

**Chao-Ying Chen, PhD, MS, PT**  
**陳昭榮**

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分機: 5487

**CURRENT POSITION 現職**

**Assistant Professor 助理教授** Taiwan, Feb 2021  
– Present  
Chang Gung University (長庚大學), Taoyuan City, Taiwan  
*School of Physical Therapy and Graduate Institute of Rehabilitation Science*

**EDUCATION 主要學歷**

**Postdoctoral Associate 博士後研究員 in Rehabilitation Medicine** Aril 2015 –  
June 2017  
University of Minnesota (明尼蘇達大學), Minneapolis, Minnesota, USA

**Doctor of Philosophy (Ph.D.) 博士 in Health and Rehabilitation Sciences** Sep 2009 –  
Dec 2014  
The Ohio State University (俄亥俄州立大學), Columbus, Ohio, USA

**Master of Science (M.S.) 碩士 in Physical Therapy and Assistive Technology** Sep 2006 –  
June 2008  
National Yang-Ming University (國立陽明大學), Taipei City, Taiwan

**Bachelor of Science (B.S.) 學士 in Physical Therapy** Sep 2002 –  
June 2008  
National Yang-Ming University (國立陽明大學), Taipei City, Taiwan

**JOB HISTORY 相關資歷**

**Assistant Professor 助理教授**  
The Hong Kong Polytechnic University, Hong Kong (香港理工大學) Dec 2017 –  
Jan 2021  
*Department of Rehabilitation Sciences*

**Postdoctoral Associate 博士後研究員**  
University of Minnesota, Minneapolis, Minnesota, USA Apr 2015 –  
June 2017  
*Gillick Pediatric Research Laboratory*

- Perinatal Stroke: Understanding Brain Reorganization through Infant Neuroimaging and Measures of Neuro-excitability
- Transcranial Direct Current Stimulation and Constraint-Induced Movement Therapy in Pediatric Hemiparesis
- Hand Strength Measurements Using the Rotterdam Intrinsic Hand Myometer in Adolescents and Young Adults

- Development of MRI-compatible infant hand movement device

### **Research Associate 研究人員**

Nationwide Children's Hospital, Columbus, Ohio, USA Sept 2012 – Aug 2014  
*Cardiovascular and Pulmonary Research (Harrison Lab)*

- A Pilot Study of a Skin-to-Skin Care Intervention in Infants with Congenital Heart Defects
- Neurodevelopment in the First Six Months of Life in Infants with Heart Defects

### **Research Associate 研究人員**

Nationwide Children's Hospital, Columbus, Ohio, USA Jun 2012 – Aug 2014  
*Neurology and Orthopedic Center*

- Transcranial Magnetic Stimulation in Children with Hemiparesis

### **Research Associate 研究人員**

The Ohio State University, Columbus, Ohio, USA Sept 2009 – Aug 2014  
*The Infant Biomechanics Laboratory*

- Training in Infants with Neonatal Strokes
- A Pilot Study of a Skin-to-Skin Care Intervention in Infants with Congenital Heart Defects
- Transcranial Magnetic Stimulation in Children with Hemiparesis

### **Research Associate 研究人員**

National Yang-Ming University, Taipei City, Taiwan Sept 2007 – Jun 2008  
*The Orthopedic Biomechanics Laboratory*

- Effects of special-designed insole intervention in patients with medial compartment osteoarthritis

### **Research Assistant 研究助理**

National Yang-Ming University, Taipei City, Taiwan Sept 2008 – Jun 2009  
*The Orthopedic Biomechanics Laboratory*

- LIBERTY motion analysis system and FOOTSCAN system testing

## **TEACHING EXPERIENCE 教學經歷**

### **Undergraduate (BSc) 大學 / Postgraduate (MS, MPT, DPT) 學士後**

- School of Physical Therapy and Graduate Institute of Rehabilitation Science, Chang Gung University, Taiwan
  - PT2026 - The Development of Children 兒童發展學 (BSc)
  - PT3044 - Advanced Pediatric Physical Therapy 進階小兒物理治療 (BSc)
- Department of Physical Therapy, The Hong Kong Polytechnic University, Hong Kong
  - HSS101 - Freshman Seminar for Board Discipline in Health Science (BSc)
  - RS2690 - Principles of Physiotherapy Practice (BSc)
  - RS3771 - Cardiopulmonary Physiotherapy II (BSc)
  - RS5310 - Principles of Physiotherapy practice (MPT)
  - RS5316 - Cardiopulmonary Physiotherapy (MPT)
  - RS5317 - Pediatric Neurology and Developmental Disabilities (MPT)
  - RS5318 - Neurological Physiotherapy I (MPT)
  - RS5304 - Human Development across Lifespan (MPT)
  - RS593 - Sensory and Motor Intervention for People with Developmental Disabilities (MSc)

