

# AVIRUT PUTTIWONGRAK

**Geo-Engineering  
Assistant Professor**

## Contact

Geotechnical and Earth Resources Engineering,  
School of Engineering and Technology, Asian  
Institute of Technology, P.O.Box 4, 58 Moo 9,  
Paholyothin Highway, Klong Luang, Pathumthani  
THAILAND 12120

Tel. +66 2 524 5576 | +66 80 219 1411  
[puttiwongrak\\_a@live.com](mailto:puttiwongrak_a@live.com)  
[avirut@ait.ac.th](mailto:avirut@ait.ac.th)



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## General Information

Date of Birth: April 3, 1984  
Nationality: Thai  
Religion: Buddhism  
Height: 167 cm  
Weight: 65 kg  
Marital Status: Married  
Military Status: Finished Military Service Training of Territorial  
Defence Course, Royal Thai Armed Forces, Thailand.

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## Experience

### Asian Institute of Technology / Academic Staff

July 2020 - PRESENT, Pathumthani/THAILAND

The main duty is a graduate lecturer to consult the students doing the research on Geo-Engineering topics relating to geo-resources and disasters.

### Prince of Songkla University Phuket Campus / Academic Staff

March 2014 - June 2020, Phuket/THAILAND

The main duty is to do the research on Geo-Engineering topics relating to geo-resources and disasters via the graduate system. Other duties are the academic program coordinator and quality assurance using the AUN-QA framework.

### Asian Institute of Technology / Research Associate

July 2009 - August 2010, Pathumthani/THAILAND

Doing and coordinating the research project in the title "Measuring Electric Resistivity of Natural and petroleum-contaminated Bangkok Clay Samples".

### King Mongkut's University of Technology North Bangkok / Teaching Assistant

December 2006 - February 2007, Bangkok/THAILAND

Teaching in a civil engineering laboratory and tutoring on the assigned subjects.

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## Education

### Kyoto University / Ph.D. in Environment and Resource System Engineering (Research - Base)

October 2010 - July 2013, Kyoto/JAPAN

Dissertation topic: Geomechanical Studies on Fluid Flow Behaviour  
Influencing Rock Deformation Mechanisms of Mudstones and Sandstones

**Asian Institute of Technology / M.Eng. in Geosystem  
Exploration and Petroleum Geoengineering (GPA 3.94/4.00 -  
Prize)**

August 2007 - May 2009, Pathumthani/THAILAND

Thesis topic: Interpretation of Seismic Data Using Open Source Environment  
(OpendTect)

**King Mongkut's University of Technology North Bangkok /  
B.Eng. in Civil Engineering (GPA 3.64/4.00 - First Class Honor)**

May 2003 - March 2007, Bangkok/THAILAND

Project topic: Determination of Chloride Content in Concrete using Non-  
Destructive Test

**King Mongkut's University of Technology North Bangkok /  
Cert. in Pre-Civil Engineering (GPA 3.25/4.00)**

May 2000 - March 2003, Bangkok/THAILAND

**Rajavinit Mathayom School / Cert. of Secondary School (GPA  
3.82/4.00)**

May 1997 - March 2000, Bangkok/THAILAND

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## Appointment

**Asian Institute of Technology/ Assistant Professor**

July 2020 - Present, Phuket/THAILAND

**Faculty of Technology and Environment, Prince of Songkla  
University / Associate Dean of Research and Graduate Study**

June 2019 - May 2020, Phuket/THAILAND

**Prince of Songkla University/ Assistant Professor**

October 2018 - June 2020, Phuket/THAILAND

**Interdisciplinary Graduate School of Earth System Science  
and Andaman Natural Disaster Management (ESSAND),  
Prince of Songkla University / Director**

