) - listening, speaking, reading, writing.

5. Computer Skills

- 5.1 Programming Language
 - 5.1.1 Good: C and Fortran
 - 5.1.2 Fair: Basic Language, Java
- 5.2 Technical Applications
 - 5.2.1 Excellent: COMSOL (Finite element modeling for coupling of solid mechanics, fluid mechanics, and chemistry)
 - 5.2.2 Good: Modflow (groundwater modeling code), FLAC (soil, rock, and structural mechanics modeling code), TOUGHREACT (reactive flow modeling code), SEEP/W (seepage analysis), SLOPE/W (slope stability analysis), KU Slope (Slope stability analysis), EndNote (Bibliography/Citation database)
 - 5.2.3 Fair: ArcGIS (Geographic Information System software), Mathematica, Grapher, Surfer (contour and mapping program), Aquachem (geochemistry data analysis tool), QuickLog (Geophysical logging software), QuickCross (Subsurface cross-section application), MATLAB (Matrix & mathematical computation software)
 - 5.2.4 Basic Understanding: AutoCAD (Engineering design aid program)
- 5.3 General Office and Graphics Operation Software
 - 5.3.1 Excellent: Microsoft Windows, Microsoft Excel, Microsoft Word, Microsoft Power Point, Microsoft Outlook, Adobe Acrobat DC

5.3.2 Good: Microsoft Project, Visio, Microsoft Access, Microsoft PageMaker, Macromedia DreamWeaver (website development software)

5.3.3 Fair: Microsoft Publisher, Photoshop, Adobe Illustrator

6. Country of Professional Experiences

- 6.1 Thailand
- 6.2 Cambodia
- 6.3 United States of America
- 6.4 Japan

7. Summarized Field of Expertise/Research Area

- 7.1 **Geo-Environmental Engineering:** nuclear waste deposit in fractured rocks/ Enhanced geothermal systems (EGS) / flow in dual porosity medium
- 7.2 **Soil Mechanics:** partially saturated soil strength and behavior/ two-phase flow in porous medium
- 7.3 **Rock Mechanics:** slope stability/ fractured mechanics/ flow in fractured rocks

8. Employment record

Date	Position	Organization
17 November 2008 – date	Assistant Professor (assigned on 4 June 2020) Lecturer (assigned on 17 November 2020)	Department of Geotechnology, Faculty of Technology, Khon Kaen University, Thailand
April 2003 – May 2005	Research Assistant	Department Geo-Environmental Engineering, Pennsylvania State University, USA
August 2002 – September 2007	Teaching Assistant	Department Geo-Environmental Engineering, Pennsylvania State University, USA
October 1999 – April 2002	Assistant to the Managing Director	Metrix Associates Co. Ltd., Bangkok, Thailand
May 1999 – September 1999	Environmental Geologist (Short-term contract)	Seatec International Co. Ltd., Bangkok, Thailand

9. Academic Services via Student Projects/Research (as Project/Thesis Advisor)

9.1 Miss Chonticha Suwan (Bachelor's degree), December 2019 – April 2020

Recipient: Siam City Cement Public Company Limited
Subject Area: Rock mechanics / slope stabilization
Project Name: Slope Stability Analysis and Design of a Dump Site at Siam City Cement Public Company Limited, Saraburi Province

9.2 Mr. Jennarong Sarak (Bachelor's degree), December 2019 – April 2020

Recipient: District 6 Regional Office, Royal Irrigation Department
Subject Area: Foundation improvement / Seepage analysis / Reservoir storage enhancement
Project Name: Analysis of seepage in compacted soil and foundation for determining storage enhancement methods, Wang Toey Reservoir Project, Chaiyaphum province

