



## **NUANLAOR THAWINCHAI, PhD., P.T. Associate Professor**

รองศาสตราจารย์ ดร. นวลลออ ธวินชัย

Department of Physical Therapy,  
Faculty of Associated Medical Sciences,  
Chiang Mai University, THAILAND  
Office Phone: +66 5394 9242  
Email: nuanlaor.thawinchai@cmu.ac.th

### **Education/Degree**

- 2005: Doctor of Philosophy (Physical Therapy-Pediatrics), Drexel University, Philadelphia, PA, USA
- 2000: Master of Science (Physical Therapy-Pediatrics), MCP Hahnemann University, Philadelphia, PA, USA
- 1992: Bachelor of Science (Physical Therapy), Chiang Mai University, THAILAND

### **Positions and appointments**

- 2016-present: Associate Head of Department for Information Technology, Department of Physical Therapy Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 2015-present: Head of Pediatric Physical Therapy Division, Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 2012-2015: Deputy Head of Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 2011-present: Curriculum committee of Physical Therapy Undergraduate course, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 1997-present: Instructor at the Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, THAILAND
- 2000-2005: Graduate research Fellow at the motion analysis lab, Philadelphia Shriners Hospital for children, Pennsylvania, USA
- 1993 - 1997: Pediatric Physical Therapist, Growth and Development Unit, Department of Pediatrics, Chulalongkorn Hospital, Bangkok, THAILAND
- 1992: Physical Therapist, Department of Rehabilitation Medicine, Lumpang Hospital, Lumpang, THAILAND

### **Honors and Grants**

- 2021: Award for outstanding research achievement in the field of expertise for Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand.

- 1997-2005: Royal Thai Government Scholarship
- April 17, 2002: Dean's Award for outstanding student research, College of Nursing and Health Professional, MCP Hahnemann University, Philadelphia, PA, USA.
- 1999: Thesis Grant, Section on Pediatrics, American Physical Therapy Association, USA.
- 1999: Award for outstanding accomplishments in 12<sup>th</sup> annual research and scholarship conference, School of Health Professions, Allegheny University of the Health Sciences, Philadelphia, PA, USA.

### **Areas of Special Interest**

- Pediatric physical therapy including high risk infants, early intervention, and school system
- Posture and Gait analysis
- Movement and exercise sciences
- Research design and statistics

### **Research Interest**

- Smartphone and posture in children
- Posture and gait training in children with disabilities
- Equine assisted therapy in individual with physical impairment
- Treadmill training in children with cerebral palsy
- Electrical stimulation for strengthening in children with cerebral palsy
- Movement analysis and Exercise for children

### **Membership**

- PT License number 824
- The Physical Therapy Association of Thailand

### **Research**

#### **International Publications**

- Ruamsilp W, **Thawinchai N**, Silitertpisan P, Peansukmanee S, Chamnongkich S. Comparison of saddles in hippotherapy for patients with chronic low back pain. *Veterinary Integrative Sciences*. 2023;21(3):821-30. (Q3, Impact factor 1.08)
- Kamnardsiri T, **Thawinchai N**, Parameyong A, Pholjaroen P, Wonglangka K, Prupetkaew P, Boripuntakul S. Conventional video-based system for measuring the subtask speed of the Timed Up and Go Test in older adults: Validity and reliability study. *PLoS One*. 2023;18(6):e0286574. (Q1, Impact factor 3.752)
- Parameyong A, Boripuntakul S, **Thawinchai N**, Chawawisuttikool J, Kamnardsiri T. Reliability and validity of the Swaymeter for measuring the trunk control in children with spastic cerebral palsy. *Dev Neurorehabil*. 2022;25(7):462-8. (Q4, Impact factor 1.907)
- Hanphitakphong, P., Keeratisiroj, O. & **Thawinchai, N**. Smartphone addiction and its association with upper body musculoskeletal symptoms among university

