

CURRICULUM VITAE

Name: Dr.Theeasak Chanwimalueang
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Educational Background

2018 Ph.D. in Electrical and Electronic Engineering, Imperial College London
2007 M.Eng. in Biomedical Electronics Engineering, King Mongkut's Institute of Technology
Ladkrabang, Thailand
2000 B.Eng. In Electrical Engineering, Khon Kaen University, Thailand

Fields of Interest

- Analog and digital circuit design
- Microcontroller, microprocessor, Interfacing, embedded systems
- Medical instruments (CT, MRI, ECG, EEG, EMG, EOG)
- Heart rate variability analysis, state of body and mind quantification
- Digital signal processing, biomedical signal processing medical imaging
- Complexity science, nonlinear analysis,
- Quantitative financial and stock market analysis

Selected Published Peer-reviewed Journals (SCI and Scopus database)

- [1] The design of cognitive training games for the thai elderly Tantisatirapong, S., Puttapirat, P., Senavongse, W., Chanwimalueang, T. **ECTI Transactions on Electrical Engineering, Electronics, and Communications [Q4, Y2021]**, 2021, 19(3), pp. 289–297.
- [2] Tricia Adjei, Wilhelm Von Rosenberg, Takashi Nakamura, Theerasak Chanwimalueang and Danilo P. Mandic, The ClassA Framework: HRV Based Assessment of SNS and PNS Dynamics Without LF-HF Controversies, **Frontiers in Physiology [Q2, IF = 3.45 (Y2019)]**, vol 10, 505, p1-15, 2019.
- [3] Bo Wu, Yangde Gao, Songlin Feng and Theerasak Chanwimalueang, “Sparse Optimistic Based on Lasso-LSQR and Minimum Entropy De-Convolution with FARIMA for the Remaining Useful Life Prediction of Machinery”. **Entropy [Q2, IF = 2.419 (Y2018)]**, 20, 747, 2018.

- [4] T. Chanwimalueang and Danilo P. Mandic, "Cosine Similarity Entropy: Self-CorrelationBased Complexity Analysis of Dynamical Systems". **Entropy [Q2, IF: 2.305 (Y2017)]**, 19, 652, 2017.
- [5] T. Chanwimalueang, L. Aufegger, T. Adjei, D. Wasley, C. Cruder, D. P. Mandic, and A. Williamon, "Stage call: Cardiovascular reactivity to audition stress in musicians," **PLOS ONE [Q1, IF = 2.766 (Y2017)]**, vol. 12, no. 4, pp. 1-14, 2017.
- [6] A. Hemakom, T. Chanwimalueang, A. C. Garcí'a, L. Aufegger, A. G. Constantinides, and D. P. Mandic, "Financial stress through complexity science," **IEEE Journal on Selected Topics in Signal Processing [Q1, IF = 5.301 (Y2016)]**, vol. 10, no. 6, pp. 1112-1126, 2016.
- [7] M. U. Ahmed, T. Chanwimalueang, S. Thyil, and D. P. Mandic, "A Multivariate Multiscale Fuzzy Entropy Algorithm with Application to Uterine EMG Complexity Analysis," **Entropy [Q2, IF = 1.821 (Y2016)]**, vol. 19, no. 1(2), pp. 1-18, 2016.
- [8] W. Von Rosenberg, T. Chanwimalueang, V. Goverdovsky, D. Looney, D. Sharp, D. P. Mandic, "Smart helmet: Wearable multichannel ECG and EEG," **IEEE Journal of Translational Engineering in Health and Medicine [Q2, IF = 2.38 (Y2016)]**, vol. 4, pp. 1-11, 2016.
- [9] W. Von Rosenberg, T. Chanwimalueang, A. Tricia, J. Usman, V. Goverdovsky, D. P. Mandic, "Resolving ambiguities in the LF/HF ratio: LF-HF scatter plots for the categorization of mental and physical stress from HRV," **Frontiers in Physiology [Q2, IF = 3.32 (Y2017)]**, vol. 8, no. 360, pp. 1-12, 2017.
- [10] W. Von Rosenberg, T. Chanwimalueang, V. Goverdovsky, N. S. Peters, C. Papavassiliou, D. P. Mandic, "Hearables: feasibility of recording cardiac rhythms from head and in-ear locations," **Royal Society Open Science [Q1, IF = 3.02 (Y2017)]**, 2017 vol.4, no. 11, pp.1-13, 2017.
- [11] Y. Tonoyan, T. Chanwimalueang, D.P. Mandic, M.M. Van Hulle, "Discrimination of emotional states from scalp- and intracranial EEG using multiscale Rényi entropy," **PLOS ONE [Q1, IF = 2.766 (Y2017)]**, vol 12, no. 11, 2017.
- [12] B Wu, Y Gao, N Ma, T Chanwimalueang, X Yuan, J Liu, "Fault diagnosis of bearing vibration signals based on a reconstruction algorithm with multiple side Information and CEEMDAN method", **Journal of Vibroengineering [Q3, IF = 0.83 (Y2020)]**, 23 (1), 127-139, 2021.

