CURRICULUM VITAE

SIRINUN BORIPUNTAKUL, Ph.D., P.T.

PERSONAL INFORMATION

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

Telephone: 66-5394-9250

Fax: 66-5394-6042

E-mail: sirinun.b@cmu.ac.th, sirinun2524@gmail.com

EDUCATION

2008-2013	Ph.D. (Biomedical Sciences), Chiang Mai University, Thailand
2004-2006	M.S. (Movement and Exercise Sciences), Chiang Mai University, Thailand
2000-2003	B.S. (Physical Therapy), Chiang Mai University, Thailand

POSITIONS

2023-present	Deputy head of Physical Therapy (Academic Services), Faculty of Associated Medical Sciences, Chiang Mai University, Thailand
2021-present	Committee of graduate course (Physical Therapy), Faculty of Associated Medical Sciences, Chiang Mai University, Thailand
2019-present	Head of Geriatric Physical Therapy, Department of Physical Therapy Faculty of Associated Medical Sciences, Chiang Mai University, Thailand
2019-present	Assistant Professor, Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Thailand
2017-present	Committee of postgraduate course (Master of Physical Therapy), Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

2013-present	Instructor at the Department of Physical Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

HONORS AND AWARDS

2008-2012	Office of the Higher Education Commission
2003	First Class Honor Degree, Chiang Mai University, Thailand

FUNDING

2024-2025 Co-investigator, Skill development for frailty assessment and outcomes of a multicomponent exercise training program in village health volunteers, Doi Lo Subdistrict, Chiang Mai Province. Matching Fund, Associated Medical Sciences, Chiang Mai University (100,000 Baht)

2023-2024 Co-investigator, Prevalence and factors associated with frailty and sarcopenia in diabetic patients in Pahsak Subdistrict, Muang District, Lamphun. Challenge Fund, Associated Medical Sciences, Chiang Mai University (100,000 Baht)

2022-2023 Co-investigator, Impairment of scapular control and related factors in individuals with chronic obstructive pulmonary disease (COPD). Associated Medical Sciences, Chiang Mai University (66,300 Baht)

2022-2023 Co-investigator, The validity and reliability of trunk control measurement scale (TCMS) in children with cerebral palsy-Thai version. Associated Medical Sciences, Chiang Mai University (68,000 Baht)

2022-2023 Co-investigator, The influence of chronic neck pain on gait asymmetry and gait variability in older adults. Associated Medical Sciences, Chiang Mai University (70,000 Baht)

2021-2022 Co-investigator, Development of a home-based exergame system to promote physical and cognitive health of older adults using computer vision. Chiang Mai University (100,000 Baht)

2021-2022 Co-investigator, A randomized controlled trial investigating the effects of combined physical-cognitive exercise and dietary intervention on cognitive

performance and changes in blood biomarkers of postmenopausal obese women. Chiang Mai University (752,000 Baht)

2021-2022 Co-investigator, The development of activity programs to enhance the quality of life for the elderly in senior schools through interdisciplinary integration. Associated Medical Sciences, Chiang Mai University (100,000 Baht)

2021-2022 Co-investigator, The project for grassroots economic revitalization through the development and enhancement of community-unique products towards a high-value creative economy base. Activity: Promoting quality of life and safety in the community, Research Institute for Health Sciences, Chiang Mai University (120,000 Baht)

2021-2022 Co-investigator, Development of the smart system for tracking an instantaneous speed in an individual sprint athlete. Chiang Mai University (100,000 Baht)

2021-2022 Co-investigator, Validity of the video-based system for measuring gait speed in older adults using 10-meter walk test and timed up and go test. College of Arts, Media and Technology, Chiang Mai University (30,000 Baht)

2020-2021 Co-investigator, Effectiveness of multicomponent physical activity and cognitive training in frailed and sarcopenia in community-dwelling Karen aging in Galyani Vadhana District, Chiang Mai: Randomized clinical trial. Associated Medical Sciences, Chiang Mai University (100,000 Baht)

2020-2021 Co-investigator, Prevalence and factors associated with frailty in community-dwelling Karen aging in Galyani Vadhana District, Chiang Mai. Associated Medical Sciences, Chiang Mai University (80,000 Baht)

2020-2021 Co-investigator, The effects of combined physical-cognitive exercise with dietary intervention on cognitive function and underlying mechanism of overweight and obese postmenopausal women. Associated Medical Sciences, Chiang Mai University (80,000 Baht)