- students classified by age and gender. *Journal of Physical Therapy Science*, 2021;33(5), 394-400. (Impact factor 0.812).
- Hanphitakphong, P., **Thawinchai, N.** & Poomsalood, S. Effect of prolonged continuous smartphone gaming on upper body postures and fatigue of the neck muscles in school students aged between 10-18 years. *Cogent Engineering*, 2021;8(1), 1890368. (Q2, Impact factor 1.35).
  - Tabsuri, T., **Thawinchai, N.**, Peansukmanee, S. & Lugade, V. Feasibility study of inertia sensor technology on the pelvic and trunk kinematics during horseback riding in children. *Veterinary Integrative Sciences*, 2021;.19(1), 111-120.
  - Hanphitakphong P, **Thawinchai N.** Validation of Thai Smartphone Addiction Scale-short version for school students between 10 to 18 years. *Journal of Associated Medical Sciences*. 2020;53(3):34-42.
  - **Thawinchai N**, Funprom K. Effect of Carrying Style on Posture Score in Adolescents with Musculoskeletal Pain. *CMUJ Nat Sci* 2019;18:553-61. doi.org/10.12982/CMUJNS.2019.0036. (Q3, Impact factor 0.25).
  - Keeratisiroj O, **Thawinchai N**, Siritaratiwat W, Buntragulpontawee M, Pratoomsot C. Prognostic predictors for ambulation in children with cerebral palsy: a systematic review and meta-analysis of observational studies. *Disabil Rehabil*. 2018;40:135-43. DOI: 10.1080/09638288.2016.1250119. (Q1, Impact factor 1.95).
  - Peansukmanee S, **Thawinchai N**, Khanproa P, Khaminluang P. Feasibility Study of Inertial Sensor Technology on Ponies for Equine-Assisted Therapy (EAT). *Kafkas Univ Vet Fak Derg*. 2017;23 (6): 871-878. DOI: 10.9775/kvfd.2017.17833. (Q3, Impact factor 0.51).
  - Keeratisiroj O, **Thawinchai N**, Buntragulpontawee M, Siritaratiwat W. Derivation of an ambulatory prognostic score chart for thai children with cerebral palsy aged 2 to 18. *J Med Assoc Thailand* 2016;99:1298-1305. (Q3, Impact factor 0.5).
  - Keeratisiroj O, **Thawinchai N**, Siritaratiwat W, Buntragulpontawee M. Prognostic Predictors for Ambulation in Thai Children with Cerebral Palsy Aged 2 to 18 Years. *J Child Neurol*. 2015;30: 1812-8. (Q2, Impact factor 1.55).

### **National Publication**

- Hanphitakphong P, **Thawinchai N.** Validation of the Smartphone Addiction Scale – Short Version for Thai Adolescents. *J Assoc Med Sciences*. 2020;53:34-42. (Thai-JIF 0.237)
- Arunwattanachok P, **Thawinchai N**, Indongloy M, Rungin J, Pichaiworaphat A, Prukmath K, Takam J, Kongaroon N. Behavior of School Bag Carriage and Its Average Weight in School Age Children. *Thai Journal of Physical Therapy* 2019; 41:16-9. (Thai-JIF 0.250)
- Angsupaisal M, **Thawinchai N**, Prathep W. Developmental performance of young children aged 1-42 months in Mueang Pitsanulok, Thailand: The Bayley-III Screening Survey. *International Journal of Child Development and Mental Health*. 2018;6:30-9. (Thai-JIF 0.0)