- 9.3 **Mr. Sabsathit Takaew (Bachelor's degree), December 2019 – April 2020**
 Recipient: Banbu Public Company Limited
 Subject Area: Soil mechanics / Seepage analysis / Slope stabilization
 Project Name: Analysis and Stabilization of Mahakam River Bank slope at Bunyut Port, Trubaindo Coal Mine, East Kalimantan, Indonesia
- 9.4 **Miss Parawan Singthong (Bachelor's degree), January 2019 – May 2019**
 Recipient: Right Tunnelling Company Limited
 Subject Area: Site characterization / Grouting
 Project Name: A Study on the Relationship between Consolidation Grouting and Granite of Different Qualities in the Water Diversion Tunnel and at the Adit Number 1, Reservoir Water Volume Increase in the Mae Kuang Udom Tara Dam Project (Mae Tang - Mae Ngud Water Tunnel, Contract No.1) Chiang Mai Province
- 9.5 **Miss Sasithorn Kumpuang (Bachelor's degree), January 2019 – May 2019**
 Recipient: District 6 Regional Office, Royal Irrigation Department
 Subject Area: Slope stability analysis / Soil Mechanics / Standard Penetration Test (SPT)
 Project Name: Slope Stability Analysis for Yang's Embankment, Selaphum District, Roi Et Province
- 9.6 **Miss Natchareeya Chathep (Bachelor's degree), January 2019 – May 2019**
 Recipient: District 6 Regional Office, Royal Irrigation Department
 Subject Area: Seepage analysis / Soil Mechanics / Slope stability analysis
 Project Name: Seepage Analysis of Lam Nam Yang Embankment, Selaphum District, Roi Et Province
- 9.7 **Miss Thitika Thangdee (Bachelor's degree), January 2019 – May 2019**
 Recipient: Mae Moh Mine, Electricity Generating Authority of Thailand
 Subject Area: Slope stabilization / Soil Mechanics / Rock Mechanics
 Project Name: Slope stability analysis and mine master plan adjustment of the east SE pit wall in Mae Moh mine
- 9.8 **Mr. Rachata Sutthikornkanon (Bachelor's degree), January 2019 – May 2019**
 Recipient: Right Tunnelling Company Limited
 Subject Area: Tunnelling / Tunnel Boring Machine (TBM) / Engineering Geology
 Project Name: An advance estimation of geological conditions in tunnel by analyse data from Tunnel Boring Machine and Mucking, reservoir water volume increase in the Mae Kuang Udom Tara Dam project (Mae Tang - Mae Ngud water tunnel, 1st contract) Chiang Mai province
- 9.9 **Miss Warawan Kumvisa (Bachelor's degree), January 2019 – May 2019**
 Recipient: Mae Moh Mine, Electricity Generating Authority of Thailand
 Subject Area: Hydrogeology / Groundwater Modeling / Mining
 Project Name: Groundwater modeling of Mae Moh mine area, Lampang province
- 9.10 **Mr. Nontasate Srikern (Master's degree), May 2017 – May 2018**
 Recipient: District 6 Regional Office, Royal Irrigation Department
 Subject Area: Rock Mechanics / Slope stabilization
 Project Name: Slope Stability Assessment and Stabilization Design along the Spillway of Prongkhunphet Reservoir, Chaiyaphum Province
- 9.11 **Miss Kunlanan Keawwong (Bachelor's degree), January 2018 – May 2018**
 Recipient: Right Tunnelling Company Limited
 Subject Area: Rock mechanics / Blasting / Tunnelling
 Project Name: Effects of Peak Particle velocity from blasting on the tunnel at Adit 1, Mae Tnang-Mae Ngud Aqueduct, Concession 1
- 9.12 **Mr. Suteanchai Pintatong (Bachelor's degree), January 2018 – May 2018**
 Recipient: District 6 Regional Office, Royal Irrigation Department

