

**CURRICULUM VITAE**  
**SOMPORN SUNGKARAT (ONLAOR), Ph.D., P.T.**

**PERSONAL INFORMATION**

**Address:** Department of Physical Therapy  
Faculty of Associated Medical Sciences  
Chiang Mai University  
Chiang Mai, 50200  
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**EDUCATION**

**Post-graduate:** University of Southern California, Los Angeles, CA, USA  
Ph.D. Biokinesiology, 2001  
University of Southern California, Los Angeles, CA, USA  
M.S. Biokinesiology and Physical Therapy, 1996

**Undergraduate:** Chiang Mai University, Chiang Mai, Thailand  
B.S. Physical Therapy, 1991

**POSITIONS AND APPOINTMENTS**

**2019-present** Chair of PhD Program (Biomedical Sciences), Faculty of Associated Medical Sciences, Chiang Mai University

**2018-present** Associate Editor of the Hong Kong Physiotherapy Journal

**2014-present** Associate Professor, Department of Physical Therapy  
Chiang Mai University, Chiang Mai, Thailand

**2004-present** Committee of Master Program (Movement and Exercise Sciences),  
Faculty of Associated Medical Sciences, Chiang Mai University

**2017-2019** Committee of PhD Program (Biomedical Sciences), Faculty of Associated Medical Sciences, Chiang Mai University

**2010-2012** Associate Dean for Research and International Relations  
Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

**2007-2012** Secretary of the Human Ethic Committee  
Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

**2004-2010** Assistant Dean for Research and International Relations

**1992-2003**

Faculty of Associated Medical Sciences, Chiang Mai University, Thailand  
Lecturer, Department of Physical Therapy  
Chiang Mai University, Chiang Mai, Thailand

### **HONORS AND AWARDS**

- Royal Thai Government Scholarship, 1994-1999
- University of Southern California Alumni Scholarship, 1996, 1999
- Academic Achievement Award, University of Southern California, 2000
- Golden Cane Award, Department of Biokinesiology and Physical Therapy, University of Southern California, 2000
- Outstanding Contribution to Department of Biokinesiology and Physical Therapy from Ph.D. Students, University of Southern California, 2001
- Research travel grant from Office of The Higher Education Commission of Thailand to visit institutions in North America under the project entitled: Neurorehabilitation: from evidence to practice, May, 2005
- Travel grant from WHO as Physical Therapist representative from Thailand to participate in The International ICF Core Sets Consensus Conference for Multiple Sclerosis at Valens Rehabilitation Centre, Switzerland, May 2008
- Good poster presentation for the research entitled “Efficacy of an insole shoe-wedge and augmented pressure sensor during gait training for individuals with stroke” at Chiang Mai University Academic Days: The 4<sup>th</sup> Annual Meeting: Innovation for Life, December, 2008.

### **RESEARCH INTEREST**

- Motor control and learning
- Neurorehabilitation (focused on balance and gait)
- Combined physical-cognitive training to improve cognition

### **MEMBERSHIP**

- International Parkinson and Movement Disorder Society
- Thai Physical Therapy Association

### **BOOK and BOOK CHAPTER**

**Sungkarat, S.** (2013). Neurorehabilitation of Individuals with Brain Disorders: From Theory to Practice. Siamnana Printing, Chiang Mai. ISBN 978-616-335-641-3. (written in Thai)  
**Kovindha, A. & Sungkarat, S.** (2016). Walking and Walking Training. In Kovindha, A. Ed. Textbook of Spinal Cord Injury: Comprehensive Rehabilitation III: Towards Independent Living. Thanakrit Printing, Chiang Mai. ISBN 978-616-406-867-4. pp. 1-63. (written in Thai)

## PUBLICATIONS (peer-reviewed)

### International publications

Phirom K, Kamnardsiri T, **Sungkarat S**. Beneficial effects of an interactive physical-cognitive game-based training on fall risk and cognitive performance of older adults. *Int J Environ Res Public Health* 2020;17:6079. Available from <https://doi.org/10.3390/ijerph17176079>. [ISI Q1]

Thaiyanto J, Sittichoke C, Phirom K, **Sungkarat S**. Effects of multicomponent exercise on cognitive performance and fall risk in older women with mild cognitive impairment. *J Nutr Health Aging*; 2020. Available from: <https://doi.org/10.1007/s12603-020-1458-5>. [Scopus Q1]

Kantatong T, Athavudh D, Panpanich R, **Sungkarat S**, Siviroj P. Predicting quality of life in chronic obstructive pulmonary disease patients living in the rural area of Chiang Mai Province, Thailand. *Open Public Health Journal* 2020;13:357-364, ID TOPHJ-13-357. Available from: <https://doi.org/10.2174/1874944502013010357>. [Scopus Q3]