- Hanphitakphong P, **Thawinchai N**. Validation of Thai version of Smartphone Addiction Proneness Scale for adults. *J Psychiatr Assoc Thailand*. 2018;63:141-52. (Thai-JIF 0.217)
- Deesungnern S, **Thawinchai N**. A survey of factors associated with schoolbag carrying and pain during schoolbag usage in high school students of Darawittayalai School, Chiang Mai. *Thai J Phy Ther*. 2014; 36:70-78. (Thai-JIF 0.0)
- Hanphithakphong P, **Thawinchai N**, Ratnapinunchai, J. Effects of Knee Extensor Electrical Stimulation in Individuals with Spastic Diplegia. *Thai Journal of Physical Therapy* 2011; 33: 53-67. (Thai-JIF 0.208)
- Numdee K, **Thawinchai N**, Ratnapinunchai, J. Effects of Knee Extensor Electrical Stimulation in Combination with Isometric Contraction in Individual with Spastic Diplegia. *Thai Journal of Physical Therapy* 2011; 33: 68-77. (Thai-JIF 0.208)
- **Thawinchai N**, Tummachai A, Intaraksa P. Prevalence of obesity and comparison of the cardiovascular fitness in female undergraduate students, Faculty of Associated Medical Sciences, Chiang Mai University. *Bulletin of Chiang Mai Associated Medical Sciences*. 2010;43:211-217. (Thai-JIF 0.0)
- **Thawinchai N**, Westcott McCoy S. A single case study of effects of ankle-foot orthoses and strength training on functional mobility in children with cerebral palsy. *Thai Journal of Physical Therapy* .2008; 30:12-25. (Thai-JIF 0.143)
- Sirilug Y, **Thawinchai N**, Siriphun K. Reliability of the modified ashworth scale (MAS) in children with spastic cerebral palsy. *Bull Chiang Mai Assoc Med Sci*. 2007; 40: 243-250. (Thai-JIF 0.0)
- **Thawinchai N**. Proprioception: How important is it for our movements? *Thai Journal of Physical Therapy*. 2006;28:52-58.
- Kokhayan C., Ratanapinunchai J., **Thawinchai N**. Heart rate variability during trail making test between subjects with regular exercise and subjects with physical inactivity. *Bull Chiang Mai Assoc Med Sci*. 2006; 39: 71-78.

### Conference Publications

- **Thawinchai N**. Effects of maximum speed treadmill training on walking capability in children with cerebral palsy. Abstract. *Mov Disord*, 2020;35:S556. doi:10.1002/mds.28268.
- Thammachai, A., Saekho, S., **Thawinchai, N.**, Bhakdikul, T., Yarach, U., Chunpenmongkol, S. et al. The Study of Deception and Truth Using Functional Magnetic Resonance Imaging (fMRI). The International Society for Magnetic Resonance in Medicine 20th Annual meeting & exhibition, Melbourne, Australia, 2012, Page 2134.
- **Thawinchai N**, Shewokis P A, Orlin M. 2006. Intralimb coordination of children stepping over obstacles. First Joint Meeting of ESMAC & GCMAS (JEGM 2006)., 27 - 30 September 2006, Vrije Universiteit, Amsterdam, the Netherlands *Gait & Posture*, Volume 24, Supplement 2, December 2006, Page S193-S194.
- Lie, WY, **Thawinchai, N**, Palisano, R, Valvano, J. The inter-rater Reliability and Stability of the Gross Motor Function Classification System. Combined Sections

meeting of the American Physical Therapy Association, Seattle, WA, *Pediatric Physical Therapy*, December 1999, Page 174-175.

### Presentation

- Ruamsilp W, **Thawinchai N**, Sitolertpisan P. 2023. Feasibility study of inertial measurement unit and pressure biofeedback unit on lumbopelvic mobility and stability in individuals with chronic low back pain. Oral Presentation in the 2<sup>nd</sup> National Conference on Natural Resource and Health Science: NACON-NARAHS, Faculty of Natural Resources, Rajamangala University of Technology Isan Sakonakhon Campus, Thailand, on February 14, 2023.
- **Thawinchai N**, Hanphitakphong P. 2019. Cross-cultural adaptation, translation, and validation of smartphone addiction scale-short version for Thai adolescents. Oral Presentation in the 19th International Conference of Public Health Sciences in collaboration with the 11th Teikyo-Harvard Symposium, Bangkok, Thailand, on October 2, 2019.
- **Thawinchai N**, Kaewsutthi M, Chamnongkich S, Peansukmanee S. Coordination of the movements of the pelvis and trunk and lower extremity in horseback rider. Poster with Oral Presentation in the 2015 HETI Congress, New Taipei City, Taiwan, on June 22-25, 2015.