- Subject Area: Rock mechanics / Slope stability analysis
 Project Name: The Rock Slope Stability Analysis by Kinematic Method at The Spillway of The Prong Khun Petch Reservoir, Koksa-ad Sub-District, Nong Bua Rawe District, Chaiyaphum Province
- 9.13 **Mr. Nisarakorn Bumrunangkit (Master's degree), May 2016 – May 2017**
 Recipient: District 6 Regional Office, Royal Irrigation Department
 Subject Area: Ground improvement / Grouting
 Project Name: The Evaluation of the Efficiency of Compacted Soil Improvement by Drilling and Cement-Bentonite Grouting Around the New Spillway at Lam Pao Dam, Kalasin Province
- 9.14 **Miss Jirawan Leebang (Bachelor's degree), January 2017 – May 2017**
 Recipient: Right Tunnelling Company Limited
 Subject Area: Engineering Geology / Tunnelling
 Project Name: Construction of an engineering geology unit map along the Mae Taeng - Mae Ngad aqueduct, Chiangmai Province
- 9.15 **Miss Bonggoch Salee (Bachelor's degree), January 2017 – May 2017**
 Recipient: Right Tunnelling Company Limited
 Subject Area: Rock mechanics / Slope stability analysis
 Project Name: Analysis of slope stability around Adit-1, Mae Taeng – Mae Ngad aqueduct project, Chiang Mai Province
- 9.16 **Mr. Pana Pornjanya (Bachelor's degree), January 2017 – May 2017**
 Recipient: Right Tunnelling Company Limited
 Subject Area: Engineering geology / Tunnelling
 Project Name: Assessment of engineering properties of rocks along Phraphuttachai tunnel and support type selection
- 9.17 **Miss Chudaporn Phuphiw (Bachelor's degree), January 2017 – May 2017**
 Recipient: Mae Moh Mine, Electricity Generating Authority of Thailand
 Subject Area: Slope characterization / Rock Mechanics / Geological Strength Index (GSI)
 Project Name: Evaluation of slope stability analysis of slope pit in Mae Mo mine using Geological Strength Index (GSI)
- 9.18 **Miss Patamawadee Thongsuk (Bachelor's degree), January 2017 – May 2017**
 Recipient: Mae Moh Mine, Electricity Generating Authority of Thailand
 Subject Area: Slope characterization / Rock Mechanics / Mining Rock Mass Rating (MRMR)
 Project Name: Slope stability analysis of C1-West wall in the Mae Moh Mine by using the Mining Rock Mass Rating (MRMR)
- 9.19 **Miss Rachada Khawngam (Bachelor's degree), January 2017 – May 2017**
 Recipient: Mae Moh Mine, Electricity Generating Authority of Thailand
 Subject Area: Slope characterization / Rock Mechanics / Q-System
 Project Name: Mae Mo pit wall slope stability assessment using the Q-system rock mass classification
- 9.20 **Ms. Thanvisa Sawaengsri (Bachelor's degree), October 2015 – February 2016**
 Recipient: District 6 Regional Office, Royal Irrigation Department
 Subject area: Seepage analysis / Reservoir storage enhancement / Grouting
 Project Name: Analysis of methods to enhance the storage capacity of the Ban Nhong Ya Plong dam, Dong Lan sub-district, Si Chom Poo district, Khon Kaen province
- 9.21 **Ms. Ketsaree Udom (Bachelor's degree), October 2015 – February 2016**
 Recipient: District 6 Regional Office, Royal Irrigation Department
 Subject area: Seepage analysis / Reservoir storage enhancement / Grouting
 Project Name: Assessment of water retention efficiency of Prong Khun Phet Dam, Chaiyaphum Province

- 9.22 **Mr. Wichan Onchoisakun (Bachelor's degree), October 2010 – February 2011**
 Recipient: Chatree Gold Mine, Akara Mining Limited
 Subject area: Rock Mechanics, Slope stability analysis, Geological Strength Index (GSI)
 Project Name: Slope stability assessment of pit walls based on Geological Strength Index (GSI) of K-west pit, Chatree gold mine, Pichit Province, Thailand
- 9.23 **Ms. Saranya Sukpeum (Bachelor's degree), October 2010 – February 2011**
 Recipient: Chatree Gold Mine, Akara Mining Limited
 Subject area: Rock Mechanics, Slope stability analysis, Rock Mass Rating (RMR)
 Project Name: Study of the relationship between the stability of K-west pit wall at Chatree Gold Mine, Pichit, and rock mass quality based on the Rock Mass Rating (RMR) system
- 9.24 **Mr. Thatsaporn Pimpa (Bachelor's degree), October 2010 – February 2011**
 Recipient: Right Tunnelling Company Limited
 Subject area: Foundation improvement / Grouting
 Project Name: Dam foundation improvement at Klongkata Reservoir, Phuket province

10. Consulting and Academic Services

10.1 January 2010 – 2011

Position: Groundwater Modeling Expert

Project Name: Study of contamination and set up of monitoring schemes for pollutants in the subsurface waters in the area of Thap Khlo, Wang Sai Phoon District, Pichit Province and Wang Pong District, Petchaboon Province

Project Value: ~10 million Thai Baht

Project Duration: 12 months

Client: Department of Groundwater Resources, Ministry of Natural Resources and Environment

Project Description: Investigate the existence of contamination within the project area focusing on arsenic and cyanide in the groundwater and identifying the source of pollutants.