Chittrakul J, Siviroj P, **Sungkarat S**, Sapbamrer R. Physical Frailty and Fall Risk in Community-Dwelling Older Adults: A Cross-Sectional Study. *J Aging Res* 2020; ID 3964973. Available from: <https://doi.org/10.1155/2020/3964973>. [Scopus Q3]

Sadjapong U, Yodkeeree S, **Sungkarat S**, Siviroj P. Multicomponent exercise program reduces frailty and inflammatory biomarkers and improves physical performance in community-dwelling older adults: a randomized controlled trial. *Int J Environ Res Public Health* 2020;17:E3760. Available from: <https://doi.org/10.3390/ijerph17113760>. [ISI Q1]

Chittrakul J, Siviroj P, **Sungkarat S**, Sapbamrer R. Multi-system physical exercise intervention for fall prevention and quality of life in pre-frail older adults: a randomized controlled trial. *Int J Environ Res Public Health* 2020;17:E3102. Available from: <https://doi.org/10.3390/ijerph17093102>. [ISI Q1]

Chuattrakoon B, Ngai SPC, **Sungkarat S**, Uthaikhup S. Balance impairment and effectiveness of exercise intervention in chronic obstructive pulmonary disease-a systematic review. *Arch Phys Med Rehabil* 2020. Available from: <https://doi.org/10.1016/j.apmr.2020.01.016>. [ISI Q1]

Sremakaew M, **Sungkarat S**, Treleaven J, Uthaikhup S. Effects of tandem walk and cognitive and motor dual- tasks on gait speed in individuals with chronic idiopathic neck pain: a preliminary study. *Physiother Theory Pract* 2019:1-7. [Scopus Q2]

Kantatong T, Panpanich R, Deesomchok A, **Sungkarat S**, Siviroj P. Effects of the Tai Chi qigong programme on functional capacity and lung function in chronic obstructive pulmonary disease patients: a randomised controlled trial. *J Tradit Complement Med* 2019. Available from: <https://doi.org/10.1016/j.jtcme.2019.03.008>. [Scopus Q1]

Sittichoke C, Buasord J, Boripuntakul S, **Sungkarat S**. Effects of compliant flooring on dynamic balance and gait characteristics of community-dwelling older persons. *J Nutr Health Aging* 2019;23(7):665-8. [Scopus Q1]

Ratanapinunchai J, Mathiyakom W, **Sungkarat S**. Scapular upward rotation during passive humeral abduction in individuals with hemiplegia post-stroke. *Ann Rehabil Med* 2019;43(2):1-9. [Scopus Q2]

Sremakaew M, **Sungkarat S**, Treleaven J, Uthaikhup S. Impaired standing balance in individuals with cervicogenic headache and migraine. *J Oral Facial Pain H* 2018;32:321-8. [Scopus Q2]

**Sungkarat S**, Boripuntakul S, Kumfu S, Lord S, Chattipakorn N. Tai Chi improves cognition and plasma BDNF in older adults with mild cognitive impairment: a randomized controlled trial. *Neurorehabil Neural Repair* 2018;32(2):142-9. [ISI Q1]

Wongcharoen S, **Sungkarat S**, Munkhetvit P, Lugade V, Silsupadol P. Home-based interventions improve trained, but not novel, dual-task balance performance in older adults: a randomized controlled trial. *Gait Posture* 2017;52:147-52. [Scopus Q1]

**Sungkarat S**, Boripuntakul S, Chattipakorn N, Watcharasaksilp K, Lord SR. Effects of Tai Chi on cognition and fall risk in older adults with mild cognitive impairment: a randomized controlled trial. *J Am Geriatr Soc* 2017;65:721-7. [ISI Q1]

Boripuntakul S, **Sungkarat S**. Specific but not global cognitive functions are associated with gait initiation in older adults. *J Aging Phys Act* 2017;25:128-33. [Scopus Q1]

Boripuntakul S, Lord SR, Brodie MD, Smith ST, Methapatara P, Wongpakaran N, **Sungkarat S**. Spatial variability during gait initiation while dual tasking is increased in individuals with mild cognitive impairment. *J Nutr Health Aging* 2014;18(3):307-12. [Scopus Q1]

Davenport T, Fisher B, Reischl S, **Sungkarat S**, Cozby J, Meyer L, et al. Alteration in corticospinal excitability, talocrural joint range of motion, and lower extremity function following manipulation in non-disabled individuals. *Orthop Phys Ther Pract* 2013;25(2):97-102.

Uthaikhup S, Jull G, **Sungkarat S**, Treleaven J. The influence of neck pain on sensorimotor function in the elderly. *Arch Gerontol Geriatr* 2012;55(3):667-72.