### Research Grants

Year	Title	Researchers	Awarding body	Value (Baht)
2023	The Use of Dual-Energy X-ray Absorptiometry to Assess Spinal Alignment in Female Adolescents with Scoliosis	Thawinchai, N Tungjai, M Sitolertpisan, P	Faculty of Associated Medical Sciences, Chiang Mai University	80,000
2022	Creating awareness and providing care for individuals experiencing knee pain in the Doi Lo district community	Thawinchai, N Yankai, A Sitolertpisan, P	Faculty of Associated Medical Sciences, Chiang Mai University	100,000
2021	Comparison of saddles used in hippotherapy for individuals with chronic low back pain	Thawinchai, N Sitolertpisan, P Chamnongkich, S Peansukmanee, S Ruamsilp, W	Faculty of Associated Medical Sciences, Chiang Mai University	75,000
2020	The effect of trunk muscle	Parameyong, A	Faculty of Associated	60,000

	coordinate exercise on the trunk muscle activation, postural stability and gross motor function in children with cerebral palsy	Thawinchai, N Boripuntakul, S Dacha, S Sa-nguanmoo, P Chawasuthikul, J	Medical Sciences, Chiang Mai University	
2020	Development of artificial intelligence of pressure sensors for pressure sore prevention	Tammaruckwattana, S Riewruja, V Petchmaneelunka, W Rerkratn, A Tammaruckwattana, N Sangsuwan, N Supa-Adirek, N Thawinchai N Sawattikanon, N Intaraksa P Pichaiya, T Werukamkul, N	Broadcasting and Telecommunications Research and Development Fund for Public Interest	11,951,045
2020	Validity of the video-based system for measuring gait speed in older adults using 10-meter walk test and timed up and go test	Kamnardsiri, T Boripuntakul, S Thawinchai, N Parameyong, A Pholjaroen, P Wonglunka, K	College of Arts, Media and Technology, Chiang Mai University	30,000
2020	The Effect of Overweight and Obesity on Joint Status of Ankle and Knee among Thai Persons with Hemophilia	Natesirinilkul, R Thawinchai, N Sriboonreung, T Sa-nguanmoo, P Keeratibumrunpong, W	World Federation of Hemophilia	38,000
2018	Balance measurement in sitting position by using the Swaymeter in children with cerebral palsy	Parameyong, A Thawinchai, N	Faculty of Associated Medical Sciences, Chiang Mai University	60,000
2017	Comparison of range of motion and electromyography in adults riders	Pholjaroen, P Boripuntakul, S Parameyong, A Thawinchai, N	Faculty of Associated Medical Sciences, Chiang Mai University	60,000

2016	A survey of smartphone addiction and factors associated with smartphone usage and upper body posture in university student	Thawinchai, N Uthaikhup, S Pirunsan, U Kamnardsiri, T	Faculty of Associated Medical Sciences, Chiang Mai University	60,000
2014	Pilot study of the 21 <sup>st</sup> century learning management for research methodology for physical therapy course (514475)	Thawinchai, N	Chiang Mai University	30,000
2012	Coordination between pelvis and trunk and lower extremity in horseback rider	Thawinchai, N Kaewsuthi, M Chamnongkich, S Peansukmanee, S	Faculty of Associated Medical Sciences, Chiang Mai University	60,000
2011	The study of deception and truth using functional magnetic resonance imaging (fMRI)	Thawinchai, N	Biomedical Engineering Center, Chiang Mai University	100,000
2009	Prevalence of obesity and comparison of the physical fitness in female undergraduate students	Thawinchai, N Thammachai, A Intarugsa, P	Faculty of Associated Medical Sciences, Chiang Mai University	30,000
2009	Biomechanical analysis of the Timed up and go test using an accelerometer in Thai elderly women	Chamnongkich, S Pratanaphon, S Thawinchai, N	Faculty of Associated Medical Sciences, Chiang Mai University	35,000
2009	Hippotherapy on Gross Motor Function and Gait in Children with Cerebral Palsy	Hensangwilai, K Thawinchai, N Chamnongkich, S	Faculty of Associated Medical Sciences, Chiang Mai University	45,000
2008	The study of forward and	Thawinchai, N	Chiang Mai University	100,000

	backward gait training with body weight support on a treadmill in children with cerebral palsy			
2006	Effects of Treadmill training with maximal velocity on gait capacity in children with CP	Thawinchai, N Chewapanich, S	Faculty of Associated Medical Sciences, Chiang Mai University	30,000