Responsibility: Develop a groundwater flow model and contaminant transport model for identifying possible contaminant source(s) and predict future behavior using MODFLOW and PHREEQC modeling programs.

10.2 March 2009 – October 2010

Position: Environmental Engineering Expert

Project Name: Pilot project of an aquifer recharge through pond in the flood plains of the lower northern region covering Pitsanulok, Sukhothai, and Pichit Provinces

Project Value: ~40 million Thai Baht

Project Duration: 18 months

Client: Department of Groundwater Resources, Ministry of Natural Resources and Environment

Project Description: Design and construct a recharge pond in order to increase the groundwater level in the vicinity.

Responsibility: Design the water quality monitoring scheme and oversee environmental issues of the project.

10.3 September 2001 – June 2002

Position: Coordinator / Geographic Information System Specialist / Hydrogeologist

Project Name: Development of Groundwater Mapping Data Management System

Project Value: 13.8 Million Baht (US \$345,000)

Project Duration: 10 months

Client: 1. Groundwater Division, Department of Mineral Resources
2. Khon Kaen University

Project Description: To develop a computer network, database, and internet system for managing and presenting Thailand's groundwater mapping data from the Geographic Information System (GIS). Activities include compiling all existing groundwater digital data and transferring it to the new database.

Responsibility: Manage, plan, and control quality of the internal project operation. Direct and control the Information Technology Team on developing the Groundwater Mapping Database. Direct and control the GIS Team on developing the Groundwater Mapping Data Management System. Review and design the Geographic Information System Database.

10.4 September 2001 – December 2001

Position: Hydrogeologist / Groundwater Modeler

Project Name: Basin Modeling and Knowledge Base Development

Project Value: US \$2 million

Project Duration: 4 months

Client: 1. Mekong River Commission (MRC), United Nations
2. Halcrow Group Limited

Project Description: To develop a modeling package and knowledge base of the Mekong River Basin. The modeling package consists of basin simulation models, hydrologic models, and hydrodynamic models. The knowledge base is an application which links directly with the modeling package and the existing database. Its purpose is to function as a tool for integrated water resources management.

Responsibility: Responsible for developing the groundwater modeling component in the Basin Modeling Package and coordinating with the groundwater modeling project team. Activities include identifying groundwater modeling system requirements in order to link with the surface water models and knowledge base, develop a groundwater modeling prototype, and train 10 MRC counterparts from four countries on groundwater model simulation and interpretation.

10.5 September 2001 – December 2001

Position: Project Coordinator / Hydrogeologist

Project Name: Study of Water Resource Utilization in Phuket, Thailand

Project Value: 400,000 Baht (US \$10,000)

Project Duration: 4 months

Client: Confidential (can be revealed if permission granted)

Project Description: To identify the present water resource utilization and assess future needs in order to plan additional water supply in Phuket.

Responsibility: Responsible for coordinating with the client, the project team, and governmental organizations that are related to the project. Assist the project director in management and quality control of the project. Advise

the project team in strategies for data collection, field work planning, and data analysis.

10.6 September 2001 – December 2001

Position: Project Manager / Natural Resource Management Specialist

Project Name: Development of the Energy Management Database: Overview and Conceptual Design

Project Value: 500,000 Baht (US \$12,500)

Project Duration: 4 months

Client: 1. Natural Energy Division, Department of Mineral Resources
2. Chula Unisearch, Chulalongkorn University

Project Description: To study the existing energy management system and develop a conceptual design of the energy management database.

Responsibility: Manage, coordinate, plan, and control the quality of the project operation. Study the existing energy management system, design a conceptual energy management database, and provide recommendations for future development.

10.7 September 2001 – October 2001

Position: Project Manager

Project Name: Web Site Development for the Office of Civil Service Commission

Project Value: 100,000 Baht (US \$2,500)

Project Duration: 1 month

Client: The Office of Civil Service Commission (OCSC), Office of the Prime Minister

Project Description: To develop a web site for presenting OCSC's information and work results.

Responsibility: Manage, coordinate, plan, and control quality of the project operation. Review data and information provided for development of the web site. Analyze and design the presentation schemes.

10.8 June 2001 – September 2001

Position: Project Manager / Exploration Geologist

Project Name: Mineral Resources Exploration at Lopburi, Thailand

Project Value: 250,000 Baht (US \$6250)

Project Duration: 3 months

Client: Confidential (can be revealed if permission granted)

Project Description: To assess the amount of reserve of an industrial mineral in Lopburi area.

