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EDUCATION

Doctor of Philosophy, Science and Technology Education, Mahidol University, Thailand, 2008

Master of Science, Physics, Mahidol University, Thailand, 2003

Bachelor of Science, Electronics Physics, Thammasat University, Thailand, 1998

ACADEMIC HONORS AND AWARDS

- ‘Invention Award’ from National Research Council of Thailand, 2019
- ‘Invention Award’ from National Research Council of Thailand, 2018
- ‘Invention Award’ from National Research Council of Thailand, 2017
- ‘Bronze medal Award’ from 2013 Taipei Int’l Invention Show and Technomart, Taiwan, 2013
- ‘Honor of Invention’ from World Invention Intellectual Property Associations (WIIPA), Taiwan, 2013
- ‘Invention Award’ from National Research Council of Thailand, 2013
- Supported Grant for International Conference Presentation from Australasian Association for Engineering Education organizers, Australia, 2012
- Research Grant from Thailand Research Fund, 2011-present
- Research Grant from National Research Council of Thailand, 2011-present
- Thesis Awards in Social Science, Office of National Research Council of Thailand, 2011
- Inventor Award (Excellence) in Social Science, Office of National Research Council of Thailand, 2009
- Thesis Awards (Honorable Mention Award Doctoral level) in Humanities, Social Science and Education, The Faculty of Graduate Studies, Mahidol University, 2009
- The Institute for the Promotion of Teaching Science and Technology Scholarship, Mahidol University, 2004 – 2007
- Medal and diploma of honor from The Professor Dr. Tab Nilanidhi Foundation, The graduate who has the highest score in the Bachelor of Science program (Physics), Thammasat University, 1998.

ACADEMIC EXPERIENCE

Vice Chairman of the Executive Committee of General Education (MUGE100), Mahidol University, *since 2019*

Committee of Young Robot Inventors and Invention Competition Robot Technology: Kamalasai AI Robotics and Technology Thailand championship #6, Kamalasai School, Thailand, *12-13 February 2022*

Executive Committee of General Education (MUGE101), Mahidol University

Design and Technology Expert, The Institute for the Promotion of Teaching Science and Technology, Thailand, *since March 2017*

STEM Ambassador, The Institute for the Promotion of Teaching Science and Technology, Thailand, *since March 2016*

Competitive committee, Secondary school students' project design and technology competition, Hatyairatprachasun School, Thailand, *9-10 December 2015*

Assistant Speaker, Active Learning Workshop, Mahidol University, Thailand, *6-15 January 2015*

Assistant Speaker, Optical Data Transmission and Wavelength Division Multiplexing, Active Learning in Optic and Photonics (ALOP): Training Physics Trainers, Faculty of Education, Chiang Mai University, Thailand, *21-25 October 2013*

Assistant Speaker, Active Learning Workshop (ALW) in Science and Engineering, Swinburne University of Technology, Sarawak, Malaysia, *8 – 10 July 2008*

Assistant Speaker, Activity Based Learning in Optics and Photonics, ALOP ASIA 2006, Miranda House, the prestigious college for women at the University of Delhi, India, *6 – 11 November 2006*

Visiting Scholar, Swinburne University of Technology, Faculty of Engineering & Industrial Sciences, Hawthorn, Melbourne, Victoria, Australia, *July 2006 – July 2007*

Scientist, Mahidol University, Faculty of Science, Bangkok, Thailand, *October 1998 – October 2004*

ADMINISTRATIVE EXPERIENCE

- **Deputy Director for Education and Networking**, Institute for Innovative Learning, Mahidol University, *2018-2020*
- **Acting Deputy Director**, Institute for Innovative Learning, Mahidol University, *2017-2018*
- **Deputy Director for Information Technology**, Institute for Innovative Learning, Mahidol University, *2010-2011*
- **Deputy Director for Information Technology**, Institute for Innovative Learning, Mahidol University, *2009-2010*
- **Assistant Director of Information Technology**, Institute for Innovative Learning, Mahidol University, *2009-2009*

PUBLICATIONS

Book Chapters

- Nopparatjamjomras T.R., **Nopparatjamjomras S.** (2020) Teaching Integration of 5E Instructional Model and Flower Components. In: Teo T.W., Tan AL., Ong Y.S. (eds) Science Education in the 21st Century. Springer, Singapore. https://doi.org/10.1007/978-981-15-5155-0_17
- Pelzang, T., **Nopparatjamjomras, S.** & Nopparatjamjomras, T. R. (2014). Enhancing Grade 10 Bhutanese Students' Understanding of DNA and Chromosome Structure Concepts. In R.P. Devadason, I. Zurida, and K.T. Ng, *Empowering the Future Generation through Science Education* (pp 63-75). SEAMEO RECSAM.

