

SUTTHIPONG NOISAGOO

Lecturer, Department of Physics, Faculty of Science, Mahidol University

Contact: snoisagool@gmail.com, Tel: (+66)062-632-9801

EDUCATION

Ph.D. in Physics, Mahidol University 2011 –2016

Thesis topic: Crustal structure studies beneath Thailand using a receiver function and ambient noise tomography, and the regional moment tensor of 5 May 2014, Mw 6.5, Chiang Rai earthquake and its aftershocks

Ph.D. Supervisor: Assoc. Prof. Weerachai Siripunvaraporn

B.Sc. in Physics (Distinction Program), Mahidol University 2007 - 2010

On course to graduate with a 3.53 GPA

Research Project: Time domain induced polarization inversion on MATLAB using deterministic and stochastic optimization

POSITIONS HELD

04/2017 – present Lecturer, Department of Physics, Faculty of Science, Mahidol University

07/2016-03/2017 Postdoctoral Researcher at Earthquake Research Institute,
The University of Tokyo

04/2015-10/2015 Internship at Earthquake Research Institute, The University of Tokyo

RESEARCH INTEREST

- Earth structure imaging using seismological method such as receiver function, ambient noise, surface wave, and body wave travel time tomography
- Regional earthquake magnitude (Richter scale) calibration for Thailand
- Earthquake source, rupture process, stress and seismo-tectonic implication
- Tectonic evolution of Thailand and adjacent area
- Earthquake damage and building health monitoring

SCHOLARSHIP

2014- 2016 Royal Golden Jubilee Scholarship, Thai Research Funds

2007-2014 Sri Trang Thong Scholarship

TRAINING EXPERIENCES

- Training Course- earthquake hazard vulnerability, Pre-conference Asian Seismological Commission general meeting 2014, 12-16 November 2014, Makati, Philippine.
- The 3rd international summer school on Earthquake Science, 4-8 September 2015, Yamanakako, Yamanashi, Japan.
- Core-mantle co-evolution workshop 21-23 March 2017, JAMSTEC, Yokohama, Kanagawa, Japan.

SEISMIC NETWORK UNDER RESPONSIBILITY

Thai Seismic ARray (TSAR) (PI: Dr. Satoru Tanaka, JAMSTEC)

TSAR is a multi-purposes broadband seismic array. It is largest temporary broadband seismic network in Southeast Asia. Forty seismic stations were successfully installed cover an area of Thailand. They will operate for 2 years. The data from this network will be use for the study of earthquake and earth structure ranging from the crust to innermost core. TSAR is expected to be an important milestone for the seismological research in Thailand.

COMPUTATIONAL TOOLS

Computational Language: fluent in MATLAB, shell script, and basic programming in C++
Computational Skill:

- Deterministic & Stochastic Inversion
- Finite Different Method
- Time series analysis

Seismological tools/skills:

- SAC
- Computer Program in Seismology (Prof. R.B.Herrmann)
- taup for global scale travel time/path calculation
- Fast Matching Method package of Prof. Nick Rawlinson
- Double Difference Method for Earthquake Relocation (HypoDD)
- STRESSINVERSE
- Global seismic data access script e.g. IRIS data

TECHNICAL AND FIELD EXPERIENCES

- Professional skill in observational seismology e.g. seismic network management, installation, and maintenance
- Emergency field work e.g. aftershock monitoring and volcanic activity
- Direct Current Resistivity method: field Survey, Data Processing, Modeling, Inversion, and interpretation
- Time-Spectral Induce Polarization method
- Gravity Modeling
- Magnetotellureic field survey
- Active source seismology: seismic reflection and refraction survey and data processing

ACADEMIC AND TEACHING EXPERIENCE

- 2014 Teaching Assistance: Physics of the Earth course for undergrad student
- 2014 Teaching Assistance: Applied Geophysics
- 2013 Teaching Assistance: Physics of the Earth course for undergrad student
- Co-advising undergrad student and master student in some topics
 - Gravity modeling software development in MATLAB
 - Statistical Seismology study of earthquake in Thailand and adjacent area
 - Crustal heterogeneity studies using Receiver function
 - Inner core anisotropy