Boripuntakul S, Kothan S, Methapatara P, Munkhetvit P, **Sungkarat S**. Short term effects of cognitive training program for individuals with amnesic mild cognitive impairment: a pilot study. *Phys Occup Ther Geriatr* 2012;30(2):138-49.

Coenen M, Cieza A, Freeman J, Khan F, Miller D, Weise A, Kesselring J, Members of the Consensus Conference: Freeman J, Kesselring J, Khan F, Kostanjsek N, Luoto E, Melvin J, Singhal B, Stucki G, Tenenbaum S, Thompson A, Anderseck B, Cáceres FJ, Chitnis S, Flachenecker P, Freeman J, Govaerts M, Hassan A, Izzeldin A, Hinrichs J, Hoang P, Jansa J, Khan F, Lexell EM, Miller D, Guiteras MR, **Sungkarat S**, et al. The development of ICF core sets for multiple sclerosis: results of the international consensus conference. *J Neurol* 2011;258(8):1477-88.

**Sungkarat S**, Fisher B, Kovindha A. Efficacy of an insole shoe-wedge and augmented pressure sensor for gait training in individuals with stroke: a randomized controlled trial. *Clin Rehabil* 2011;25:360-9.

**Onlaor S**, Winstein CJ. Determining the optimal challenge point for motor skill learning in individuals with moderately severe Parkinson's disease. *Neurorehabil Neural Repair* 2008;22:385-95.

Shohamy D, Myers CE, **Onla-or S**, Gluck MA. Role of the basal ganglia in category learning: how do patients with Parkinson's disease learn?. *Behav Neurosci* 2004;118:676-86.

Myers CE, Shohamy D, Gluck MA, Grossman S, **Onla-or S**, Kapur N. Dissociating medial temporal and basal ganglia memory systems with a latent learning task. *Neuropsychologia* 2003;41:1919-28.

**Onla-or S**, Winstein CJ. Function of the “direct” and “indirect” pathways of the basal ganglia motor loop: evidence from reciprocal aiming movements in Parkinson’s disease. *Brain Res Cogn Brain Res* 2001;10:329-32.

Pohl PS, Winstein CJ, **Onla-or S**. Sensory-motor control in the ipsilateral upper extremity after stroke. *Neurorehabilitation* 1997;9:57-69.

### **National publications**

Maiarin S, **Sungkarat S**, Kamnardsiri T, Boripuntakul S. Increased spatiotemporal variability during unplanned gait speed transition in older adults with mild cognitive impairment. *JAMS* 2021; 54:17-25.

Puipanichsiri P, **Sungkarat S**, Boripuntakul S, JinajinS, Tanakietpinyo S, Nantachai G, Ruangrukrien B. Comparison of the effectiveness of fall prevention training programs in healthy elderly. *J Gerontol Geriatr Med* 2020; 19:47-63.

Sittichoke C, Boripuntakul S, Worakul P., **Sungkarat S**. Effects of cognitive training on fall risk and cognitive performance in individuals with mild cognitive impairment. *JAMS* 2020; 53:92-99.

Chuatrakoon B, Uthaihpup S, Pichaiya T, **Sungkarat S**. Relationship between cognition, disease severity and balance performance in individuals with chronic obstructive pulmonary disease. *JAMS* 2019;52:131-7.

Wannaprom N, **Sungkarat S**, Uthaihpup S. Change in gait speed using the timed 10 meter walk test in individuals with neck pain. *JAMS* 2018;51:1-5.

Srimaloon K, Silsupadol P, **Sungkarat S**. Effect of dual task on balance in older adults with mild cognitive impairment. *J Assoc Med Sci* 2017;50(3):605-16.

Phirom K, Sanglah C, **Sungkarat S**. Relationship between Physiological Profile Assessment (PPA) and Berg Balance Scale (BBS) scores in patients with stroke. *J Assoc Med Sci* 2017; 50(3):587-96.

Boripuntakul S, **Sungkarat S**, Parameyong A, Ponljaroen P. Immediate effects of cold on balance and proprioception in Thai healthy older adults. *J Assoc Med Sci* 2017;50(2):217-26.

**Sungkarat S**, Uthaikhup S, Kaewsutthi M, Charoenlimprasert J, Kaewsanmuang S. Intra- and inter-rater reliability of the Stroke Rehabilitation Assessment of Movement (STREAM). *J Assoc Med Sci* 2017;50(1):71-86.

Boripuntakul S, Lord SR, **Sungkarat S**. Unplanned stopping strategy in individuals with mild cognitive impairment. *Walailak J Sci & Tech* 2017;14(1):35-42.