Brief Paper

- Nopparatjamjomras, T. R., & **Nopparatjamjomras, S.** (2011). Teacher development program: tailor made for science teachers in welfare schools. SEAMEO RECSAM, Malaysia.

International Journals

- Nopparatjamjomras, T. R., **Nopparatjamjomras, S.**, Chitaree, R., & Kalaya, T. (2022). Grade 10 Students' Idea about the Direction of a Galvanometer's Needle due to the Flow of

- Current in a Simple DC Circuit วารสารวิธีวิทยาการวิจัย (Journal of Research Methodology: JRM), 35, 249. https://portal.edu.chula.ac.th/pub/jrm/index.php/jrm/article/view/756/pdf_549
- Kalaya, T., **Nopparatjamjomras, S.**, Nopparatjamjomras, T. R., & Chitaree, R. (2021). The Development of Current Resistance and Power Conceptual Test (CRPCT) for Thai Students in the Enrichment Science Classroom Program. วารสารวิธีวิทยาการวิจัย (Journal of Research Methodology: JRM), 34, 21. <https://portal.edu.chula.ac.th/pub/jrm/index.php/jrm/article/view/673>
 - Kalaya, T., **Nopparatjamjomras, S.**, Chitaree, R., & Nopparatjamjomras, T. R. (2019). Worksheet analysis for revealing students' understanding of simple DC circuits. *Journal of Physics: Conference Series*, 1380, 012164. doi:10.1088/1742-6596/1380/1/012164
 - **Nopparatjamjomras, S.**, Kalaya, T., & Nopparatjamjomras, T. R. (2018). 7th Graders' understanding of a fire caused by an electrical short circuit. *Journal of Physics: Conference Series*, 1144, 012123. doi:10.1088/1742-6596/1144/1/012123
 - Khaing, S. W., **Nopparatjamjomras, S.**, Nopparatjamjomras, T. R., & Chitaree, R. (2018). Development of Arduino-based logic gate training kit. *Journal of Physics: Conference Series*, 1144, 012134. doi:10.1088/1742-6596/1144/1/012134
 - Hlaing, P., Nopparatjamjomras, T., & **Nopparatjamjomras, S.** (2018). Digital technology for preventative health care in Myanmar. 4(3), 117-121. doi:10.4103/digm.digm_25_18
 - Sujarittam, T., Emarat, N., Tanamatayarat, J., Arayathanitkul, K., & **Nopparatjamjomras, S.** (2016). Levels of Students' Understandings of Electric Field Due to a Continuous Charged Distribution: A Case Study of a Uniformly Charged Insulating Rod. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 10, 237-242.
 - Tamang, S., **Nopparatjamjomras, S.**, Chitaree, R., & Nopparatjamjomras, T. R. (2015). Using the missing pin to challenge concepts of refraction and total internal reflection. *Physics Education*, 50(1), 28.
 - **Nopparatjamjomras, S.**, Nopparatjamjomras, T. R., & Chitaree, R. (2011). Using hidden messages created by Microsoft® Word to teach students about colour filters. *Teaching Science: The journal of Australian Science Teachers Association*, 57(4), 49-50.
 - A. Mazzolini, T. Edwards, W. Rachinger, **S. Nopparatjamjomras**, & Shepherd, O. (2011). The use of interactive lecture demonstrations to improve students' understanding of operational amplifiers in a tertiary introductory electronics course. *Latin American Journal of Physics Education*, 5(1), 147-153.
 - **Nopparatjamjomras, S.**, & Panijpan, B. (2010). Emperor's crown model teaches fluidics. *Physics Education*, 45(2), 137.
 - Panijpan, B., Sujarittam, T., Arayathanitkul, K., Tanamatayarat, J., & **Nopparatjamjomras, S.** (2009). A magnetic set-up to help teach Newton's laws. *Physics Education*, 44(6), 599.