Responsibility: Manage, plan, and control quality of the project operation. Review secondary information, implement field exploration, prepare detailed geological map at the scale of 1:1,000, review data from laboratory analysis, and assess the mineral reserve amount in the study area.

10.9 February 2001 – June 2001

Position: Environmental Geologist

Project Name: Conceptual Design and Environmental Impact Study of a Waste Disposal Site, Nonthaburi, Thailand

Project Value: 1.7 Million Baht (US \$42,500)

Project Duration: 5 months

Client: Confidential (can be revealed if permission granted)

Project Description: To develop a conceptual design of a landfill at Nonthaburi and study the environmental impact on the physical environment, the biological environment, society, and quality of life.

Responsibility: Participate in designing the landfill position, geometry, operation, and monitoring schemes. Analyze issues regarding groundwater flow and geological characteristics of the project area. Design the groundwater dewatering system for the construction and operation of the landfill. Participate in assessing the environmental impact on the physical environmental regarding soil and groundwater.

10.10 March 2000 – May 2001

Position: Project Coordinator / Hydrogeologist

Project Name: Provincial Groundwater Mapping

Project Value: 21 Million Baht (US \$525,000)

Project Duration: 12 months

Client: 1. Groundwater Division, Department of Mineral Resources
2. Layne (Thailand) Ltd.

Project Description: To produce provincial groundwater maps at the scale of 1:100,000 of the 11 assigned provinces (Bangkok, Nonthaburi, Pathum Thani, Ayuthaya, Samut Prakan, Samut Sakhon, Ang Thong, Singburi, Chainat, Pichit, and Petchaboon) by using Geographic Information System (GIS) technology.

Responsibility: Manage, plan, solve problems, and control the quality of the internal project operation consisting of 8 internal team members and 2 external teams from joint venture companies. Manage the project schedule, budget, personnel, and tools. Direct and control the Information Technology Team in order to develop a database and mapping operation system. Associate with the hydrogeological team to review issues on hydrogeology and geology in the area of the assigned provinces. Interpret hydrogeological and geological data to produce hydrogeological maps and cross-sections, using various types of computer programs, such as Surfer, QuickCross, QuickFence, QuickLog, MapInfo, R2V, ArcView, etc. Write reports and present work progress and results to the clients.

10.11 February 2001 – March 2001

Position: Project Manager / Hydrogeologist

Project Name: Groundwater Well Decommissioning

Project Value: 70,000 Baht (US \$1,750)

Project Duration: 1 month

Client: Future Park Rangsit

Project Description: To decommission groundwater wells with appropriate procedures in order to prevent environmental impacts, according to the national regulations.

Responsibility: Manage, plan, and control quality of the groundwater decommissioning operation.

10.12 October 2000 – December 2000

Position: Project Manager / Hydrogeologist / Groundwater Modeler

Project Name: Study and Modeling of Groundwater in Bangkok and Its Vicinity (Phase 2)

Project Value: 1.2 Million Baht (US \$30,000)
Project Duration: 3 months
Client: Confidential (can be revealed if permission granted)
Project Description: To study the hydrogeological and geological characteristics of Bangkok and its vicinity (part of the Lower Central Plain) and design a groundwater artificial recharge system by simulating numerical models.
Responsibility: Collect, review, study, compile, and analyze hydrogeological data and related information of the project area. Utilize Modflow to simulate various numerical models in order to design a conceptual artificial recharge system.

10.13 May 2000 – September 2000

Position: Hydrogeologist / Groundwater Modeler
Project Name: Study and Modeling of Groundwater in Bangkok and Its Vicinity (Phase 1)
Project Value: 500,000 Baht (US \$12,500)
Project Duration: 5 months
Client: Confidential (can be revealed if permission granted)
Project Description: Simulate numerical groundwater models to support the existing artificial recharge system design.
Responsibility: Collect, review, study, compile, and analyze hydrogeological data and related information in the project area. Utilize Modflow to simulate various numerical models in order to support the existing artificial recharge system design.