November 2018 - December 2019, Phuket/THAILAND

**ANDaman Environment and Disaster (ANED) Research  
Center, Prince of Songkla University / Director**

September 2018 - June 2020, Phuket/THAILAND

**Prince of Songkla University Phuket campus / ESSAND Board  
of Trustee Committee and Associate Secretary**

March 2015 - September 2018, Phuket/THAILAND

**Prince of Songkla University Phuket campus / ESSAND  
Quality Assurance Committee**

March 2015 - September 2018, Phuket/THAILAND

**Prince of Songkla University Phuket campus / PSU Phuket  
campus Academic Committee**

September 2014 - June 2019, Phuket/THAILAND

**Prince of Songkla University Phuket campus / ESSAND**

Scholarship Committee  
August 2014 - September 2018, Phuket/THAILAND

**Prince of Songkla University Phuket campus / ESSAND Steering Committee**  
June 2014 - September 2018, Phuket/THAILAND

**Prince of Songkla University Phuket campus / ESSAND TOR Supporting Staffs Evaluation Committee**  
June 2014 - September 2018, Phuket/THAILAND

**Prince of Songkla University Phuket campus / Deputy Assistant Director of ESSAND Academic Affairs**  
June 2015 - August 2016, Phuket/THAILAND

**Prince of Songkla University Phuket campus / ACM-ICPC World Finals Sub-Committee**  
May 2015 - April 2016, Phuket/THAILAND

**Prince of Songkla University Phuket campus / ESSAND M.Res. and M.Sc. (Natural Disaster Management) Programme Developing Committee**  
December 2014 - December 2015, Phuket/THAILAND

**Prince of Songkla University Phuket campus / PSU Academic Open-House 2015 Operating Committee**  
September 2015 - November 2015, Phuket/THAILAND

**Prince of Songkla University Phuket campus / Phuket and Andaman Provincial Group Budget Requesting Committee**  
January 2015 - August 2015, Phuket/THAILAND

**Prince of Songkla University Phuket campus / ESSAND D.Phil. Program 2014 Recruiting Committee**  
January 2014 - May 2014, Phuket/THAILAND

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## Academic Service

**The 5th Asia Pacific Meeting on Near Surface Geoscience and Engineering 2022 / Technical Program Committee**  
30th November - 2nd December 2022, Taipei, Taiwan

**The 297<sup>th</sup> Program Assessment: Bachelor of Agricultural Economics, Vietnam National University of Agriculture / Assessor**  
October 2022, the AUN-QA Programme Assessment (AUN-QA PA)

**Research Article: "Quantitative Analysis and Modeling of Groundwater Flow Using Visual Modflow: A Case from Subtropical Coal Mine Basin, Bangladesh" / Reviewer**  
October 2022, Geocarto International ISSN: 1752-0762

**Research Article: "Electro-Mechanical Behaviour of Graphene-based Geotextiles for Pavement Health Monitoring" / Reviewer**  
September 2022, Geotextiles and Geomembranes ISSN: 0266-1144

**Seminar on Geophysical Engineering and Non-Destructive Testing in Infrastructural Engineering/ Guest Speaker**

**Research Article: "Multi-criteria Ground Water Potentiality Mapping Utilizing Remote Sensing and Geophysical data: A case study within Sinai Peninsula, Egypt" / Reviewer**

June 2022, The Egyptian Journal of Remote Sensing and Space Sciences  
ISSN: 2090-2476

**Research Article: "Geophysical investigation of salt-polluted groundwater system in Ogba-Iyo/Blessed community, Ijoko, southwestern Nigeria" / Reviewer**

April 2022, Applied Water Science ISSN: 2190-5495

**Research Article: "Estimation of Drain Pipe Effects Prospecting and Unsaturated Soil/Water Coupled Analysis / Reviewer**

January 2022, Journal of SEAGS & AGSSEA ISSN: 0046-5828

**Research Article: "An Qbliquely Incident Wave Propagation Through the Jointed Complex Rock Messes" / Reviewer**

January 2022, Journal of SEAGS & AGSSEA ISSN: 0046-5828

**Research Article: "Numerical Analysis of the Dynamic Earth Dam - Cas the Ourkiss Dam, Algeria" / Reviewer**

January 2022, Journal of SEAGS & AGSSEA ISSN: 0046-5828

**The 4th Asia Pacific Meeting on Near Surface Geoscience and Engineering 2021 / Technical Program Committee**

30th November - 2nd December 2021, Ho Chi Minh City, Vietnam

**Research Article: "Strength and road performance of super-absorbent polymer combined with cement for reinforcement of excavated soil" / Reviewer**

