



RANGSIT UNIVERSITY

Lecturer

College of Biomedical Engineering

Thanate Angsuwatanakul, PhD



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EDUCATION

Doctor of Philosophy

Systems Life Sciences,

Kyushu University, Japan

2012 – 2020

Master of Engineering

Biomedical Electronics Engineering,

King Mongkut's Institute of
Technology Ladkrabang, Thailand

2004 – 2007

Bachelor of Engineering

Electrical Engineering,

King Mongkut's Institute of
Technology Ladkrabang, Thailand

1997 – 2001

WORK EXPERIENCE

December 2007 – present :

Lecturer of College of Biomedical Engineering,
Rangsit University, Thailand

December 2001 – December 2004 :

Engineer of Accelerator Technology Division, Synchrotron
Light Research Institute (Public Organization), Thailand

RESEARCH EXPERTISE

Bioelectronics, Signal processing, Neuroinformatics,
Electroencephalography (EEG), Functional near-
infrared spectroscopy (fNIRS), Entropy

RESEARCH INTERESTS

Biomedical electronics

Medical signal and image processing

Brain function analysis

Neuromarketing

Brain computer interface

PUBLICATIONS

Journal Publications

Angsuwatanakul, T., O'Reilly, J., Ounjai, K., Kaewkamnerdpong, B., & Iramina, K. (2020). Multiscale Entropy as a New Feature for EEG and fNIRS Analysis. *Entropy*, 22(2), 189.

O'Reilly, J. A., & Angsuwatanakul, T. (2019). More evidence for a long-latency mismatch response in urethane-anaesthetised mice. *bioRxiv*, 837690.

Phukhachee, T., Maneewongvatana, S., Angsuwatanakul, T., Iramina, K., & Kaewkamnerdpong, B. (2019). Investigating the Effect of Intrinsic Motivation on Alpha Desynchronization Using Sample Entropy. *Entropy*, 21(3), 237.

Conference Proceedings

Chantarat, T., Sangworasil, M., Angsuwatanakul, T., Puttasakul, T., O'Reilly, J. A., & Matsuura, T. A (2020, May). Two-channel Electromyogram-based Robotic Arm System: A Continuous Wireless Control using Simulated Hand Gesture Patterns. In *2020 5th RSU National and International Research Conference on Science and Technology, Social Sciences, and Humanities (RSUSSH)*

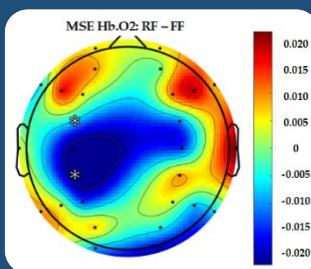
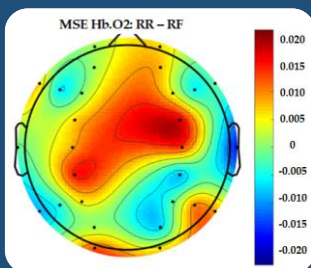
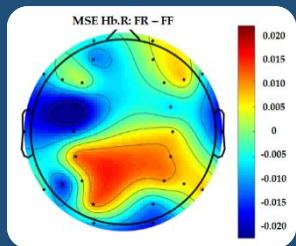
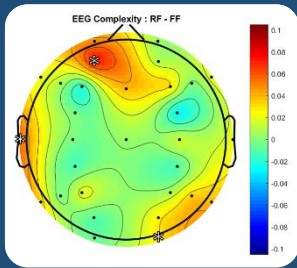
Angsuwatanakul, T., A-Lad, K., Jung-In, W., Sangworasil, M., O'Reilly, J. A., & Matsuura, T. (2019, August). Measuring Brain Activity for Preference Tasks Using Functional Near-Infrared Spectroscopy (fNIRS). In *2019 Life Engineering Symposium (LE2019)*, Bangkok, Thailand.

Angsuwatanakul, T., A-Lad, K., Jung-In, W., Suprabha, Y., Inthaphuk, N., Sangworasil, M. & O'Reilly, J. A. (2019, August). Analysis of Brain Activity for Preference Tasks Using EEG Signals. In *2019 Life Engineering Symposium (LE2019)*, Bangkok, Thailand.

