# CV



Name	Ray-Yau Wang
Organization	Department of Physical Therapy and Assistive Technology
Position	Professor
Telephone	(02)2826-7210
Fax	(02)2820-1841
Email	rywang@ym.edu.tw
Major Research Area	Neurological Physical Therapy
	Neurophysiology of Motor Control
	Aging

### Education

Ph.D., Physiology, National Yang-Ming University

Master, Physical Therapy, Emory University (USA)

Bachelor, Physical Therapy, National Taiwan University

## Experience

2015/08-Present	Distinguished Professor, National Yang-Ming University
2000/08-Present	Professor, Department of Physical Therapy and Assistive Technology, National Yang-Ming
	University
2004/08-2016/07	Jointly Appointed Professor, Institute of Physiology, National Yang-Ming University
2006/02-2010/07	Adjunct Research Fellow, Taipei City Hospital
2005/03-2008/03	Chairperson, Taiwan Physical Therapy Association
1997/08-2000/07	Chairperson, Taipei Society of Physical Therapists
1985/08-1988/01	Senior Physical therapist, Emory University Hospital, USA

### Courses

Aging

Applied Neurophysiology

Neuroscience

Neurophysiology of Motor Control

Physical Therapy of Stroke

### **Honors & Awards**

2018 Academic Year Teaching Excellence Award, National Yang-Ming University

2017 Academic Year Mentor Award, National Yang-Ming University

2015 Academic Year Excellent Mentor Award, National Yang-Ming University

#### **Publications**

## A. Journal Articles (2015-Present) \* as the corresponding author

- 1. Ku PH, Chen SF, Yang YR, Lai TC, <u>Wang RY</u>\*. The effects of Ai Chi for balance in individuals with chronic stroke: a randomized controlled trial. Sci Rep, 10: 1201, 2020. (SCI)
- 2. Cheng FY, Jovita M, Mok HY, Lee YS, Tee HX, <u>Wang RY</u>, Yang YR. Effects of fibular tape and traditional tape on functional performance in individuals with functional ankle instability: a randomized controlled trial. Formos J Phys Ther, 44: 221-230, 2019.
- 3. Yang YR, Cheng SJ, Lee YJ, Liu YC, <u>Wang RY</u>\*. Cognitive and motor dual task gait training exerted specific training effects on dual task gait performance in individuals with Parkinson's disease: A randomized controlled pilot study. PLoS One, 14: e0218180, 2019. (SCI)
- 4. Liao YY, Chen IH, <u>Wang RY</u>\*. Effects of Kinect-based exergaming on frailty status and physical performance in the prefrail and frail elderly: a randomized controlled trial. Sci Rep, 9: 9353, 2019. (SCI)
- 5. Chen IH, Yang YR, Lu CF, <u>Wang RY</u>\*. Novel gait training alters functional brain connectivity during walking in chronic stroke patients: a randomized controlled pilot trial. J Neuroeng Rehabil, 16: 33, 2019. (SCI)
- 6. Wang RY, Wang FY, Huang SF, Yang YR. High-frequency repetitive transcranial magnetic stimulation enhanced treadmill training effects on gait performance in individuals with chronic stroke: a double-blinded randomized controlled pilot trial. Gait Posture, 68: 382-387, 2019. (SCI)
- 7. Chen JL, Wang RY, Lee CS, Chen YJ, Yang YR. Immediate effect of hip taping on balance and walking ability in cane-dependent ambulators with chronic stroke: a randomized controlled trial. Eur J Phys Rehabil Med, 55: 156-161, 2019. (SCI)
- 8. Liu HH, Yeh NC, Wu YF, Yang YR, <u>Wang RY</u>, Cheng FY. Effects of Tai Chi exercise on reducing falls and improving balance performance in Parkinson's disease: A meta-analysis. Parkinsons Dis, 2019: 9626934, 2019. (SCI)
- 9. Lee MY, Wang RY, Hsu SS, Chen SS, Yang YR. Effects of reversed cycling training on stiff knee gait after stroke: two case reports. Formos J Phys Ther, 44: 69-76, 2019.
- 10. Lin YC, Sow LC, Wang WY, Wang RY, Yang YR. Effects of exergame on balance in individuals with Parkinson's disease: a meta-analysis and systematic review. Formos J Phys Ther, 44: 86-87, 2019.
- 11. Yang YR, Mi PL, Huang SF, Chiu SL, Liu YC, <u>Wang RY</u>\*. Effects of neuromuscular electrical stimulation on gait performance in chronic stroke with inadequate ankle control a randomized controlled trial. PLoS One, 13: e0208609, 2018. (SCI)
- 12. Liu YC, Yang YR, Tsai YA, Wang RY\*, Lu CF. Brain activation and gait alteration during cognitive and motor dual task walking in stroke a functional near-infrared spectroscopy study. IEEE Trans Neural Syst Rehabil Eng, 26: 2416-2423, 2018. (SCI)
- 13. Cheng FY, Yang YR, Wu YR, Cheng SJ, <u>Wang RY</u>\*. Beta event-related desynchronization can be enhanced by different training programs and is correlated with improved postural control in individuals with Parkinson's disease. IEEE Trans Neural Syst Rehabil Eng, 26: 1957-1964, 2018. (SCI)
- 14. Wang RY, Zhou JH, Huang YC, Yang YR\*. Reliability of the Chinese version of the trail making test and stroop color and word test among older adults. Int J Gerontol, 12: 336-339, 2018. (SCI)
- 15. Wang RY, Huang FY, Soong BW, Huang SF Yang YR. A randomized controlled pilot trial of game-based training in individuals with spinocerebellar ataxia type 3. Sci Rep, 8: 7816, 2018. (SCI)
- 16. Wang RY, Wang YL, Cheng FY, Chao YH, Chen CL, Yang YR. Effects of a multicomponent exercise on dual-task performance and executive function among older adults. Int J Gerontol, 12: 133-138, 2018. (SCI)