July 2021, Advances in Civil Engineering ISSN: 1687-8086

**Research Article: "Influence of RB-05 in Reducing Erodibility of Sand / Reviewer**

February 2021, Journal of SEAGS & AGSSEA ISSN: 0046-5828

**Research Article: "Seismic Behaviour of Complex H-Shaped Buried Structures / Reviewer**

February 2021, Journal of SEAGS & AGSSEA ISSN: 0046-5828

**Research Article: "The effect of geogrid angle on shear stress and crown displacement in earth dams / Reviewer**

February 2021, Journal of SEAGS & AGSSEA ISSN: 0046-5828

**Research Article: "Using a Stochastic Model to Study the Ground Motion of Comprehensive Subsurface Structure / Reviewer**

February 2021, Journal of SEAGS & AGSSEA ISSN: 0046-5828

**The 192<sup>nd</sup> Program Assessment: Bachelor of Arts in Histor, Vietname National University / Assessor**

December 2020, the AUN-QA Programme Assessment (AUN-QA PA)

**Research Article: "Comprehensive ahead prospecting of tunnels in severely weathered rock mass environments with**

**high water inrush risk: a case study in Shaanxi Province /  
Reviewer**

August 2020, Advances in Civil Engineering. ISSN: 1687-8086 eISSN:  
1687-8094

**Research Article: "Delineation of Leachate at a Dumpsite  
Using Geo-Electrical Resistivity Method: A Case Study of  
Abule Egba, Lagos, Nigeria / Reviewer**

August 2020, SN Applied Sciences ISSN: 2523-3963 eISSN: 2523-3971

**2020 International Symposium on Water, Ecology and  
Environment (ISWEE2020) / Reviewer**

June 2020, Conference Proceeding ISSN: eISSN: 1755-1315, ISSN:  
1755-1307

**An Integration of Water Resources of Phuket / Subcommittee**

November 2019, Phuket Governmental Office/THAILAND

**PSU Internal Programme Quality Assurance in Academic  
Year 2017 / Assessor**

August 2018, Prince of Songkla University/THAILAND

**PSU Research Evaluation: Community-Based Integrated  
Water Resources Management in Satingphra Peninsula,  
Songkhla Province / Research Evaluator**

August 2018, Prince of Songkla University/THAILAND

**PSU Research Evaluation: Community-Based Re-Utilisation  
of Natural Waterways System in Khlong Hoi Khong District,  
Songkhla Province / Research Evaluator**

August 2018, Prince of Songkla University/THAILAND

**Course Work of CE71.63 Workflow in Oil and Gas Operation  
/ Adjunct Faculty**

March 2018, Asian Institute of Technology/THAILAND

**Research Article: "Justification of Spatially-Planned  
Solutions and Determination of the Dimension Block" /  
Reviewer**

March 2018, Journal of SEAGS & AGSSEA ISSN: 0046-5828

**PSU Phuket International Conference 2018 (PSU-PIC 2018) /  
Program Committee**

March 2018, Prince of Songkla University Phuket campus/THAILAND

**PSU Internal Programme Quality Assurance in Academic  
Year 2016 / Assessor**

August 2017, Prince of Songkla University/THAILAND

**Research Article: "Application of Geo-Mechanical Models in  
the Geological Interpretation of Rock Property Trends" /  
Reviewer**

July 2017, Cogent Geoscience ISSN: 2331-2041

**Seminar on Outcome-Based Education (OBE) Using AUN-QA  
/ Guest Speaker**

June 2017, Prince of Songkla University Surat Thani Campus/THAILAND

**Course Work of CE71.63 Workflow in Oil and Gas Operation / Adjunct Faculty**  
March 2017, Asian Institute of Technology/THAILAND