10.14 February 2000 – September 2000

Position: Assistant to Thailand's Groundwater Expert / Hydrogeologist
Project Name: Thailand's Groundwater Management System Improvement
Project Value: US \$30,000
Project Duration: 8 months
Client: 1. The World Bank
2. Groundwater Division, Department of Mineral Resources
Project Description: Each of a National and International Groundwater Expert is designated to study the existing groundwater management system in Thailand and produce an improvement proposal for requesting a loan from the World Bank.
Responsibility: Research and review the existing groundwater management system from secondary data, reports, and interviews regarding issues on groundwater resource management, information system, organization, and regulation. Compile and summarize data from the findings. Assist Thailand's National Expert in business scheduling, document filing, translating, document production, presentation production, and client coordination.

10.15 December 1999 – February 2000

Position: Hydrogeologist / Groundwater Modeler
Project Name: Review and Modification of a Conceptual Design for a Groundwater Dewatering System
Project Value: 80,000 Baht (US \$2,000)

Project Duration: 3 months

Client: 1. International Blaster Co. Ltd.
2. Layne (Thailand) Ltd.

Project Description: To simulate numerical groundwater models in order to examine an existing conceptual design for a groundwater dewatering system at an excavated mine site in Chaiyaphum, Thailand. Find options in reducing the cost (number of wells and pumping rate) by modifying the existing design.

Responsibility: Review geological and hydrogeological information from secondary data reports and simulate a groundwater numerical model to examine the operative of the existing conceptual design by using Modflow. Simulate various models to find options in reducing the number of dewatering wells and pumping rate by modifying the original design.

10.16 May 1999 - September 1999

Position: Geologist / Database Editor

Project Name: Thailand's National Groundwater Database Development

Project Value: 15 Million Baht (US \$375,000)

Project Duration: January 1999 – September 1999

Client: Groundwater Division, Department of Mineral Resources

Project Description: To produce Thailand's groundwater database for supporting management and technical operations of the Groundwater Division.

Responsibility: Participate in developing the final phase of the database, consisting of development of database applications and documentation. Design linkage of the National Groundwater Database with third-party software by reviewing system requirements of each application, examples of these applications are: Modflow, Grapher, Surfer, QuickCross, QuickFence, QuickLog, ArcView, Aquachem, etc. Set user requirements for the database application system in geological and hydrogeological aspects. Design and edit the database's front-end and user interface functions, operations, logic, and language. Write the National Groundwater Database User's Guide in both Thai and English languages.

II. Professional Contribution

- 11.1 February 2019 – Date, **Secretary and Committee Member**, Curriculum Management Committee for the M.Sc. and Ph.D. in Geotechnology, Department of Geotechnology, Faculty of Technology, Khon Kaen University
- 11.2 November 2018 – Date, **Technical Committee Member**, Geological Society of Thailand
- 11.3 March 2018 – February 2019, **Secretary and Committee Member**, Curriculum Management Committee for the B.Sc. in Geotechnology, Department of Geotechnology, Faculty of Technology, Khon Kaen University
- 11.4 January 2016 – Date, **Committee Member**, Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP)
- 11.5 January 2009 – Date, **Member**, The Engineering Institute of Thailand, Under H.M. The King's Patronage
- 11.6 May 2005 – Date, **Member**, Pennsylvania State University Alumni Association
- 11.7 August 2002 – October 2008, **Active Member**, International Speakers Program, State College, PA.
- 11.8 May 1999 – Date, **Member**, Geological Society of Thailand
- 11.9 May 1999 – Date, **Member**, Chulalongkorn University Geology Alumni (CUGA)
- 11.10 May 1995 – 1999, **Student Member**, Geological Society of Thailand