Angsuwatanakul, T., Chairoek, S., Charoenyingsataporn, T., Chantarat, T., Pechprasan, S. & Sangworasil, M. (2019, May). A Study of Vibrotactile Stimulator for Quadriceps Muscle: Analysis of EMG Reaction Signal. In *2019 4th RSU National and International Research Conference on Science and Technology, Social Sciences, and Humanities (RSUSSH)* (pp. 1744 – 1753)

Angsuwatanakul, T., Tuvanonvorakul, N., Chan-Im, C., O'Reilly, J. A., Sangworasil, M. & Matsuura, T. (2018, November). Self – Regulation Training Game based on Brain Computer Interface (BCI). In *2018 Workshop: Advanced Human-Machine Interaction for Improving Quality of Life and Health, The 22nd International Computer Science and Engineering Conference (ICSEC)*. Chiang Mai, Thailand.

Thanawut, S., Wattanakool, N., Chairoek, S., Angsuwatanakul, T., O'Reilly, J. A. & Sangworasil, M. (2018, November). Analysis of Binaural Beats Song based on Instrumental Piano Music: A case – study. In *2018 Workshop: Advanced Human-Machine Interaction for Improving Quality of Life and Health, The 22nd International Computer Science and Engineering Conference (ICSEC)*. Chiang Mai, Thailand.



Conference Proceedings

Tongpance, N., Jung-In, W., A-Lad, K., Angsuwatanakul, T., O'Reilly, J. A. & Sangworasil, M., (2018, November). An Investigation of Brain Activity Analysis for Preference Tasks using EEG – fNIRS. In *2018 Workshop: Advanced Human-Machine Interaction for Improving Quality of Life and Health, The 22nd International Computer Science and Engineering Conference (ICSEC)*. Chiang Mai, Thailand.

Chunhajiruttukarl, C., Kanyangern, P., Angsuwatanakul, T., O'Reilly, J. A. Sangworasil, M. & Matsuura, T. (2018, November). Portable EEG Power Meter for Educational Application Application. In *2018 Workshop: Advanced Human-Machine Interaction for Improving Quality of Life and Health, The 22nd International Computer Science and Engineering Conference (ICSEC)*. Chiang Mai, Thailand.

Chaiyanan, C., Iramina, K., Angsuwatanakul, T., & Kaewkamnerdpong, B. (2017, December). Response time analysis on implicit learning induced by cognitive tasks toward developing ADHD treatment. In *2017 10th Biomedical Engineering International Conference (BMEiCON)* (pp. 1-5). IEEE.

Phukhachee, T., Maneewongvatana, S., Kaewkamnerdpong, B., Angsuwatanakul, T., & Iramina, K. (2017, July). Measuring brain activation by using baseline-normalized event-related spectral perturbation in working memory task. In *2017 39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)* (pp. 4379-4382). IEEE.

Angsuwatanakul, T., Iramina, K., & Kaewkamnerdpong, B. (2015, November). Brain complexity analysis of functional near infrared spectroscopy for working memory study. In *2015 8th Biomedical Engineering International Conference (BMEiCON)* (pp. 1-5). IEEE.

Angsuwatanakul, T., Iramina, K., & Kaewkamnerdpong, B. (2014, November). Multi-scale sample entropy as a feature for working memory study. In *The 7th 2014 Biomedical Engineering International Conference* (pp. 1-5). IEEE.

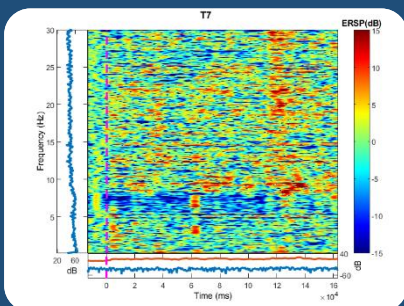
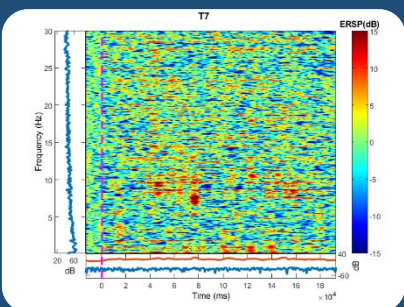
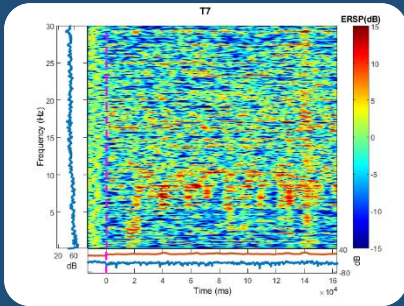
Angsuwatanakul, T., Kwamhman, K., Tubsai, J. & Suwannakham, N. (2012, August). EEG Alpha Wave Detector. In *2012 4th Symposium on Thai Biomedical Engineering Conference (BMECON)*, Bangkok, Thailand.