**Workshop on Prevention, Mitigation, Resource Supporting, and Disaster Management of Earthquake and Tsunami for Andaman Provinces, Thailand / Guest Speaker**  
March 2016, Provincial Disaster Prevention and Mitigation Area 18/THAILAND

**Course Work of CE71.63 Workflow in Oil and Gas Operation / Adjunct Faculty**  
March 2016, Asian Institute of Technology / THAILAND

**Seminar on Earthquake and Geo-Hazards (Tsunami) Prevention and Mitigation / Guest Speaker**  
February 2016, Provincial Disaster Prevention and Mitigation Area 18/THAILAND

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## **Award**

**Hydrotech Research Institute-National Taiwan University / The outstanding performance in a summer training course for slope land disaster reduction 2015**  
August 2015, Taipei/TAIWAN

**Japanese Government / Monbukagakusho Scholarship to pursue a Ph.D. program at Kyoto University, Japan**  
October 2010, Kyoto/JAPAN

**Asian Institute of Technology / The Deeswasmongkol prize in recognition of the most outstanding academic performance in the field of Geotechnical and Geoenvironmental Engineering, School of Engineering and Technology**  
May 2009, Pathumthani/THAILAND

**Thai Government / Royal Thai Government Scholarship (RTG) to pursue Master program at Asian Institute of Technology (AIT)**  
August 2007, Pathumthani/THAILAND

**Siam Cement Public Company Limited (SCG) / SCG Talent Scholarship**  
January 2007, Bangkok/THAILAND

**King Mongkut's University of Technology North Bangkok / The outstanding academic performance**  
June 2006, Bangkok/THAILAND

**Rajavinit Mathayom School / The outstanding academic performance**  
August 2000, Bangkok/THAILAND

**Rajavinit Mathayom School / The outstanding academic performance**  
January 2000, Bangkok/THAILAND

**Rajavinit Mathayom School / The outstanding academic performance**  
March 1999, Bangkok/THAILAND

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## **Certified Training**

**The Dutch Water Boot Camp: Digital Data Approach for Water Data Management Under Uncertainty / Attendance**  
May 2019, Bangkok/THAILAND

**10th Assessors Training Workshop for AUN-QA Programme Assessment / Attendance**  
February 2019, Bangkok/THAILAND

**International Training Workshop on Integrated Risk Assessment Methods Using Spatial and Social Vulnerability Data for Disaster Risk Reduction / Scholar Attendance**  
December 2017, Sanya/CHINA

**AUN-QA Training Course for Accomplishing Programme Assessment / Attendance**  
February 2017, Bangkok/THAILAND

**The 40th Annual ACM-ICPC World Finals / Host Organizer**  
May 2016, Phuket/THAILAND

**Summer Training Course for Slope Land Disaster Reduction / Scholar Attendance**  
August 2015, Taipei/TAIWAN

**A short course of Urban Infrastructure Asset Management / Attendance**  
March 2009, Pathumthani/THAILAND

**Training course in Geophysical Inversion and Applications / Attendance**  
March 2009, Pathumthani/THAILAND

**Training course in Introduction to Interactive Petrophysics Software and Petrel Software / Attendance**  
December 2008, Pathumthani/THAILAND

**Training at Geophysics section (Seismic Interpretation) of The Petroleum Authority of Thailand Exploration and Production Public Company Limited (PTT'EP Public Company Limited) / Student Trainee**  
June 2008 - July 2008, Bangkok/THAILAND

**Training course in Reservoir Simulation using ECLIPSE Software / Attendance**  
February 2008, Pathumthani/THAILAND

**Certifying in the License for Professional Practice (Associate Civil Engineer) of Council of Engineers / Examinee**  
January 2008, Bangkok/THAILAND

**Training in SCG Excellent Internship Program of Siam Cement**

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**Public Company Limited (SCG) / Scholar Trainee**

March 2006 - May 2006, Bangkok/THAILAND

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**Professional Affiliation****Engineering Institute of Thailand (EIT) / Member**