### Graduated student supervision

Academic Year	Name	Title	Level
2022	Tunyalux Wannakon	In Progress	PhD (Biomedical Science program)
2021	Wirintorn Ruamsilp	The effect of hippotherapy on pain level and lumbopelvic motion and stability in individuals with chronic low back pain	MS (Movement and Exercise Sciences)
2020	Panida Hanphitakphong	Effect of Duration of Smartphone Use on Upper Body Postures and Fatigue of Neck Muscles Caused by Smartphone Addiction in Children and Adolescents	PhD (Biomedical Science program)
2020	Taweetip Tabsuri	Trunk and pelvis biomechanical responses in children with cerebral palsy and children with typical development during horseback riding	MS (Movement and Exercise Sciences)
2017	Orawan Keeratisiroj	Ambulation in Children with Cerebral Palsy: Prognostic Predictors and Clinical Prediction Rule	PhD (Clinical Epidemiology)
2011	Ajchamon Thammachai	Study of Deception and Truth Using Functional Magnetic Resonance Imaging	MS (Forensic Science)
2010	Panida Hanphitakphong	Effects of Electrical Stimulation on Knee Extensor in Individuals with Spastic Diplegia	MS (Movement and Exercise Sciences)

2010	Kanokorn Numdee	Effects of Knee Extensor Electrical Stimulation in Combination with Isometric Contraction in Individual with Spastic Diplegia	MS (Movement and Exercise Sciences)
2008	Nutcha Somsak	Correlation Study of Lower Extremity Muscle Strengths and Timed Up and Down Stairs in School Children	Diploma (Clinical Physical Therapy)

### Undergrad Student Project

- 2022. Napakamon Boonrasri. The relationship between factors related to knee pain and leg muscle strength by using 5 times sit to stand in patients with knee pain in Doi Lor Subdistrict, Doi Lor District, Chiang Mai Province.
- 2022. Aksiporn Sommana. The relationship between factors related to knee pain and walking speed using the 10 Meters walk test in participants with knee pain in Doi Lo subdistrict, Doi Lo district, Chiang Mai.
- 2022. Nobphanat Saenthanarat. The relationship between factors related to knee pain and balance by using Y-balance test in patients with knee pain. Doi Lor Subdistrict, Doi Lor District, Chiang Mai Province.
- 2021. Nittayaporn Kanoi. Relationship between physical activity and mental health status of third-year physical therapy students, Faculty of Associated Medical Sciences, Chiang Mai University 2021.
- 2021. Patcharada Wangnai. The correlation between the physical activity and stress in the third-year physical therapy students, Faculty of Associated Medical Sciences, Chiang Mai University for the academic year 2021.
- 2021. Krisana Ngeanthongdeang. The correlation between the physical activity and eating behaviors that are at risk of obesity in the fourth-year students, Faculty of Associated Medical Sciences, Chiang Mai University for academic year 2021.
- 2020. Atitaya Panyakhong. Relationship between smartphone addiction, sleep quality and physical activity in physical therapy student, Faculty of Associated Medical Sciences, Chiang Mai University.
- 2020. Banthita Chaisak. Survey of iPad usage behavior and musculoskeletal symptoms of neck and shoulder region in student of Faculty of Associated Medical Science, Chiang Mai University.
- 2019. Wanatsara Temeeya. Relationship between Levels of smartphone addiction and physical activity, body composition in physical therapy student, Faculty of Associated Medical Sciences, Chiang Mai University.
- 2019. Kamonnut Nilkham. Smartphone usage survey and association between smartphone addiction and smartphone usage behavior and pain levels in students of the faculty of Associated Medical Sciences, Chiang Mai University.
- 2019. Naipaporn Suthasiri. Survey of iPad usage behavior and level of addiction by Smartphone Addiction Scale: Thai Short Version in student of Faculty of Associate Medical Science, Chiang Mai University
- 2018. Suwanee Wongngen. Validity of sitting balance assessment using postural swaymeter in children with cerebral palsy