Saenphan W, **Sungkarat S**, Boripuntakul S, Watcharasaksilp K. Effects of home-based Tai Chi training on balance in older adults with mild cognitive impairment. *Bull Chiang Mai Assoc Med Sci* 2016;49(1):123-33.

Namkhum S, Watcharasaksilp K, **Sungkarat S**. Comparisons of gait characteristics during obstacle crossing at different heights between older adults with and without mild cognitive impairment. *Bull Chiang Mai Assoc Med Sci* 2015;48(3):204-13.

Panachamnong N, Methapatara P, **Sungkarat S**, Taneyhill K, Intasai N. Clusterin as a blood biomarker for diagnosis of mild cognitive impairment and Alzheimer's disease. Chiang Mai University. *J Natural Sciences* 2014;13(3):331-334.

Kumfu S, Silsupadol P, **Sungkarat S**. Effect of executive function and attention on gait in individuals with mild cognitive impairment. *Thai Phys Ther* 2011;34(1):12-23.

**Sungkarat S**, Methapatara P, Taneyhill K, Apiwong R. Sensitivity and specificity of seven minute screen (7MS) Thai version in screening Alzheimer's disease. *J Med Assoc Thai* 2011; 94(7):842-8.

Chouchay S, **Sungkarat S**, Silsupadol P. Impact of footwear styles on postural control ability of female elderly. *J Gerontol Geriatr Med* 2010;11(1):25-35.

Boripuntakul S, **Sungkarat S**. Effects of up-and downslope walking on mean and variability of gait parameters in elderly women. *Thai Phys Ther* 2010;32(2):55-61.

**Onla-or S**, Sawasthikanontha N, Namfun T. Effects of shoe wedge use during stance and gait training on balance and gait velocity in individuals with stroke. *Bull Chiang Mai Assoc Med Sci* 2006;39:61-70.

Kowkerd W, Cheewapanich S, **Onla-or S**. Comparison of gait parameters in elderly women with and without balance impairment. Bull Chiang Mai Assoc Med Sci 2006;39:52-60.

**Onla-or S**, Sawasthikanontha N. Effects of symmetrical body-weight distribution training on balance and gait in individuals with stroke. Thai Phys Ther 2005;27(3):39-51.

**Onla-or S**, Saksri P, Chaimongkol N. Effects of home exercise and stretching program on balance ability of elderly women. J Gerontol Geriatr Med 2004;5:11-8.

**Onla-or S**, Saksri P, Wongyai A. Effects of Tai Chi exercise on functional mobility in elderly. J Gerontol Geriatr Med 2003;4:12-8.

#### **ABSTRACTS (Proceeding conference)**

Winstein, C.J. & **Onla-or, S**. (1996). Effects of unilateral brain damage on the control of aiming movements. Abstract, Neurology Report, 20, 21.

Winstein, C.J., Fisher, B.E., & **Onla-or, S**. (1997). Response variability of goal-directed voluntary arm movements: Pathology or flexibility? Abstract, Journal of Sport and Exercise Psychology, 19 (Suppl.), 20.

Winstein, C.J., **Onla-or, S**, & Sullivan, K.J. (1997). Deficits in movement-related information processing post-stroke: A kinematic analysis. Abstract, Society for Neuroscience, 23, 2373.

**Onla-or, S** & Winstein, C.J. (1998). Relationship between “Programming” and “Execution” of movement in individuals with severe Parkinson’s Disease with pharmacological treatment. Abstract, Neurology Report, 22, 177.

**Onla-or, S** & Winstein, C.J. (1999). Context-specificity and generalizability of motor learning in individuals with Parkinson’s disease: A pilot study. Abstract. Neurology Report, 23, 151.

Shohamy, D., **Onla-or, S** & Gluck, M.A. (2000). Category learning in Parkinson’s disease: The effect of multiple training sessions on probabilistic classification with highly discriminable categories. Abstract, Cognitive Neuroscience.

**Onla-or, S** & Winstein, C.J. (2000). Context-specific learning in individuals with Parkinson’s disease. Abstract, Journal of Sport and Exercise Psychology, 22, 84.

**Onla-or, S**. (2001). Is the “unaffected arm” of stroke patient really “unaffected”? A kinematic and brain-behavior relationship analysis. Abstract, Chiangmai Medical Bulletin, 40(3), 13.

**Onla-or, S**. (2001). Motor learning in individuals with Parkinson’s Disease. Abstract, 25 yr. Anniversary of the faculty of Associated Medical Sciences Meeting, Chiang Mai University, Chiang Mai.



Shohamy, D., **Onla-or, S.**, & Gluck, M. (2001). How patients with Parkinson's disease learn: Analysis of strategies used to solve a cognitive category learning task. Abstract, Society for Neurosciences Meeting, San Diego.