Bangkok/THAILAND

**Council of Engineers of Thailand (COE) / Member**

Bangkok/THAILAND

**Engineering Geology of SouthEast Asian Geotechnical Society / Member**

Pathumthani/THAILAND

**Integrated Research and Disaster Risk / Young Scientist Member**

Beijing/CHINA

**International Society for Digital Earth / Member**

Beijing/CHINA

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**Extra-Activity****Thai Students' Association in Japan under the Royal Patronage / Vice President of Activity Affairs Batch 72**

March 2011 - February 2012, Kyoto/JAPAN

**AIT Student Union / Volunteer for Help Kids & Help Envi Project**

June 2008, Chanthaburi/THAILAND

**AIT Student Union / Volunteer of Internal Affair & Relation Section**

August - December 2008, Patumthani/THAILAND

**AIT Student Union / Volunteer for AIT Cross Cultural Learning Camp**

August 2008, Patumthani/THAILAND

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**Skills****Computer Skills**

Microsoft Office / AutoCad / GRASP / Decision Tree / @Risk / Grapher / Surfer / Seisimager / SPW / Interactive Petrophysics (IP) / Petrel / OpendTect / Res2Dinv / Syscal / FLAC3D / AGI software / PMWIN-Modflow / ARCGIS / Visual MODFLOW / GeoStudio

**Language Skills****Thai Language**

WRITING / Excellent

SPEAKING / Excellent

LISTENING / Excellent

READING / Excellent

**English Language**

WRITING / Good

SPEAKING / Good



LISTENING / Good  
READING / Good

### Chinese Language

WRITING / NA  
SPEAKING / Good  
LISTENING / Good  
READING / NA

### Japanese Language

WRITING / Beginning  
SPEAKING / Beginning  
LISTENING / Beginning  
READING / Beginning

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## Research Interests

My research interests are in geophysical, geotechnical, and geomechanical techniques in exploration of surface and subsurface, and integrated knowledge for contributing to the development of energy, environment, and infrastructure.

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## Research Grants

### **Research and Development Office (RDO), Prince of Songkla University / Compaction of Shales Based on Geological Time Sequences**

January 2015 - December 2015, 102,904 Baht/Project Leader/Project Completed

### **Phuket Campus Research Funds, Prince of Songkla University / The Study and Prediction of Groundwater Level Changing in Kathu, Phuket**

July 2016 - June 2017, 100,500 Baht/Project Leader/Project Completed

### **2017 Annual Expenditure of Government Statement - Budget Bureau of Thailand / The Study and Observation Seawater Intrusion due to Overuse of Groundwater in Phuket**

February 2017, 2,500,000 Baht (Hardware Budget Approval)/Project Leader/Purchase Completed

### **2018 Annual Expenditure of Government Statement - Budget Bureau of Thailand / Geo-Disaster Monitoring at Phuket City**

October 2017 - September 2018, 3,335,000 Baht /Project Initiation and Consultant/Project Completed

### **Phuket Campus Research Funds, Prince of Songkla University / Studying, Surveying, and Mapping of Groundwater Potential in Phuket using Electrical Resistivity Survey**

November 2018 - October 2020, 149,985 Baht/Project Leader/Project Completed

### **EGAT Research and Developing Innovation Funds, Electricity Generating Authority of Thailand (EGAT) / Characterization of Backfill Soils for Substation**

September 2020 - August 2021, 1,989,500 Baht/Project Member/Project On-Going

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## Publications

### Journals

1. Puttiwongrak, A., Syukaratun, N., Chaiyasart, C., Gao, P. H., Sakanann, V., Suteerasak, T., and Hashimoto, K. (2022). A 3D Empirical Model of Standard Compaction Curve for Thailand Shales: Porosity in Function of Burial Depth and Geological Time.