Selected Published Conference Proceedings

- [1] N. Chaowadee, P. Lertsiriyothin, T. Phuangkhemkhao, T. Chanwimalueang, "Reinforced Learning in Children through a Stress Warning Unit", 2nd Information Communication Technologies Conference (ICTC), Nangjing, China, pp386-389, 2012
- [2] D. Srisuchinwong, B. Sukhachewanon, T. Chanwimalueang, "Acquiring unobtrusive sleep-related signals through an ESP32-based data logger", 13th International Conference on Knowledge and Smart Technology (KST), Chonburi, Thailand, pp38-42, 2021.

- [3] A. Thongklang, P. Thongnawakun, T. Chanwimalueang, N. Rattanajaruskul, D. Sueaseenak “An ArduinoBLE based Digital Holter for Thai Ambulatory and Personal Healthcare”, IEEE 3rd Global Conference on Life Sciences and Technologies (LifeTech), Nara, Japan, pp522-526, 2021.
- [4] T. Chanwimalueang, W. von Rosenberg, and D. P. Mandic, “Enabling Rpeak Detection in Wearable ECG: Combining Matched Filtering and Hilbert Transform,” In Proceedings of the IEEE International Conference on Digital Signal Processing (DSP 2015), pp. 134-138, 2015.
- [5] T. Chanwimalueang, L. Aufegger, W. von Rosenberg, and D. P. Mandic, “Modelling stress in public speaking: Evolution of stress levels during conference presentations,” In Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2016),” pp. 1-18, 2016.
- [6] T. Chanwimalueang, Direk Sueaseenak, Chaleeya Praliwanon, Manus Sangworasil, Chuchart Pintavirooj, “An Eigen Based Feature on Time-Frequency Representation of EMG,” In Proceedings of the International Conference on Research, Innovation and Vision for the Future (RIVF 2009), Da Nang City Veit Nam 13-17 Jul, 2009.
- [7] A. C. Garcí a, T. Chanwimalueang, G. G. Calvi , A. Hemakom, R. M. Ric´os, and D. P. Mandic, “Modelling economic stress through financial systemic balance index,” In Proceedings of the IEEE International Conference on Digital Signal Processing (DSP 2016), pp. 565{569, 2016.
- [8] W. von Rosenberg, T. Chanwimalueang, D. Looney, and D. P. Mandic, “Vital signs from inside a helmet: A multichannel face-lead study,” In Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2015),” pp. 982-986, 2015.
- [9] W. Von Rosenberg, T. Chanwimalueang, V. Goverdovsky, D. P. Mandic, “Smart helmet: Monitoring brain, cardiac and respiratory activity,” In Proceedings of IEEE International Conference on Medicine and Biology Society (EMBC 2015), pp. 1829-1832, 2015.
- [10] T. Chanwimalueang , M. Sangworasil and C. Pintavirooj, “Experimental Investigation of Arbitrary-Oreintation Conebeam X-ray Tomography”, World Congress on Medical Physics and Biomedical Engineering 2006 (WC 2006), August 27-September 1 2006, COEX Seoul Korea.

Experience

- Assistant Dean, Faculty of Engineering, Srinakharinwirot University, 2562 – 2563
- Head of Department, Department of Biomedical Engineering, 2563 - Present

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- [1] <https://scholar.google.co.th/citations?user=M81C6OcAAAAJ&hl=en>
- [2] <https://www.scopus.com/authid/detail.uri?authorId=16318476800>
- [3] <http://bme.eng.swu.ac.th/page15.html>