PUBLICATIONS

- s2. **Noisagool, S.**, Nishida, K., Boonchaisuk, S., Pornsopin, P., and Siripunvaraporn, W., Ambient noise tomography across Thailand (In preparation)
- s1. Boonchaisuk, S., Amatayakul, P., Rung-Arunwan, T., Vachiratianchai, C., **Noisagool, S.**, Siripunvaraporn, W., 2017, 3-D magnetotelluric imaging of the Phayao Fault Zone, Northern Thailand: evidence for fluid in the source region of the 2014 Chiang Rai earthquake (Under revision)
2. **Noisagool, S.**, Boonchaisuk, S., Pornsopin, P., and Siripunvaraporn, W., 2016, The regional moment tensor of the 5 May 2014 Chiang Rai earthquake ($M_w = 6.5$) and its aftershocks and implication of stress and instability of Phayao Fault Zone, *Journal of Asian Earth Science*, Vol. 127, P. 231-245. (Quartile 1)
1. **Noisagool, S.**, Boonchaisuk, S., Pornsopin, P., and Siripunvaraporn, W., 2014, Thailand's crustal properties from tele-seismic receiver function studies, *Tectonophysics*, Vol. 632, P64-75. (Quartile 1)

CONFERENCE PRESENTATIONS

11. Sutthipong Noisagool, Kiwamu Nishida, Weerachai Siripunvaraporn, Songkhun Boonchaisuk, 2016, Crustal Tomographic Imaging of Thailand using a receiver function and ambient noise tomography, the 3rd conference on Tectonic of Northwestern Indochina, The Empress, Chiang Mai, Thailand.
10. Sutthipong Noisagool, Satoru Tanaka, Hitoshi Kawakatsu, Weerachai Siripunvaraporn, Songkhun Boonchaisuk, 2016, Thai Seismic ARray (TSAR) project and its future application for tectonic and crustal studies of Thailand, the 3rd conference on Tectonic of Northwestern Indochina, The Empress, Chiang Mai, Thailand.
9. Sutthipong Noisagool, Satoru Tanaka, Hitoshi Kawakatsu, Weerachai Siripunvaraporn, Songkhun Boonchaisuk, Yasushi Ichihara, Kim Taewon, Kenji Kwai, Nozomu Takeuchi, and Koji Miyakawa, 2016, Current Status of Pilot stations of Thai Seismic Array (TSAR) and Preliminary Receiver Function Analysis, Seismological Society of Japan Fall Meeting 2016, 5-7 October 2016, Nagoya, Japan.
8. Sutthipong Noisagool, Songkhun Boonchaisuk, Patinya Pornsopin, Weerachai Siripunvaraporn, and Kiwamu Nishida, 2016, Crustal structure beneath Thailand using a Receiver function and Ambient Noise Tomography: A New Geophysical Constraint, 17th RGJ-Ph.D. Congress, 8-11 June 2016, Palm Beach Jomtien, Pattaya, THAILAND. (Oral Presentation) - **Outstanding Award**
7. Sutthipong Noisagool, Songkhun Boonchaisuk, Patinya Pornsopin, and Weerachai Siripunvaraporn, 2016, Crustal structure beneath Thailand using Receiver function and Ambient Noise Analysis, JpGU 2016 meeting, 22-26 May 2016, Makuhari Messe, Chiba, JAPAN. (Oral Presentation)
6. Sutthipong Noisagool, Songkhun Boonchaisuk, Patinya Pornsopin, and Weerachai Siripunvaraporn, 2015, The ambient noise tomography of Thailand, Wave

propagation and scattering meeting, Earthquake Research Institute, University of Tokyo, JAPAN.

5.Sutthipong Noisagool, Songkhun Boonchaisuk, Patinya Pornsopin, and Weerachai Siripunvaraporn, 2015, Regional Moment tensor inversion, The 3rd international summer school on Earthquake science, 4-8 September 2015, Yamanachi, JAPAN.

4.Sutthipong Noisagool, Songkhun Boonchaisuk, Patinya Pornsopin, and Weerachai Siripunvaraporn, 2014, Crustal thickness and Poisson's ratio of Thailand from teleseismic receiver function: implication for crustal composition, The 10th Asian Seismological Commission General Assembly, 18-20 November 2014, Manila, Philippines. (Oral Presentation, outstanding student presentation)

3.Sutthipong Noisagool, Songkhun Boonchaisuk, and Weerachai Siripunvaraporn, 2012, Preliminary results of crustal studies beneath Kanchanaburi Province using seismological methods, The 6th international conference on applied geophysics, November 15-17, 2012, Kanchanaburi, Thailand. (Poster presentation)

2.Sutthipong Noisagool, Chatchai Vachiratienchai and Weerachai Siripunvaraporn, 2011, Time – Spectral Induced Polarization Inversion, The 12th Science Project Exhibition, 12 March 2011, Bangkok, Thailand. (Oral presentation)

1.Sutthipong Noisagool, Chatchai Vachiratienchai and Weerachai Siripunvaraporn, 2011, Computation of Cole-Cole Parameters by Stochastic Optimization, Conference on Science and Technology for Youths, 19 March 2011, BiTech, Bangkok, Thailand. (Oral presentation)