**Onla-or, S.** (2002). Effects of long-term use of Levodopa on goal directed reciprocal movements in individuals with Parkinson's disease. Abstract, The 20<sup>th</sup> Annual Health Science Meeting, Research Instituted for Health Sciences, Chiang Mai University.

Myers, C.E., Shohamy, D., Grossman, S., Gluck, M.A., **Onla-or, S.**, Eby, L.A., & Sage, J. (2003). Parkinson's patients are unimpaired at probabilistic classification and reversal in a three-cue task. Abstract, Cognitive Neuroscience Society Annual Meeting, NYC, March 30 – April 1 2003.

Kongsompong, S. & **Onla-or, S.** (2003). Quality of life of individuals with Parkinson's disease. Abstract, The 4<sup>th</sup> Annual Physical Therapy Meeting, Chulalongkorn University, BKK, Oral Presentation, April 28-29, 2003.

**Onla-or, S.** & Moolsawasdee, N. (2004). Effects of symmetrical body weight distribution training on balance and gait in individuals with stroke. Abstract, The 5<sup>th</sup> Annual Neurophysical Therapy Meeting, Mahidol University, BKK, Oral Presentation, April 28-29, 2004.

**Sungkarat, S.** & Kovindha, A. (2008). Efficacy of an Insole Shoe-wedge and Augmented Pressure Sensor during Gait Training for Individuals with Stroke: A Preliminary Study. Abstract, Chiang Mai University Academic Days: The 4<sup>th</sup> Annual Meeting: Innovation for Life, Poster Presentation, December 19-20, 2008.

**Sungkarat, S.** (2009). Determining the optimal challenge point for motor skill learning in individuals with moderately severe Parkinson's disease. Abstract, Best practice in geriatric physical therapy: Falling assessment and intervention; 25yr Anniversary of Physical Therapy, Chiang Mai University, Oral Presentation, March 10-13, 2009.

**Sungkarat, S.**, Methapatara, P., Taneyhill, K., & Apiwong, R. (2009). Development of the screening methods for Alzheimer's disease. Abstract, Chiang Mai University Academic Days: The 5<sup>th</sup> Decade toward the University of Excellence, Poster Presentation, November 26-27, 2009.

**Sungkarat, S.**, Methapatara, P., & Apiwong, R. (2010). A screening test for Alzheimer's Disease: Sensitivity and Specificity of 7-Minute Screen Thai Version. Abstract, Annual Meeting of Thai Society and Geriatric Medicine: Practical Management, Caring and Supporting in Older Adults, Oral Presentation, January 20-22, 2010.

**Sungkarat, S.**, Kothan, S., Methapatara, P., Munkhetvit, P., & Boripuntakul, S. (2010). Development and Efficacy of Cognitive Training Program for Individuals with Mild Cognitive Impairment: Evidence from Biomarker Analysis in Brain by Magnetic Resonance Spectroscopy and Cognitive Skills. Abstract, Annual Academic Meeting of the Faculty of

Associated Medical Sciences, Chiang Mai University, Chiang Mai. Poster presentation, December 1-3, 2010.

**Sungkarat, S.**, Uthaikhup, S., Khamsaen, K. (2012). The Influence of Neck Pain on Gait. Abstract, IFOMPT 2012, The World Congress of Manual/Musculoskeletal Physiotherapy, Quebec City, Canada. Poster presentation, September 30-October 5, 2012.

**Sungkarat, S.**, Boripuntakul, S., Lord, S., Methapatara, P., Wongpakaran, N. (2012). Effects of Dual-task on Gait Initiation in Individuals with Mild Cognitive Impairment. Abstract, The Asian Physical Therapy symposium, Mahidol University, Bangkok, Thailand, Oral presentation, September 6-7, 2012.

**Sungkarat, S.**, Uthaikhup, S., Silsupadol, P. (2014). Physiological and Functional Factors Predicting Recurrent Falls in Community-Dwelling Older Adults. The International Physical Therapy Conference 2014, Chiang Mai, Thailand. Poster presentation, July 27, 2014.

Thanakkhasaranee, W., **Sungkarat, S.** (2014). Effects of Tai Chi Training on Physiological Factors Associated with Falls in Older Adults with Mild Cognitive Impairment. Proceeding, International Graduate Conference (iGRC) 2014, Chiang Mai, Thailand. Oral presentation, December 12, 2014.