Angsuwatanakul, T., Somwhang, E., Krasaesoom, J. & Chollamart, R. (2012, August). ECG Portable with Thumb Electrodes. In *2012 4th Symposium on Thai Biomedical Engineering Conference (BMECON)*, Bangkok, Thailand.

Angsuwatanakul, T., Kaewseedoung, P. & Aimkaew, S. (2011, August). Audio Visual Nurse Call Center. In *2011 3rd Symposium on Thai Biomedical Engineering Conference (BMECON)*, Pattaya, Thailand.

Angsuwatanakul, T., Rattana, N. & Boonnak, P. (2010, August). Portable EKG Monitor using ARM7. In *2010 23rd Symposium on Thai Biomedical Instrumentation Conference (ThaiBMI)*, Bangkok, Thailand.

Angsuwatanakul, T., Srijutha, P. & Veekam, N. (2010, August) Digital Spirometer with Graphic LCD. In *2010 2nd Symposium on the Biomedical Engineering Conference (BMECON)*, Bangkok, Thailand.

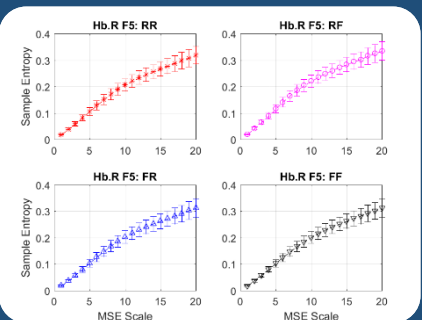
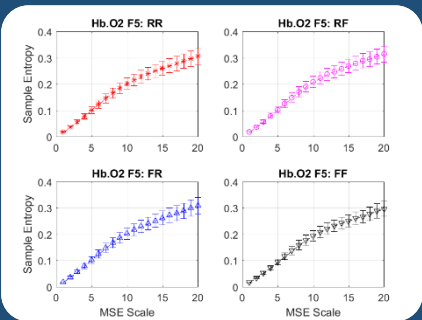
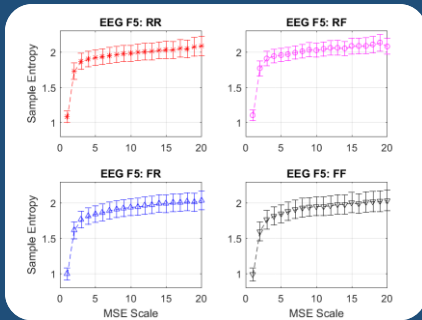


Conference Proceedings

Angsuwatanakul, T., Bunruang, J., Kamphan, K., Rattanamanee, N. & Deepankaew, R. (2009, August). A study on the design and construction of QC Test Instruments for Diagnostic X –ray Apparatus using Phototransistor. In *2009 22th Symposium on Thai Biomedical Instrumentation Conference (ThaiBMI)*, Chiangmai, Thailand.

Srisuk, N., Angsuwatanakul, T., Chanwimalueang, T. & Pintavirooj, C. (2007, November). X-ray Array Detector: System and Calibration. In *2007 International Conference on Engineering, Applied Sciences and Technology (ICEAST)*, Bangkok, Thailand.

Angsuwatanakul, T., Chanwimalueang, T., Pintavirooj, C., Sangworasil, M. & Lertprasert, P. (2006, October). Improve – resolution X – ray Array Detectors Applied for SART Fanbeam. In *2006 International Symposium on Communications and Information Technologies (ISCIT)*, Bangkok, Thailand.



AWARDS

Innovation

Areehatairat, P., Rakdech, S., Boonnak, P., Rattana, N. & Angsuwatanakul, T. (2010). Portable EKG Monitor using ARM7. *Honorable mention in Science and Technology Innovation, Thailand Innovation Awards 2010*

RESEARCH PROJECTS

2020 – present :

Evaluating Comparability of Paper – based and Computer – based Tests: Proficiency Interpretations and Cognitive Load Assessment using EEG., collaborate with Faculty of Liberal Arts, King Mongkut’s Institute of Technology Ladkrabang.

X-ray image system with flat detectors., funded by Research Institute of Rangsit University.