- **Nopparatjamjomras, S.**, Panijpan, B., & Huntula, J. (2009). Newton's third law on a scale balance. *Physics Education*, 44(5), 484-487.
- **Nopparatjamjomras, S.**, Chitaree, R., & Panijpan, B. (2009). A handheld LED coloured-light mixer for students to learn collaboratively the primary colours of light. *Physics Education*, 44(2), 123-128.

National Journal

- **Nopparatjamjomras, S.**, Soankwan, C., & Chitaree, R. (2004). Construction and application of an automatic Stokes parameter photopolarimeter. *Songklanakarin J Sci Technol*, 26(2), 285-294.

Proceedings

- Hlaing, P., Nopparatjamjomras, T., & **Nopparatjamjomras, S.** (2018). Digital technology for preventative health care in Myanmar [Review Article]. 4(3), 117-121. https://doi.org/10.4103/digm.digm_25_18
- Norsaputra, A., Nopparatjamjomras, T. R., **Nopparatjamjomras, S.**, & Chitaree, R. (2017). *Development of Stefan-Boltzmann board game based on game characteristics*. Paper presented at the The 3rd International Conference on Education, Kuala Lumpur, Malaysia.
- Aung, L. H., Nopparatjamjomras, T. R., & **Nopparatjamjomras, S.** (2017). *Medical Doctors' Procedural Skill Performance and Attitude Toward Ultrasound-Guided Pericardiocentesis Model*. Paper presented at the The 2nd International Conference on Applied Science and Health, Faculty of Graduate Studies, Mahidol University, Thailand.
- Dema, M., **Nopparatjamjomras, S.**, Chitaree, R., Nopparatjamjomras, T. R. (2015). Developing and Validating a DC Motor Multiple Choice Questionnaire for High School Bhutanese Students. In the 3rd CAS National and International Conference 2015 (CASNIC 2015).
- Tamang, S., **Nopparatjamjomras, S.**, & Nopparatjamjomras T. R. (2014, February 5-7). Bhutanese students' ability to apply the concepts of light reflection and refraction to the situations related to a fish tank. In Proceedings of the 2nd ASEAN Plus Three Graduate Research Congress (2nd AGRC), Bangkok, 527-534.
- **Nopparatjamjomras, S.**, Nopparatjamjomras, T. R.* (2012, 3-5 December). Students' understanding about a brightness of light bulbs connected in DC electric circuit. Paper presented at Australasian Association for Engineering Education 2012, Melbourne, Australia.
- **Nopparatjamjomras, S.**, Nopparatjamjomras, T. R.* (2012, 18-19 September). Development of coloured-light mixer for teaching coloured light and colour perception concepts. Paper presented at International Conference on Physics 2012, Yogyakarta, Indonesia.
- Nopparatjamjomras, T. R., & **Nopparatjamjomras, S.** (2012, 15-16 September). Education for Disadvantaged Students in Sociocultural Contexts of Thailand. Paper presented at the International Conference on Current Issues in Education (ICCIE), Yogyakarta, Indonesia.
- Win Thu Zar, Hla Myo Tun, & **Suchai Nopparatjamjomras.** (2012). *Design Analysis of Fin Actuator for Ship Stabilization System Using MATLAB*. Paper presented at the The First ASEAN Plus Three Graduate Research Congress (AGRC), Chiang Mai University, Thailand.
- Jigme, S. & **Nopparatjamjomras, S.** (2011, 9 - 10 September). Simple Activities of Buoyant Force for High School Students. Paper presented at the 4th International Conference on Educational Research (ICER) 2011: Learning Community for Sustainable Development, Khon Kaen.