- Open Geosciences [ISSN: 2391-5447, ISI Q.3, IF = 1.229], in press.
2. **Puttiwongrak, A.**, Ratha, M., Sakanann, V., Sam Ol, K., Suteerasak, T., and Nontapot, T. (2022). Groundwater Modeling for Natural Recharge Estimation in Phuket Island, Thailand. *Burapha Science Journal* [ISSN: 2351-0781, ACI, T-JIF = 0.043], 27(1), 316-333..
  3. **Puttiwongrak, A.**, Ratha, M., Sakanann, V., Hashimoto, K., and Suteerasak, T. (2021). Application of Geoelectrical Survey and Time-lapse Resistivity with Groundwater Data in Delineating Groundwater Potential Map: A Case Study from Phuket Island, Thailand. *Sustainability* [ISSN: 2071-1050, ISI Q.2, IF=3.251], 14(1), 397, 1-17.
  4. Tran, T.N.H., **Puttiwongrak, A.**, Pongsopha, P., Intarabut, D., Jamsawang, P. and Sukontasukkul, P. (2021). Microparticle Filtration Ability of Pervious Concrete Mixed with Recycled Synthetic Fibers. *Construction and Building Materials* [ISSN: 0950-0618, ISI Q.1, IF=6.141], 270, 1-13.
  5. **Puttiwongrak, A.**, Giao, P.H., and Sakanann, V. (2020). An Easily Used Mathematical Model of Porosity Change with Depth and Geologic Time in Deep Shale Compaction. *International Journal of GEOMATE* [ISSN: 2186-2982, ISI Q.4 SJR=0.3], 19(73), 108-115.
  6. Tesfaldet, Y.T, **Puttiwongrak, A.** and Arpornthip, T. (2020). Spatial and temporal variation of groundwater recharge in shallow aquifers in Thepkasattri of Phuket, Thailand. *Journal of Groundwater Science and Engineering* [ISSN: 2305-7068, ISI Q.4 SJR=0.18], 8(1), 10-19.
  7. Sakanann, V., **Puttiwongrak, A.**, Suteerasak, T. and Koedsin, W. (2020). Delineation of Seawater Intrusion Using Geo-Electrical Survey in a Coastal Aquifer of Kamala Beach, Phuket, Thailand. *Water* [ISSN: 2073-4441, ISI Q.2, IF = 3.229]. 12(2), 1-15.
  8. **Puttiwongrak, A.** and Htwe, N.N. (2019). Application of Electrical Resistivity Imaging and Slope Modeling to the Investigation of the Sliding Geometry of Landslides in Phuket. *Geotechnical Engineering* [ISSN: 0046-5828, ISI Q.4, SJR = 0.19]. 50(4), 89-95.
  9. Tesfaldet, Y.T. and **Puttiwongrak, A.** (2019). Seasonal Groundwater Recharge Characterization using Time-Lapse Electrical Resistivity Tomography in Thepkasattri Watershed on Phuket Island, Thailand. *Hydrology* [E-ISSN: 2306-5338, ISI Q.4]. 6(2), 36, 1-15.
  10. **Puttiwongrak, A.**, Sakanann, V., Rattanakom, R. and Ruamkaew, S. (2019). Preliminary Assessment of Seawater Intrusion in Phuket Island using Groundwater Data Analysis and GIS Techniques. *Engineering Journal of Research and Development* [ISSN: 0857-7951, TCI G.1, T-JIF = 0.022], 30(4), 75-88.
  11. **Puttiwongrak, A.**, Suteerasak, T., Mai, K.P., Hashimoto, K., Gonzalez, J.C., Rattanakom, R., and Prueksakorn, K. (2019). Application of multi-monitoring methods to investigate the contamination levels and dispersion of Pb and Zn from tin mining in coastal sediments at Saphan Hin, Phuket, Thailand. *Journal of Cleaner Production* [ISSN: 0959-6526, ISI Q.1, IF=9.297], 218, 108-117.
  12. **Puttiwongrak, A.**, Sam Ol, K. and Sakanann, V. (2018). Groundwater Recharge Estimation in Kathu, Phuket using Groundwater Simulation. *Geotechnical Engineering* [ISSN: 0046-5828, ISI Q.4, SJR = 0.19]. 49(3), 4-10.
  13. **Puttiwongrak, A.** (2017). Rock Deformation Caused by Different Fluid injection for CO<sub>2</sub> Sequestration Technique. *The Journal of King Mongkut's University of Technology North Bangkok* [ISSN: 2465-4698, ACI, T-JIF = 0.104], 27(3), 481-491. (in Thai).
  14. **Puttiwongrak, A.**, Honda, H., Matsuoka, T. and Yamada, Y. (2013). Compaction Curve with Consideration of Time and Temperature Effects for Mudstones. *Geotechnical Engineering* [ISSN: 0046-5828, ISI Q.4, SJR = 0.19], 44(1), 34-39.