2020-2021 Co-investigator, The effect of trunk muscle coordinate exercise on the trunk muscle activation, postural stability and gross motor function in children with cerebral palsy. Associated Medical Sciences, Chiang Mai University (80,000 Baht)

2019-2020 Co-investigator, The validity and reliability of the gait speed detection program for gait speed assessment in healthy older adults. College of Arts, Media and Technology, Chiang Mai University (30,000 Baht)

2018-2019 PI, A smartphone-based assessment of free-living gait in young adults and older adults with and without a history of falls. Associated Medical Sciences, Chiang Mai University (60,000 Baht)

2018-2020 PI, Effect of transitional gait speed and cognitive load on gait characteristics in individuals with Mild Cognitive Impairment. Thailand Research Fund (TRF) (600,000 Baht)

2018-2019 Co-investigator, Effectiveness of falls prevention training program in Thai elderly. National Research Council of Thailand (NRCT) (495,935 Baht)

2017-2018 Co-investigator, Comparison of range of motion and electromyography in adult riders. Associated Medical Sciences, Chiang Mai University (59,600 Baht)

2017-2018 Co-investigator, The relationship of arm curl test and strength and endurance tests with hand-held dynamometer in older adults. Associated Medical Sciences, Chiang Mai University (27,500 Baht)

2016-2017 Co-investigator, Comparisons of balance and gait characteristics of elderly while walking on shock absorbing flooring and vinyl flooring. The Siam Cement Public Company Limited (SCG)-Innovation and Technology Project (55,000 Baht)

2016-2017 Co-investigator, Validity of a smartphone-based accelerometer for gait assessment in older adults. Associated Medical Sciences, Chiang Mai University (52,302 Baht)

2016-2017 Co-investigator, The reliability of balance assessment by using swaymeter in normal and Down syndrome children age between 7-12 years old. Associated Medical Sciences, Chiang Mai University (48,796 Baht)

2015-2016 PI, Short-term effect of cryotherapy on balance, proprioception, and postural sway in Thai elderly people. Associated Medical Sciences, Chiang Mai University (32,700 Baht)

2010-2011 Co-investigator, 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. BioMedical Engineering Center, Chiang Mai University (100,000 Baht)

RESEARCH INTERESTS

- Balance and Gait
- Fall in Older People
- Motor Impairment in Individuals with Cognitive Impairment

SERVICE TO THE FIELD

Manuscript Reviewer:

- PLOS One
- Brain and Behavior
- Disability and Rehabilitation
- BioMed Research International
- Archives of Allied Health Sciences
- Journal of Associated Medical Sciences
- Thai Journal of Physical Therapy

MEMBERSHIPS

The Physical Therapy Association Thailand

TRAINING

July 2012-January 2013 Neuroscience Research Australia, Sydney, Australia

PUBLICATIONS

International Publications:

1. **Boripuntakul S**, Kamnardsiri T, Pholjaroen P, Apichai K, Musikcharoen C, Toopmuangpak C. Gait Speed Assessment in the 10-meter walk test for older adults using a computer vision-based system: A cross-sectional study on validity, reliability, and usability. Open Public Health Journal. 2024;17:e18749445346573.
2. Kamnardsiri T, Kumfu S, Munkhetvit P, **Boripuntakul S**, Sungkarat S. Home-based, low-intensity, gamification-based, interactive physical-cognitive training for older adults using the ADDIE model: design, development, and evaluation of user experience. JMIR Serious Games 2024;12:e59141.
3. Keawtep P, Sungkarat S, **Boripuntakul S**, Sa-nguanmoo P, Wichayanrat W, Chattipakorn SC, Worakul P. Effects of combined dietary intervention and physical-cognitive exercise on cognitive function and cardiometabolic health of postmenopausal women with obesity: A randomized controlled trial. International Journal of Behavioral Nutrition and Physical Activity. 2024;21:28.
4. Poosri T, **Boripuntakul S**, Sungkarat S, Kamnardsiri T, Soontornpun A, Pinyopornpanish K. Gait smoothness during high-demand motor walking tasks in older adults with mild cognitive impairment. PLoS ONE. 2024;19(1):e0296710.
5. Kamnardsiri T, **Boripuntakul S**, Kaiket C. Computer vision-based instantaneous speed tracking system for measuring the subtask speed in the 100-meter sprinter: Development and concurrent validity study. Heliyon. 2024;10:e24086.
6. Keawtep P, Kamnardsiri T, **Boripuntakul S**, Wichayanrat W, Worakul P, Sungkarat S. Feasibility of internet-based physical-cognitive exercise for health benefits of middle-aged obese women. Journal of Primary Care & Community Health. 2023;14: 21501319231189961.
7. 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.