Namkhum, S. **Sungkarat, S.** Chamnongkich, S. (2015). Comparisons of Gait Characteristics during Obstacle Crossing at Different Heights between Older Adults with and without Mild Cognitive Impairment. Academic Celebration on the 40th Years in Establishment of the AMS Faculty: Annual Academic Meeting 2015, Faculty of Associated Medical Sciences, Chiang Mai, Thailand, Poster presentation, November 25-27, 2015

Saenphan, W., Watchalaksilp, K., Boripuntakul, S., **Sungkarat, S.** (2015). Effects of Home-based Tai Chi on Balance in Older Adults with Mild Cognitive Impairment. Academic Celebration on the 40th Years in Establishment of the AMS Faculty: Annual Academic Meeting 2015, Faculty of Associated Medical Sciences, Chiang Mai, Thailand, Poster presentation, November 25-27, 2015.

**Sungkarat, S.**, Uthaikhup, S., Kaewsutthu, M., Charoenlimprasert, J., Kaewsanmuang, S. (2017). Intra- and inter-rater reliability of the Stroke Rehabilitation Assessment of Movement (STREAM). AMS conference 2017, Chiang Mai, Thailand, Poster presentation, February 8-10, 2017.

**Sungkarat, S.**, Boripuntakul, S., Buasord, J., Sittichoke, C. (2017). Comparisons of balance and gait characteristics of older adults while walking on absorbing floor and rigid floor. AMS conference 2017, Chiang Mai, Thailand, Poster presentation, February 8-10, 2017.

Sittichoke, C., Boripuntakul, S., Saenphan, W., **Sungkarat, S.** (2018). Home-based Tai Chi exercise improves quality of life in individuals with amnesic mild cognitive impairment. AMS conference 2018, Chiang Mai, Thailand, Poster presentation, February 5-7, 2018.

Chuatrakoon, B., Uthaihpup, S., Ngai, S., **Sungkarat, S.** (2018). Physiological Factors Associated with Fall Risk in Individuals with Chronic Obstructive Pulmonary Disease (COPD). 11th Pan-Pacific Conference on Rehabilitation, The Hong Kong Polytechnic University, Hong Kong, November 16-18, 2018.

Phirom, K., Kamnardsiri, T., **Sungkarat, S.** (2019). Effects of combined physical-cognitive training program on fall risk in older adults. AMS conference 2019, Chiang Mai, Thailand, Poster presentation, December 6-8, 2019.

## **RESEARCH GRANTS**

### **Principle Investigator:**

- |           |   |
|-----------|---|
| 2004-2005 | Associated Medical Sciences Research Grant<br>Project "Effects of Symmetrical Body-Weight Distribution Training on Balance and Gait in Individuals with Stroke"   |
| 2005-2006 | Chiang Mai University New Researcher Grant<br>Project "Effects of Shoe Wedge Use during Stance and Gait Training on Balance and Gait in Individuals with Stroke"  |
| 2007-2009 | Thailand Research Fund and Office of the Higher Education Commission Grant<br>Project "Development and Efficacy of an Inserted Shoe-Wedge with Pressure Sensor during Gait Training on Gait and Balance in Individuals with Stroke"   |
| 2008-2009 | National Research Council of Thailand (NRCT)<br>Project "Development of the Screening Methods for Alzheimer's Disease"  |
| 2010-2011 | Biomedical Engineering Center Research Grant, Chiang Mai University<br>Project "Development and Efficacy of Cognitive Training Program for Individuals with Mild Cognitive Impairment: Evidence from Biomarker Analysis in Brain by Magnetic Resonance Spectroscopy and Cognitive Skills" |
| 2011-2012 | National Research Council of Thailand (NRCT)<br>Project "Allied Health Sciences for Diagnosis, Management and Care of Elderly with Dementia"  |
| 2013-2015 | Thailand Research Fund (Research Grant for Mid-Career University Faculty)<br>Project "A randomized controlled trial of mind-body exercise: Effects of a 6-month Tai Chi exercise on cognition and blood biomarkers of individuals with mild cognitive impairment (MCI)"                   |
| 2016-2017 | The Siam Cement Public Company Limited (SCG) –Innovation and Technology<br>Project "Comparisons of Balance and Gait Characteristics of Elderly while Walking on Shock Absorbing Flooring and Vinyl Flooring"  |
| 2017-2018 | Associated Medical Sciences Research Grant  |