### Conference Proceeding

1. Ranasinghe, A. and **Puttiwongrak, A.** (2021). Coupled Simulation of Groundwater Flow and Contaminant Transport Models: A Dispersion of Contaminations Along Bang-Yai, Phuket. *Proceeding of the 4<sup>th</sup> Asia Pacific Meeting on Near Surface Geoscience and Engineering*, 30 November - 2 December 2021, Ho Chi Minh City, Vietnam.
2. Sakanann, V., **Puttiwongrak, A.**, Ratha, M., and Suteerasak, T. (2021). Groundwater Potential Assessment using Geoelectrical Data: A Case Study of Phuket Island, Thailand. *Proceeding of the 4<sup>th</sup> Asia Pacific Meeting on Near Surface Geoscience and Engineering*,

- 30 November - 2 December 2021, Ho Chi Minh City, Vietnam.
3. Nontapod, T., Giao, P.H., and **Puttiwongrak, A.** (2019). Geophysical Investigation of Seawater Intrusion at a Coastal Site in Phuket, Thailand. *Proceeding of the 2<sup>nd</sup> EAGE-GSM Asia Pacific Meeting on Near Geoscience and Engineering*, Kuala Lumpur, Malaysia.
  4. **Puttiwongrak, A.** and Sakanann, V. (2018). Using 2D & 3D Electrical Resistivity Imaging for Spatial Extent of Seawater Intrusion in Phuket Island, Thailand. *Proceeding of the Vietnam International Water Week - VACI2018*, 4-8 March 2018, Hanoi, Vietnam.
  5. **Puttiwongrak, A.** and Sakanann, V. (2017). Preliminary Assessment of Seawater Intrusion in Phuket Island using Groundwater Data Analysis and Geographic Information System (GIS) Techniques. *Proceeding of the 12th Greater Mekong Subregion Academic and Research Network (GMSARN)*, 27 November - 1 December 2017, Da Nang, Vietnam.
  6. **Puttiwongrak, A.**, Sam Ol, K., and Sakanann, V. (2017). Groundwater Modelling of Natural Recharge Estimation in Phuket Island, Thailand. *Proceeding of the International Symposium on Flood Pulse Ecosystems (ISFE)*, 24-27 July 2017, Siem Reap, Cambodia.
  7. **Puttiwongrak, A.** Sam Ol, K., Sakanann, V., and Giao, P.H. (2017). Hydrogeological Characterization and Groundwater Analysis with Reference to Development of Kathu, Phuket, *Proceeding of the 5th Asia-Pacific Coastal Aquifer Management Meeting (APCMM)*, 17-19 July 2017, Da Nang, Vietnam.
  8. **Puttiwongrak, A.**, Matsuoka, T., Horiuchi, Y. (2013). Deformations of Sandstones Induced by Supercritical CO<sub>2</sub>, *Proceeding of the EIT-JSCE Joint International Symposium on International Human Resource Development for Disaster-Resilient Countries 2013*, 12-13 September 2013, Bangkok, Thailand.
  9. **Puttiwongrak, A.** and Matsuoka, T. (2012). Geomechanical Simulation of Deformation by CO<sub>2</sub> Injection into Homogeneous Sandstone. *Proceedings of the 6th International Conference on Applied Geophysics*, 15-17 November 2012, Kanchanaburi, Thailand.
  10. **Puttiwongrak, A.**, Honda, H. and Matsuoka, T. (2012). An Adjustment of Compaction Concept Method for Pore Pressure Prediction in Shale based on Time Effect, *Proceeding of the EIT-JSCE Joint International Symposium on International Human Resource Development for Disaster-Resilient Countries 2012*, 13-14 September 2012, Bangkok, Thailand.