- 17. Cheng FY, Yang YR, Wu YR, Cheng SJ, <u>Wang RY</u>\*. Effects of curved-walking training on curved-walking performance and freezing of gait in individuals with Parkinson's disease: A randomized controlled trial. Parkinsonism Relat Disord, 43: 20-26, 2017. (SCI)
- 18. Liu YC, Yang YR, Tsai YA, <u>Wang RY</u>\*. Cognitive and motor dual task gait training improve dual task gait performance after stroke a randomized controlled pilot trial. Sci Rep, 7: 4070, 2017. (SCI)
- 19. Zhou JH, Hsu KN, Chen JL, <u>Wang RY</u>, Yang YR. Effects of Hydrotherapy in Patients with multiple sclerosis: systematic review & meta-analysis. Formos J Phys Ther, 42: 95-105, 2017.
- 20. Yang YR, Luo HJ. HJ, Huang WC, Wu HY, <u>Wang RY</u>\*. Effects of different exercise modes on physical function and activity in older adults. Formos J Phys Ther, 42: 257-267, 2017.
- 21. Cheng FY, Yang YR, Chen LM, Wu YR, Cheng SJ, <u>Wang RY</u>\*. Positive effects of specific exercise and novel turning-based treadmill training on turning performance in individuals with Parkinson's disease: a randomized controlled trial. Sci Rep, 6: 33242, 2016. (SCI)
- 22. Shih MC, <u>Wang RY</u>, Cheng SJ, Yang YR. Effects of a balance-based exergaming intervention using the Kinect sensor on posture stability in individuals with Parkinson's disease: a single-blinded randomized controlled trial. J Neuroeng Rehabil, 13: 78, 2016. (SCI)
- 23. Chiou SY, <u>Wang RY</u>, Liao KK, Yang YR. Facilitation of the lesioned motor cortex during tonic contraction of the unaffected limbs corresponds to motor status following stroke. J Neurol Phys Ther, 40: 15-21, 2016. (SCI)
- 24. Liao CF, Liaw LJ, <u>Wang RY</u>, Su FC, Hsu AT. Relationship between trunk stability during voluntary limb and trunk movements and clinical measurements of patients with chronic stroke. J Phys Ther Sci, 27: 2201-2206, 2015.
- 25. Liao CF, Liaw LJ, Wang RY, Su FC, Hsu AT. Electromyography of symmetrical trunk movements and trunk position sense in chronic stroke patients. J Phys Ther Sci, 27: 2675-2681, 2015.
- 26. Wang RY, Wang YL, Cheng FY, Chao YH, Chen CL, Yang YR. Effects of combined exercise on gait variability in community-dwelling older adults. Age, 37: 9780, 2015. (SCI)
- 27. Laio YY, Yang YR, Wu YR, <u>Wang RY</u>\*. Virtual reality based Wii Fit training in improving muscle strength, sensory integration ability and walking abilities in patients with Parkinson's disease: a randomized control trial. Int J Gerontol, 9: 190-195, 2015. (SCI)
- Yang YR, Chen YH, Chang HC, Chan RY, Wei SH, Wang RY\*. Effects of interactive visual feedback training on post-stroke pusher syndrome: a pilot randomized controlled study. Clin Rehabil, 29: 987-993, 2015. (SCI)
- 29. Chang HC, Huang YJ, <u>Wang RY</u>, Yang YR. Effects of enriched environment on motor learning improvement in 6-hydroxydopamine-induced parkinson's rats. Adaptive Medicine, 7: 129-235, 2015.
- 30. Liu YC, Mi PL, Shih MC, Lo SS, <u>Wang RY</u>, Yang YR. Therapeutic effects of electrical stimulation on ankle spasticity in individuals with stroke: a meta-analysis. Formos J Phys Ther, 40: 179-187, 2015.
- 31. Laio YY, Yang YR, Cheng SJ, Wu YR, Fuh JL, <u>Wang RY</u>\*. Virtual reality-based training to improve obstacle crossing performance and dynamic balance in patients with Parkinson's disease. Neurorehabil and Neural Repair, 29: 658-667, 2015. (SCI)
- 32. Lu CF, Liu YC, Yang YR, Wu YT, Wang RY\*. Maintaining gait performance by cortical activation during dual-task interference: a functional near-infrared spectroscopy study. PLoS One, 10: e0129390, 2015. (SCI)
- 33. Wang RY, Wang YL, Cheng FY, Chao YH, Chen CL, Yang YR. Effects of combined exercise on gait variability in community-dwelling older adults. Age, 37: 9780, 2015. (SCI)

### B. Books (2010-Present)

- 王瑞瑤:神經疾病物理治療學之總校閱:第一章:神經物理治療簡介,第八章:巴金森氏症,第十二章:腦腫瘤。華格那企業,2016。
- 2. 王瑞瑶:中風病人的物理治療之校閱:早期復健介入(Physical Therapy for the Stroke Patient: Early Stage Rehabilitation)。合計圖書出版社,2015。
- 3. 王瑞瑶:基礎物理治療學:第十二章:本體感覺神經肌肉誘發技巧。禾楓書局有限公司,2013。
- 4. 王瑞瑶:神經物理治療學下冊:第十四章:虛擬實境與科技輔助應用。禾楓書局有限公司,2011。
- 5. 王瑞瑶:神經物理治療學上冊:第三章:神經再塑性。禾楓書局有限公司,2010。