8. Keawtep P, Wichayanrat W, **Boripuntakul S**, Chattipakorn SC, Worakul P, Sungkarat S. Physical-cognitive training with dietary intervention to improve cognitive function and circulating biomarkers in postmenopausal women with obesity: Study protocol for a randomized controlled trial. Advances in Integrative Medicine. 2023;10(1):22-8.
9. **Boripuntakul S**, Kamnardsiri T, Lord SR, Maiarin S, Worakul P, Sungkarat S. Gait variability during abrupt slow and fast speed transitions in older adults with mild cognitive impairment. PLoS One. 2022;17(10):e0276658.
10. Keawtep P, Wichayanrat W, **Boripuntakul S**, Chattipakorn SC, Sungkarat S. Cognitive benefits of physical exercise, physical-cognitive training, and technology-based intervention in obese individuals with and without postmenopausal condition: A narrative review. International Journal of Environmental Research and Public Health. 2022;19(20):13364.
11. Wichayanrat W, **Boripuntakul S**, Keawtep P, Worakul P, Sungkarat S. Obesity and brain health: The impact of metabolic syndrome and cardiorespiratory fitness on cognitive performances in middle-aged obese women. The Journal of Prevention of Alzheimer's Disease. 2022;9(4):701-7.
12. 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. Developmental Neurorehabilitation. 2022;25(7):462-8.
13. Kamnardsiri T, Phirom K, **Boripuntakul S**, Sungkarat S. An interactive physical-cognitive game-based training system using Kinect for older adults: Development and usability study. JMIR Serious Games. 2021;9(4):e27848.
14. Lugade V, Kuntapun J, Prupetkaew P, **Boripuntakul S**, Verner E, Silsupadol P. Three-day remote monitoring of gait among young and older adults using participants' personal smartphones. Journal of Aging and Physical Activity. 2021;29(6):1026-33.

15. Kamnardsiri T, Khuwuthyakorn P, **Boripuntakul S**, Janchai W. A Knowledge-based smart trainer system for transferring knowledge from coaches to long jump students. Frontiers in Education. 2021;6:1-10.
16. Sittichoke C, Buasord J, **Boripuntakul S**, Sungkarat S. Effects of compliant flooring on dynamic balance and gait characteristics of community-dwelling older persons. The Journal of Nutrition Health & Aging. 2019;23:665-8.
17. Taylor ME, **Boripuntakul S**, Toson B, Close JCT, Lord SR, Kochan NA, Sachdev PS, Brodaty H, Delbaere K. The role of cognitive function and physical activity in physical decline in older adults across the cognitive spectrum. Aging & Mental Health. 2019;23:863-71.
18. Parameyong A, **Boripuntakul S**, Kamnardsiri T, Chawawisuttikool J. The validity and reliability of the Swaymeter for postural sway measurement in typically developing children aged between 7-12 years. Gait & Posture. 2018;66:273-7.
19. 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. Neurorehabilitation and Neural Repair. 2018;32:142-9.
20. Sungkarat S, **Boripuntakul S**, Chattipakorn N, Watcharasaksilp K, Lord S. Effects of Tai Chi on cognition and fall risk in older adults with mild cognitive impairment: A randomized controlled trial. Journal of the American Geriatrics Society. 2017;65:721-7.
21. **Boripuntakul S** & Sungkarat S. Specific but not global cognitive functions are associated with gait initiation in older adults. Journal of Aging and Physical Activity. 2017;25:128-33.
22. **Boripuntakul S**, Lord SR, Methapatara P, Sungkarat S. Unplanned stopping strategy in individuals with mild cognitive impairment. Walailak Journal of Science and Technology. 2017;14:35-42.