  11. **Puttiwongrak, A.**, Honda, H., and Matsuoka, T. (2012). Time effect on Mechanical Compaction of Mudrocks and Terzaghi Equation, *Proceeding of the Japanese Association for Petroleum Technology (JAPT) Spring Conference 2012*, 5-7 June 2012, Akita, Japan.
  12. **Puttiwongrak, A.** (2012). Time Effect of Cenozoic Mudstone Compactions with Consideration of Terzaghi Equation, *Proceeding of 修士課程・博士課程中間発表概要 2012*, 12 March 2012, Kyoto, Japan.
  13. **Puttiwongrak, A.**, Honda, H., Matsuoka, T. and Yamada, Y. (2011). Time and Temperature Effects Influencing the Mechanical Processes of The Mudstone Compactions, *Proceeding of EIT-JSCE Joint International Symposium Geotechnical Infrastructure Asset Management 2011*, 30-31 August 2011, Bangkok, Thailand.
  14. **Puttiwongrak, A.**, Honda, H., and Matsuoka, T. (2011). The Effects of Time and Temperature on Mudstone Compaction Curves Requiring for Primary Hydrocarbon Migration, *Proceeding of the DMF 4th Petroleum Forum 2011*, 26-27 May 2011, Bangkok, Thailand.
  15. **Puttiwongrak, A.** and Giao, P. H. (2010). Interpretation of Seismic Data in a Site Investigation for Subsea Cable Installation, *Proceeding of Intl' Symp. Hanoi Geoengineering*, 22-23 November 2010, Hanoi, Vietnam.
  16. Giao, P.H., Seeboonruang, U. and **Puttiwongrak, A.** (2010). Measuring Electric Resistivity of Natural and Petroleum-Contaminated Bangkok Clay Samples, *Proceeding of the 7th International Symposium on Lowland Technology*, 16-18 September 2010, Saga, Japan.
  17. Vichalai, C., Giao, P.H., and **Puttiwongrak, A.** (2009). Integrated Analysis of High Resolution Seismic and Geotechnical Data using Open Source Software for An Offshore Drilling Rig Site. *Proceedings of the 9th SEGJ International Symposium on Imaging and Interpretation*, 12-14 October 2009, Hokkaido, Sapporo, Japan.

## **Book Chapter**

1. **Puttiwongrak A., Ratha M., Sakanann V., Hashimoto K., Suteerasak T.** Application of Geoelectrical Survey and Time-Lapse Resistivity with Groundwater Data in Delineating a Groundwater Potential Map: A Case Study from Phuket Island, Thailand. In: Magdalena Maciaszczyk, editor. Prime Archives in Sustainability: 3rd Edition. Hyderabad, India: Vide Leaf. 2022.

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## **Graduate Students**

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**Hydrogeological Characterization and Groundwater Analysis with Reference to (Urban, Tourists, and Economic) Development of Phuket Areas, Thailand / Mr. Kong Sam Ol (Student ID: 5830420005) - M.Sc. Degree**

May 2017

**Preliminary Assessment of Seawater Intrusion in Phuket Island, Thailand/ Mr. Sakanann Vann (Student ID: 5930421003)-M.Sc. Degree**

June 2018

**Application of Multi-Monitoring Methods to Investigate the Contamination and Distributed Accumulation of Heavy Metals at Saphan Hin, Phuket, Thailand/Ms. Phuong Khanh Mai (Student ID: 6030420005) - M.Sc. Degree**

June 2019

**Groundwater Recharge Estimation in Thepkasattri Watershed, Phuket, Thailand/ Mr. Yacob Tesfamariam Tesfaldet (Student ID: 6030420011) - M.Sc. Degree**

June 2019

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