- Anchaleesathaporn, O., Nopparatjamjomras, T. R.*, & **Nopparatjamjomras, S.** (2011, 9 - 10 September). Teaching Color Extraction from Plants in Junior High School Level. Paper presented at the 4th International Conference on Educational Research (ICER) 2011: Learning Community for Sustainable Development, Khon Kaen.
- Sarasalin, S., Nopparatjamjomras, T. R.*, & **Nopparatjamjomras, S.** (2011, 9 - 10 September). Classification of Matter for Junior High School Students in Multicultural Context. Paper presented at the 4th International Conference on Educational Research (ICER) 2011: Learning Community for Sustainable Development, Khon Kaen.
- Zar, W. T. & **Nopparatjamjomras, S.** (2011, 9 - 10 September). Teaching Simple DC Electric Circuits in Multicultural Classroom. Paper presented at the 4th International Conference on Educational Research (ICER) 2011: Learning Community for Sustainable Development, Khon Kaen.
- **Nopparatjamjomras, S.**, Zar, W. T., Soankwan, C., & Tun, H. M. (2011). *Thai and Myanmar first year undergraduate science students' misconception about simple DC electric circuit in terms of brightness and current.* Paper presented at the Siam Physics Congress, Ambassador City Jomtien Hotel, Pattaya, Thailand.
- **Nopparatjamjomras, S.**, & Chitaree, R. (2009, 5th - 7th July). *Using students' misconceptions of primary coloured lights to design a hands-on coloured light mixer.* Paper presented at the Education & Training in Optics & Photonics, Technium Optic, St. Asaph, North Wales, UK.
- **Nopparatjamjomras, S.**, Wutti-prom, S., & Chitaree, R. (2007, 6-9 November 2007). *iPODs: Inquiry-Based Learning Activities in Light and Color.* Paper presented at the ICASE Asian Symposium 2007, Pattaya, Thailand.

SEMINAR PRESENTATIONS

- **Nopparatjamjomras, S.**, & Chitaree, R. (2009, 5th - 7th July). *Using students' misconceptions of primary coloured lights to design a hands-on coloured light mixer.* Paper presented at the Education & Training in Optics & Photonics, Technium Optic, St. Asaph, North Wales, UK.
- **Nopparatjamjomras, S.**, Panijpan, B., Chitaree, R., Soankwan, C., & Mazzolini, A. P. (2008). An inquiry-based approach to understanding colour via the use of colour filters. *Physics Education.*
- Chitaree, R., **Nopparatjamjomras, S.**, Soankwan, C., Arayathanitkul, K., & Emarath, N. (2006). *Conceptual change in practice: Primary colored lights.* . Paper presented at the The First National Symposium on Physics Graduate Research.
- **Nopparatjamjomras, S.**, Ranusawud, A., Soankwan, C., & Chitaree, R. (2005). *The Incremental Conception of Sound Wave in a Resonance Tube by Demonstration.* Paper presented at the 15 th Congress on Science and Technology in School.
- **Nopparatjamjomras, S.**, Chitaree, R., & Soankwan, C. (2005a). *The application of MCS-51 to Stokes parameters measurement.* Paper presented at the Second National Conference on Optics and Applications (NCOA-2).
- **Nopparatjamjomras, S.**, Chitaree, R., & Soankwan, C. (2005b). *Development of Multimedia for Inquiry Teaching on Color Mixing.* Paper presented at the National Conference on Undergraduate Physics Education.
- **Nopparatjamjomras, S.**, Chitaree, R., Tongchai, A., Suppapittayaporn, D., & Phuapaiboon, U. (2005). *The Construction of Color Light Mixer used for Teaching Color Light Mixture Topic.* Paper presented at the 31 st Congress on Science and Technology of Thailand.
- **Nopparatjamjomras, S.**, Ranusawud, A., Soankwan, C., Arayatanitkul, K., Emarat, N., & Chitaree, R. (2004). *The Correction of Misconception in Sound Wave in a Resonance Tube.* Paper presented at the 30 th Congress on Science and Technology of Thailand.

- **Nopparatjamjomras, S.,** Chitaree, R., & Soankwan, C. (2004). *The application of the rotating quarter-wave retarder polarimeter for retardance measurement.* Paper presented at the First National Conference on Optics and Applications (NCOA-1).
- **Nopparatjamjomras, S.,** Chitaree, R., & Soankwan, C. (2003). *A construction of polarization analyzer unit based on the Fourier analysis using rotating quarter-wave plate technique.* Paper presented at the 29 th Congress on Science and Technology of Thailand.
- **Nopparatjamjomras, S.,** Chitaree, R., & Soankwan, C. (2002). *Importance of using the high resolution A/D for the data acquisition in the optical polarization state analysis.* Paper presented at the 28 th Congress on Science and Technology of Thailand.
- **Nopparatjamjomras, S.,** Chitaree, R., & Soankwan, C. (2000). *The application of the Fourier analysis for measuring polarization parameters.* Paper presented at the 26 th Congress on Science and Technology of Thailand.

AREA OF INTERESTS

- Development of Teaching and Learning Activities, Instructional Materials based on PODS learning cycle and Assessment in Physics
- Active Learning
- Polarization
- Electronics
- Microcontroller and Computer Programming
- Science Teacher Professional Development
- LMS (Learning Management System)