National Publications:

1. Maiarin S, Sungkarat S, Kamnardsiri T, **Boripuntakul S**. Increased spatiotemporal variability during unplanned gait speed transition in older adults with mild cognitive impairment. Journal of Associated Medical Sciences. 2021;54:17-25.
2. Puipanichsiri P, Sungkarat S, **Boripuntakul S**, Jinajin S, Tanakietpinyo S, Nantachai G, Ruangrukrien B. Comparison of the effectiveness of fall prevention training programs in healthy elderly. Journal of Gerontology and Geriatric Medicine. 2020;19:47-63.
3. Sittichoke C, **Boripuntakul S**, Worakul P, Sungkarat S. Effects of cognitive training on fall risk and cognitive performance in individuals with mild cognitive impairment. Journal of Associated Medical Sciences. 2020;53:92-9.
4. Ueawattanasirikul C, **Boripuntakul S**, Wonglangka K, Pinkaew D. Correlation between thoracic kyphosis and pulmonary function in elderly. Journal of Associated Medical Sciences. 2020;53:23-30.
5. Khamwong P, Sitilertpisan P, **Boripuntakul S**, Pinkaew D, Tuanwaena P, Tadchana P, Pantueng S. The relationship of arm curl test and strength and endurance tests of elbow flexors with hand-held dynamometer in older adults. Journal of Medical Technology and Physical Therapy. 2019;31:412-8.
6. **Boripuntakul S**, Sungkarat S, Parameyong A, Ponljaroen P. Immediate effects of cold on balance and proprioception in Thai healthy older adults. Journal of Associated Medical Sciences. 2017;50:217-26.
7. Parameyong A, **Boripuntakul S**, Chawawisuttikool J. Test-retest reliability of balance assessment using swaymeter in children with Down syndrome aged 7-12 years. Journal of Associated Medical Sciences. 2017;50:253-61.
8. Saenphan W, Sungkarat S. **Boripuntakul S,** Watcharasaksilp K. Effects of home-based Tai Chi training on balance in older adults with mild cognitive impairment. Bulletin of Chiang Mai Associated Medical Sciences. 2016;49:123-33.

9. **Boripuntakul S**, Sungkarat S. Effects of up-and downslope walking on mean and variability of gait parameters in elderly women. Thai Journal of Physical Therapy. 2010; 32:55-61.

Ph.D. Degree Publications:

1. **Boripuntakul S,** Lord SR, Brodie MAD, Smith ST, Methapatara P, Wongpakaran N, Sungkarat S. Spatial variability during gait initiation while dual tasking is increased in individuals with mild cognitive impairment. The Journal of Nutrition, Health & Aging. 2014;18:307-12.
2. **Boripuntakul S**, Kothan S, Methapatara P, Munkhetvit P, Sungkarat S. Short-term effects of cognitive training program for individuals with amnestic mild cognitive impairment: A pilot study. Physical & Occupational Therapy in Geriatrics. 2012;30: 138-49.

Conference Proceedings and Oral Presentations

1. **Boripuntakul S**, Kamnardsiri T. Concurrent validity of a video-based system for assessment of gait speed adaptation in healthy older adults. The scientific subcommittee of world physiotherapy-AWP regional congress 2022 (Virtual international conference), 18-20 June 2022.
2. Kamnardsiri T, Khuwuthyakorn P, **Boripuntakul S.** The development of a gait speed detection system for older adults using video-based processing. 4th international conference on biomedical imaging, signal processing (ICBSP 2019), 17-19 October 2019, Nagoya, Japan.
3. **Boripuntakul S**, Panjaroen K, Kormkaew K, Yawisit P, Kamnardsiri T. Validity of a speed detection system for measuring gait speed in community-dwelling older adults. 3rd international conference on computational biology and bioinformatics (ICCBB), 17-19 October 2019, Nagoya, Japan.
4. Kamnardsiri T, Kormkaew K, **Boripuntakul S.** The reliability of the video-based speed detection system for gait speed measurement in healthy older adults, on the 1st

national conference on Thai society of biomechanics in sports (TSBS2019), 2 August 2019, Krabi, Thailand.

5. **Boripuntakul S,** Kamnardsiri T, Saksrisataporn K. Framework of an interactive game-based balance training system for improving standing balance using the Kinect sensor. 11th European conference games based learning (ECGBL) 2017, FH Joanneum University of Applied Science, Graz, Austria.
6. **Boripuntakul S,** Lord SR, Delbaere K. Mild Cognitive Impairment is a predictor of physical decline in older people. Graduate research conference 2013, Khon Kaen University, Thailand.

PATENT AND COPYRIGHT

- **Patent Number 23324** (13 March 2024):
  Signal Integration Seat Cushion Set
- **Copyright Number 419402** (19 July 2022):
  Smart system program for monitoring an instantaneous speed in sprinter.
- **Patent Number 16706** (31 August 2020):
  External Audiovisual Synchronization Box.

****