- Project “Physiological factors related to balance impairment and falls in Individuals with Chronic Obstructive Pulmonary Disease (COPD)”
- 2017-2019 Thailand Science Research and Innovation (TSRI)  
Project “Development of a virtual, interactive physical-cognitive game-based training program for reduction of falls and dementia risk”
- 2018-2021 Thailand Science Research and Innovation (TSRI)  
Project “Synergistic effects of combined physical-cognitive training on cognitive function in individuals with mild cognitive impairment (MCI): A randomized controlled trial”
- Co-investigator:**
- 2005-2006 Thai Health Promotion Foundation  
Project “Effects of cell phone conversation on driving performance”
- 2007-2008 Transcranial Magnetic Stimulation Laboratory Fellowship, University of Southern California, Los Angeles, USA.  
Project “Alteration in Cortical Motor Excitability Following Ankle Joint Manipulation”
- 2008-2009 National Science and Technology Development Agency (NSTDA)  
Project “Invention of insole sensor for measurement of foot pressure during stance and gait”
- 2010-2011 Chiang Mai University New Researcher Grant  
Project “The influence of neck pain on sensorimotor function in elderly patients”
- 2010-2011 National Research Council of Thailand (NRCT)  
Project “National Research Project Management (NRPM) for Health Science”
- 2011-2012 Associated Medical Sciences Research Grant  
Project “Are dividing attention and allocating attention during sitting correlated with dual-task gait performance in older adults?”
- 2011-2012 Associated Medical Sciences Research Grant  
Project “Effects of Sit-to-Stand Home-Based Exercise on Muscle Performance, Physical Performance and Quality of Life in the Elderly”
- 2012-2013 Associated Medical Sciences Research Grant  
Project “Physiological Factors Associated with Fall and Functional Ability in Thai - Dwelling Elderly”
- 2013-2014 Associated Medical Sciences Research Grant  
Project “Effects of Physiological Factors and Functional Ability on Recurrent Falls in the Elderly”
- 2014-2015 Department of Medical Services Grant

- Project “The Development of Model for Physical Rehabilitation of Patients Recovering from Cerebrovascular Disease in Health Promoting Hospital”
- 2017-2019 National Research Council of Thailand (NRCT)
- Project “Effectiveness of falls prevention training program in Thai elderly”
- 2018-2019 National Research Council of Thailand (NRCT) –Graduate Study
- Assessment and Management of Balance Impairment and Fall Risk in Individuals with Chronic Obstructive Pulmonary Disease (COPD)

#### **GRADUATE STUDENTS SUPERVISION (M.S./Ph.D.)**

- Sirinun Boripuntakul (2005-2007) M.S. (Movement and Exercise Sciences)  
Thesis title: Effects of Up-and Down-Slope Walking on Mean and Variability of Gait Parameters in Elderly Women
- Theerasak Boonwang (2005-2007) M.S. (Movement and Exercise Sciences)  
Thesis title: Effects of Cell Phone Conversation on Driving Performance
- Supanee Chouchay (2007-2010) M.S. (Movement and Exercise Sciences)  
Thesis title: Impact of Footwear Styles on Postural Control Ability of Female Elderly
- Dararat Thipwong (2007-2008) M.S. (Public Health)  
Project title: Problems and Needs for Government Support of People with Disabilities in Maesariang District, Mae Hong Son Province
- Wachiraporn Norach (2009-2010) M.S. (Public Health)  
Project title: Needs of Patients with Stroke and Family in Physical, Psychological and Social Cares from Home Health Care Team, Mae Ai Hospital
- Sirintip Kumfu (2008-2011) M.S. (Movement and Exercise Sciences)  
Thesis title: Effects of Specific Cognitive Domains on Gait in Individuals with Mild Cognitive Impairment
- Sirinun Boripuntakul (2008-2013) Ph.D.(Biomedical Sciences)  
Thesis title: Gait Variability during Gait Initiation and Termination in Individuals with Mild Cognitive Impairment
- Wannisa Thanakkhasaranee (2012-2014) M.S. (Movement and Exercise Sciences)  
Thesis title: Effects of Tai Chi Training on Physiological Factors associated with Falls and Fall Risk in Older Adults with Mild Cognitive Impairment
- Wannisa Saenphan (2012-2015) M.S. (Movement and Exercise Sciences)  
Thesis title: Effects of Tai Chi Training on Balance and Trunk Coordination in Older Adults with Mild Cognitive Impairment
- Sikarin Namkhum (2013-2015) M.S. (Movement and Exercise Sciences)  
Thesis title: Effects of Obstacle crossing on Gait in Older Adults with Mild Cognitive Impairment

- Kedkanok Srimaloon (2015-2017) M.S. (Movement and Exercise Sciences)  
Thesis title: Effects of Dual Tasks on Balance in Older Adults with Mild Cognitive Impairment
- Busaba Chuatrakoon (2016-2020) PhD. (Biomedical Sciences)  
Thesis title: Assessment and Management of Balance Impairment and Fall Risk in Individuals with Chronic Obstructive Pulmonary Disease
- Cattaleeya Sittichoke (2018-2020) M.S. (Movement and Exercise Sciences)  
Thesis title: Effects of Cognitive Training on Fall Risk and Cognitive Performance in Individuals with Mild Cognitive Impairment
- Jirapinya Thaiyanto (2018-2020) M.S. (Movement and Exercise Sciences)  
Thesis Title: Effects of Multicomponent Exercise on Cognitive Performance and Fall Risk in Older Adults with Mild Cognitive Impairment
- Kochaphan Phirom (2018-2020) M.S. (Movement and Exercise Sciences)  
Thesis Title: Development and Evaluation of an Interactive Physical-Cognitive Game-Based Training Program on Fall Risk and Cognitive Performance of Older Adults