- 2018. Chitsinee Chorueangsak. Reliability of dynamic balance range in sitting by using postural swaymeter in children with cerebral palsy aged 5-12 years
- 2018. Praerapitch Sukaratsakul. Association between emotional quotient and academic achievement of the 3<sup>rd</sup> and 4<sup>th</sup> year physical therapy students in Chiang Mai university
- 2018. Kanchana Chunlapan. Association between EI and clinical performance of the 3<sup>rd</sup> and 4<sup>th</sup> year physical therapy students, Chiang Mai University
- 2017. Saiyane Kalupae. Evaluation of standing posture on the foam of children with Down syndrome sway meter at different times.
- 2017. Nopphadon Khatthi. Comparison of postural sway between standing with open and close eyes on hard surfaces in children with down's syndrome.
- 2017: Nitchanun kanthasit. Comparison of postural sway between sitting and standing in children with Down syndrome.
- 2016: Krittaporn Ruangsutta. Level of smartphone addiction in student of Faculty of Associate Medical Sciences, Chiang Mai University.
- 2016: Nontacha Jantoon. Smartphone use in sitting position on musculoskeleton symptoms in students of faculty of Associated Medical Sciences, Chiang Mai University.
- 2015: Raweewan Akarawiboonchai. Effect of bag carriage on postural sway in female geriatrics. (Outstanding student research award for poster presentation, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand).
- 2015: Issaraporn Saema. Effects of backpack load on agility in late adolescence.
- 2015: Siriporn Peansukmanee, Nuanlaor Thawinchai, Prakaykul Khanproa, Prayanee Khaminluang. Kinematic analysis in ponies for equine-assisted therapy (EAT) by applying Inertia Sensor Technology, Faculty of Veterinary Medicine, Chiang Mai University Grant, Chiang Mai University, Chiang Mai, Thailand.
- 2014: Phatthrapron Jujia. Comparison of bilateral coordination between children with Intellectual Impairment and healthy children, aged 6-12 years old.
- 2014: Danai Kantasorn. Comparison of strength between children with Intellectual Impairment and healthy children, aged 6-12 years old.
- 2014: Sutthida Tonahongsa. Comparison of speed and agility between children with intellectual impairment and healthy children, aged 6-12 years old on the Bruininks-Oseretsky Test of Motor Proficiency, 2nd Edition (BOT-2).
- 2014: Ratinard Champa .Comparison of balance control between children with intellectual impairment and healthy children, aged 6-12 years old, using the Bruininks.
- 2014: Supattra Gamon. Relationship between carrying backpack duration and pressure pain threshold of upper trapezius muscle.
- 2014: Phiangtarn Narttai. The Effect of asymmetrical carrying bag on standing posture.
- 2014: Thanawan Prueksawanakit. The Effect of walking with carrying backpack on lower back and hamstring flexibility.

- 2013: Kannikar Funprom. The effect of carrying backpack styles on posture in junior high school students with back pain.
- 2013: Phunyanuch Noknuam. Caregiver's awareness regarding school bags in junior high school students.
- 2013: Thanakorn Koonphaen. Awareness about effect of Behavior in carrying school bag in junior high school students, Muang Lamphun.
- 2012: Panchalee Sriraksa. Internal consistency of measurement of pelvic and lower lumbar angles in riders during horse back riding with two-dimension analysis.
- 2012: Suphanan Potaya. The internal consistency of measurement of hip and knee angles in riders during horseback riding with 2-dimension analysis.
- 2011: Tanya Kamplean. The effect of school bag styles on cardiopulmonary endurance in junior high school students.
- 2011: Sirirat Deesoongnern. Relationship between behaviors of carry backpack and back pain in student.
- 2011: Hataichanok Intana. The effect of backpack load on agility in girl junior high school students.
- 2010: Wanitha Leelaroch. Comparison of the ability in using the gross motor function measure-66 (GMFM-66) to evaluate children with cerebral palsy between the 3rd and 4th year physical therapy students.
- 2010: Sakhon Paopo. Test-retest reliability of the Gross motor function measure (GMFM) in fourth year physiotherapist student.
- 2010: Somkit Chunwijit. Comparison of the error scores of the Gross Motor Function Measure (GMFM-66) evaluated between in real-time and via a video by the 4th year physical therapy students.
- 2009: Mingkwan Rampeungkid. The Study of cardiorespiratory fitness and risk of cardiovascular diseases in female students with normal BMI, aged 20-29 years old, in Faculty of Associated Medical Sciences, Chiang Mai University.
- 2009: Kittikun Khaengkayun. The Study about  $VO_{2max}$  running on treadmill with Balke protocol in overweight and obese women.
- 2009: Wannee Kittijanrattana. Intra-rater & inter-rater reliability of the gross motor function measure-66 for children with cerebral palsy.
- 2008: Napaporn Jantarungsee. Study of children with down syndrome walking up and down stairs compared to children with typical development.
- 2008: Kannika Pinta. Interrater reliability of the Gross Motor Function Measure-88 for children with cerebral palsy.
- 2008: Keerati Saimanee. Relationship between body mass index and one-leg standing balance in children with down syndrome aged 11-19 years old.
- 2007: Penhathai Jundee. Comparison of gait parameters in child with and without down syndrome when stepping over obstacle.
- 2007: Sirilug Yaidee. Interrater and intrarater reliability of the Modified Ashworth Scale for children with spastic cerebral palsy.