12. Publications

- Promkotra, S., Trakoolngam, K., & Kangsadan, T. (2018). Compressive Strength of Fired-Clay Brick with Variations in Composition of Rice Husk Ash Compared with Ancient Bricks in Dvāravatī Period, Northeast Thailand. In Aguilar, R., Torrealva, D., Moreira, S., Pando, M.A., & Ramos, L.F. (Eds.). **Structural Analysis of Historical Constructions**. RILEM Bookseries. (pp. 2359-2367), Vol. 18. Cusco, Peru: Springer.
- Srikern, N., & Trakoolngam, K. (2018). Slope Stability Assessment and Stabilization Design along the Spillway of Prongkhunphet Dam, Chaiyaphum Province. **Proceedings of the 9th Engineering, Science, Technology and Architecture Conference 2018 (ESTACON2018)**, 7 September 2018, Rajamangala University of Technology Isan, Khon Kaen Campus, Thailand. (pp. 1-7 in Thai).
- Thuennadee, P., & Trakoolngam, K. (2017). A simplified method for estimating coefficient of earth pressure at rest (K_0) in cohesive soils. **Proceedings of the 7th International Conference on Geotechnique, Construction Materials and Environment (GEOMATE)**. Tsu, Mie, Japan: The GEOMATE International Society.
- Trakoolngam, K., & Promkotra, S. (2017). Compressive mechanical behavior of red loess/black-rice husk ash composite material under variations of firing temperature. **Suranaree Journal of Science and Technology**, 23(4): 401-407.
- Bamrungrat, N., Trakoolngam, K., and Wongmaket, S. (2017). Evaluation of the Efficiency of Compacted Soil Improvement by Drilling and Cement-Bentonite Grouting around the New Spillway at Lam Pao Dam, Kalasin Province. **Proceedings of the 8th Engineering, Science, Technology and Architecture Conference 2017 (ESTACON2017)**, 21 July 2017, North Eastern University, Khon Kaen, Thailand. (pp. 1-7 in Thai).
- Trakoolngam, K., & Promkotra, S. (2016). Nam Phong Sediments for manufacturing of fired-clay bricks in the Northeast of Thailand. **Proceedings of the Thematic Session "Geoscience for the Society", 52nd CCOP Annual Session**, 30 October - 2 November, Bangkok, Thailand.
- Trakoolngam, K. (2016). **Strength of fired-clay blocks from Lower Nam Phong sediments with variations in composition and firing temperature**. For the Doctoral Degree in Geotechnology. Department of Geotechnology, Khon Kaen University, Khon Kaen, Thailand.
- Trakoolngam, K. & Promkotra, S. (2016). Mechanical Behavior of Fired-Clay Bricks from Stream Sediments under Uniaxial Compressive Loading. **Key Engineering Materials**, 690, 252-258.

- Wannakao, L., Sukplum, W., Youngme, W., Wannakao, P., & Trakoolngam, K. (2014). Correlation Between Gas and Water Permeabilities of the Namphong Formation Sandstones and their Factor Affecting. **Proceedings of the 8th Asian Rock Mechanic Symposium**. Sapporo, Japan.
- Trakoolngam, K., Pimpa, T., & Phonsri, T. (2013). Mathematical evaluation of grouting effectiveness in fractured rock mass. **Proceedings of the 4th Thailand Symposium on Rock Mechanics**, (pp. 189-202). January 24-25, Im Poo Hill Resort, Wang Nam Keaw, Nakhon Ratchasima, Thailand.
- Wannakao, L., Sukplum, W., Wannakao, P., & Trakoolngam, K. (2013). Experimental assessment of the anisotropic permeability of Sandstone, Nam Phong Formation Loei-Petchabun Fold Belt by gas flowing under confining pressure. **Proceedings of the 4th Thailand Symposium on Rock Mechanics**, (pp. 153-164.). January 24-25, Im Poo Hill Resort, Nakhon Ratchasima, Thailand: Suranaree University.
- Trakoolngam, K. (2009). Determination of the mechanical-hydraulic coupled behavior of the Phu Thok sandstone: A dual-porosity approach. In Fuenkajorn, K. (Ed.). **Proceedings of the 2nd Thailand Rock Mechanics Symposium**, (pp 219-234). March, 12-13, Chonburi, Thailand.
- Taron, J., Min, K.-B., Yasuhara, H., Trakoolngam, K.K., & Elsworth, D. (2006). Numerical simulation of coupled thermo-hydro-chemo-mechanical processes through the linking of hydrothermal and solid mechanics codes. **Proceedings of the Golden Rocks 2006**, The 41st U.S. Symposium on Rock Mechanics (USRMS), Vol. 1 (pp. 268-276). June 17-21, Golden, Colorado: American Rock Mechanics Association.
- Trakoolngam, K. (2005). **The Effects of Wetting Saturation on Sand Production in Wells**. A Thesis for the Master Degree in Geo-environmental Engineering. Department of Geo-environmental Engineering, The Pennsylvania State University, Pennsylvania, USA.
- Trakoolngam, K. (1999). **Sedimentary Characteristics of the Sao Khua Formation at Southern Phu Phan Range, Thailand**. A senior thesis for the BSc in Geology, Department of Geology, Chulalongkorn University, Bangkok.