#### **SHORT COURSE TRAINING/ CONFERENCE**

<b><u>Course</u></b>	<b><u>Organization</u></b>	<b><u>Date</u></b>
Motor Control and Learning in the Adult Neurologic Patient	Rancho Los Amigos Medical Center, USA	September, 1997
Improving Function in Geriatric and Neurological Rehabilitation	Education Resources, USA	January, 1999
Multiple Sclerosis: Focus on Rehabilitation	Serono Symposia, USA	December, 1999
Motor Synergies in Healthy and Impaired Persons	Thai PT Associations Thailand	November, 2002
The 3 <sup>rd</sup> Asian and 4 <sup>th</sup> Chiang Mai Spinal Cord Injury Workshop	Chiang Mai University & International Spinal Cord Society	November, 2003
III STEP: Linking Movement Science and Intervention	APTA Neurology & Pediatrics section, USA	July, 2005

Transcranial Magnetic Stimulation: Methods and Practice	Neuroplasticity & Imaging Laboratory, USC, USA	May, 2006
Mini-Fellowship: Advanced Transcranial Magnetic Stimulation	Neuroplasticity & Imaging Laboratory, USC, USA	April-May, 2007
GAITRite: Operation & Application	School of Rehabilitation Sciences, University of Queensland, Australia	March, 2008
ICF Core Sets for Multiple Sclerosis	Valens Rehabilitation, Switzerland	May 2-4, 2008
Management of Individuals with Parkinson's Disease	Annual meeting: The faculty of Physical Therapy and Applied Movement Science, Mahidol University, Thailand	March 25-27, 2009
14th Asia-Pacific Regional Conference of Alzheimer's Disease International	Medical Convention Promotion and Cardiovascular Metabolic Center, Faculty of Medicine Ramathibodi, Mahidol University	January 11-13, 2012
Managing People and Performance	Strategic Resources International, Austin, Texas, USA and Chiang Mai University	March 23-24, 2012
Movement Disorders Course	Movement Disorders Society, WHO, & Thai PDMDS	February 8, 2013
Applied Functional Science Concept for Therapeutic Exercise	T & S Physical Therapy and Dept. Physical Therapy, Chiang Mai University	July 30-31, 2014
Update in Physical Therapy for Parkinson's Management	Faculty of Allied Health Sciences, Chulalongkorn University	January 12-14, 2016

**RESEARCH ETHICS, GCP and OTHER RELEVANT TRAINING**

- Guidelines for IRB review and ethical issues in research, Research Institute for Health Sciences, Chiang Mai, February 2008.
- GCP-based investigator training program workshop, Research Institute for Health Sciences, Chiang Mai, May 2008.
- International course on surveying and evaluating ethical review practices programme, SIDCER, Research Institute for Health Sciences, Chiang Mai, July 2008.
- WHO-TDR SIDCER-FERCAP-FERCIT training course for standard operating procedures IEC/IRB recognition program, Faculty of Medicine, Thammasart University, March 2010.
- International course on surveying and evaluating ethical review practices programme, SIDCER-FERCAP, Faculty of Medicine, Chiang Mai University, June 2011.
- FERCAP surveyor training update, Faculty of Medicine, Chulalongkorn University, September 22, 2013.
- Local surveyor, SIDCER survey, Faculty of Nursing, Chiang Mai University, September 26-28, 2013.
- FERCAP surveyor training update, Faculty of Medicine, Chiang Mai University, March 8, 2015.
- Local surveyor, SIDCER survey, Central Research Ethics Committee (CREC), Bangkok, March 12-14, 2015.
- "Human Subject Protection Course" Forum for Ethical Review Committees in Thailand (FERCIT), Faculty of Medicine, Chulalongkorn University, May 23-24, 2016.
- NECAST surveyor, Regional Research Ethics Committee (RREC), Naresuan University, Pitsanuloke, September 7-9, 2017.
- Good Clinical Practice (GCP) training course, Chiang Mai University, July 5-6 2018.
- Human research ethics. Chiang Mai University, July 4-5, 2019.
- Update NECAST-SIDCER Surveyor 2020: Ethical and Regulatory Issues. Miracle Grand Hotel, Bangkok, January 18-19, 2020.
- SIDCER-FERCAP survey and evaluation of ethical review practices, Faculty of Nursing, Chiang Mai University Research Ethics Committee, August 26-29, 2020.

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