- 2007: AnchaleeSommai. Effect of spasticity after maximal isometric contraction in children with cerebral palsy.

### **Training and certification**

- June 29, 2023: Preparing the tools for assessing the practical skills of students. QED, Chiang Mai University, Chiang Mai, Thailand.
- July 12-13, 2022: Management of club foot associated with neuromuscular conditions, online training.
- July 30, 2021: Make design easy with Canvas, online training.
- June 2-4, 2021: Cardiac rehabilitation guideline and current trend in physical therapy, online training.
- May 28, 2021: Learning Management System: CMU Canvas, online training.
- May 25, 2021: Curriculum management that focuses on learning outcomes in the approach. Outcome-based Education (OBE), online training.
- May 22, 2021: Social Media Marketing-SMM), online training.
- May 22, 2021: Design Based Thinking in Thailand, online training.
- December 9, 2020: Human Research Ethics for Students/Researchers, Chiang Mai, Thailand.
- July 24-26, 2019: Childhood Adversity: Impacts & Opportunities. Developmental and behavioral pediatrics club of Thailand, Bangkok, Thailand.
- December 11-12, 2018: Good Clinical Practice: GCP Training National clinical research center, Kantary Hills, Chiang Mai, Thailand.
- April 28, 2018: The 3rd Hemophilia Education Day in Chiang Mai: Better Self Care, Better Outcome in Hemophilia. Chiang Mai University Hospital, Chiang Mai, Thailand.
- August 25, 2017: Hemophilia Joint Health Score and FISH, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand.
- July 20-21, 2017: Infographic, Information Technology Service Center, Chiang Mai University, Chiang Mai, Thailand.
- August 29-October 23, 2016: Managing Children with Cerebral Palsy (MCCP MOOC), Physiopedia Plus, London, United Kingdom
- July 30-31, 2016: R programming for research, Faculty of Business, Economics and Communications, Naresuan University, Phitsanulok, Thailand.
- July 6-7, 2016: Good clinical practice: GCP, Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand.
- July 6-7, 2015: Research Methodology in Physical Activity and Health, Research Center in Back, Neck, Other Joint Pain and Human Performance (BNOJPH), Khon Kaen University, Khon Kaen, Thailand.
- April 28 2015: Research Ethics, Graduate school, Chiang Mai University, Chiang Mai, Thailand.
- March 20-21, 2015: Introductory MAES Therapy Course: A better understanding of children with Cerebral Palsy and principles to improve their coordination, Faculty of Health Science, Srinakharinwirot University, Bangkok, Thailand.

- June 5-6, 2014: Basic Good Clinical Practice (GCP) for Research Involving Human Subjects, Faculty of Medicine and Faculty of Nursing, Chiang Mai University, Chiang Mai, Thailand.
- May 8-10, 2014: Writing, Production, and Dissemination of Textbooks and Academic books, Chula press.
- May 8-10, 2013: Exercise is Medicine: Clinical and Experimental Evidence, Faculty of Science, Mahidol University, Bangkok, Thailand.
- December 11-13, 2013: Current trends in neurorehabilitation, Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand.
- November 30 -December 1, 2013: Introduction to Equine Assisted Therapy, Horseshoe Point, Pattaya Chonburi, Thailand.
- September 6-7, 2012: The Asian Physical Therapy Research Symposium, Faculty of Physical Therapy, Mahidol University, Nakhonpathom, Thailand
- April 23-25, 2012: Improving clinical decision making and research in PT education, The Physical Therapy Association of Thailand, Bangkok, Thailand.
- February 16, 2010: Research development in Medical Sciences, National Research Council of Thailand cooperated with Faculty of Medicine, Chiang Mai University, Chiang Mai, Thailand.
- October 7, 2009: Health Promotion Activity and Basic Physical Therapy for Cerebral Palsy Children (For Caretaker) , Rajanagarindra Institute of Child Development cooperated with PH-Japan Thailand, Chiang Mai, Thailand.
- July 20-31, 2009: Web Development Program using PHP, Information Technology Service Center, Chiang Mai University, Chiang Mai, Thailand.
- January 31-February 1, 2008: Massage for baby, Faculty of Allied Health Sciences, Naresuan University, Pitsanuloke, Thailand.
- October 22, 2007: Update course on ERP applications, Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand.
- November 22, 2006: Practical use of EBNeuro ERP acquisition system, Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand.
- April 27-28, 2006: Musculoskeletal management: Integration of PNF, Neurodynamic and Manual Techniques, Department of Physical Therapy, Faculty of Health Science, Srinakharinwirot University, Bangkok, Thailand.
- July 8, 2005: Human subjects protection and clinical research ICH GCP skills workshop, Research Institute for Health Sciences, Chiang Mai University, Chiang Mai, Thailand.
- April 8, 2005: Motor Learning based intervention for children with cerebral palsy, Shriners hospitals for children, Philadelphia, PA, USA.
- April 16, 2004: Connecting the pieces: clinical assessment in cerebral palsy, Shriners hospitals for children, Philadelphia, PA, USA.

- May 7-10, 2003: Gait and Clinical Movement Analysis Society Annual Meeting 2003, Wyndham Hotel, Wilmington, DE, USA.
- April 11, 2003: Strategies to improve quality of care for the child and family with cerebral palsy, Shriners hospitals for children, Philadelphia, PA, USA.
- June 25, 2001: Innovations in treatment & assessment of children with cerebral palsy, Shriners hospitals for children, Philadelphia, PA, USA.
- March 21- 22, 1998: Diversity in Pediatric interventions: Enhancing Treatment Strategies, Pediatric Physical Therapy Program, Allegheny University of the Health Sciences, Philadelphia, PA, USA.
- April 1-5, 1996: Bobath Technique in Cerebral Palsy, Department of Physical Therapy, Faculty of Associated Medical Sciences, Khon Kaen University, Khon Kaen, Thailand.
- January 29-30, 1996: Movement Assessment of Infant, School of Physiotherapy, Faculty of Medicine Siriraj Hospital, Bangkok, Thailand.
- August-November, 1995: Training program for pediatric physical therapy in Honolulu, University of Hawai'i at Manoa, Affiliated Program for Developmental Disabilities, Hawaii, USA.
- October 25-28, 1994: Workshop in Paediatric Physiotherapy IV: Movement from Infancy to Adolescence Course, School of Physiotherapy, Faculty of Medicine Siriraj Hospital, Bangkok, Thailand.
- August 16-19, 1994: Workshop in Paediatric Physiotherapy III: Children's Course, School of Physiotherapy, Faculty of Medicine Siriraj Hospital, Bangkok, Thailand.
- May 17-20, 1994: Workshop in Paediatric Physiotherapy II: Advanced Infants Course, School of Physiotherapy, Faculty of Medicine Siriraj Hospital, Bangkok, Thailand.
- February 23-24, 1994: Workshop in Paediatric Physiotherapy I: Introductory Course, School of Physiotherapy, Faculty of Medicine Siriraj Hospital, Bangkok, Thailand.