- Department of Physical Therapy, School of Health and Rehabilitation Sciences, The Ohio State University, USA
  - PHYSTHER 763.01 - Clinical Application in Pediatric Lecture: Problem Based Learning and Didactic (DPT)
  - PHYSTHER 763.02 - Clinical Application in Pediatric Laboratory (DPT)
  - PHYSTHER 785.01 - Introduction to Research: Orthopedic Journal Club (DPT)
- Department of Physical Therapy, National Yang-Ming University, Taipei City, Taiwan
  - Orthopedic Physical Therapy - Orthopedic Laboratory (BSc)

### **Mentoring and Advising Activities 指導經驗**

- The Hong Kong Polytechnic University, Hong Kong
  - RS4050 - Capstone Project (BSc)
  - RS5324 - Capstone Project (MPT)
- University of Minnesota, Minneapolis, Minnesota, USA
  - Tonya Rich (*PhD student, 2014-2016*)
  - Maíra Lixandrão (*Visiting PhD scholar, 2015-2016*)
  - DPT students (*Research project: Hand intrinsic muscle strength measurements, 2015*)
- The Ohio State University, Columbus, Ohio, USA
  - High school / undergraduate students (*High School and Undergraduate Research Program, 2009-2013*)
  - DPT students (*Basic Research, 2010-2014*)
  - Sara Tafone (*DPT student: Basic and Pediatric Research, 2010-2014*)
  - Karah Bush (*DPT/PhD student, 2011-2014*)

### **Other Teaching Activities 其他教學活動**

- Department of Rehabilitation Sciences, The Hong Kong Polytechnic University.
  - Massive Open Online Courses (MOOC) project: The inter-disciplinary management of cardiopulmonary health and disease

### **Guest Lecturer 客座講師**

- Department of Physical Therapy, The Hong Kong Polytechnic University, Hong Kong
  - Sensory and Motor Intervention for People with Developmental Disabilities (MSc): Motor development, motor control, and motor learning  
(*24 students/faculty; Jan 27, 2021*)
- Department of Physical Therapy, The Hong Kong Polytechnic University, Hong Kong
  - Sensory and Motor Intervention for People with Developmental Disabilities (MSc): Influences of movement and mobility in early development  
(*24 students/faculty; Feb 3, 2021*)
- Brain Plasticity Laboratory, University of Minnesota, Minneapolis, Minnesota, USA
  - Brain Plasticity Laboratory Blitz (Co-teaching: Dr. Bernadette Gillick, Dr. Samuel Nemanich, Tonya Rich): Novel Neuromodulatory Interventions in the Rehabilitation in Hemiparesis  
(*15 students/faculty; Mar 24, 2016*)

- Institute of Child Development, College of Education and Human Development, University of Minnesota, Minnesota, USA
  - Institute of child development colloquium (Co-teaching: Dr. Bernadette Gillick): Improving motor outcomes in hemiparetic cerebral palsy through neuromodulation and early identification. (30 students; Sept 29, 2016)
- Department of Rehabilitation Medicine, School of Medicine, University of Minnesota, Minnesota, USA
  - Pediatric Physical Therapy - Lecture: Atypical Development. (50 students; Jun 15, 2016)
- Department of Rehabilitation Medicine, School of Medicine, University of Minnesota, Minnesota, USA
  - Rehabilitation Sciences Seminar: Early Outcomes in Infants at Risk for Long-Term Development Impairments: Neuroplasticity, Assessment, and Intervention. (15 students/faculty; Apr; 26, 2016)

### **HONORS, AWARDS, AND FELLOWSHIPS 學術榮譽**

- FHSS (Faculty of Health and Social Sciences) Summer Research Studentship 2019/20. (Role: Mentor)
- Bronze Award of poster presentation at the 11<sup>th</sup> PPCR (Pan Pacific Conference on Rehabilitation), Hong Kong, Nov. 17-18, 2018
- 3<sup>rd</sup> place of poster award at the 18<sup>th</sup> International Conference and Workshops of Early Intervention for Children with Developmental Delays (第十八屆兒童早期療育國際論文發表大會暨工作坊), Taichung, Taiwan, Nov 3-5, 2017
- 3<sup>rd</sup> place of poster award at the MnDRIVE (Minnesota's Discovery, Research and Innovation Economy) Brain Condition Retreat, May 22, 2017
- MnDRIVE Postdoctoral Fellowship in Neuromodulation, Minneapolis, Minnesota, Jun 2016 - Jun 2017.
- Travel Award of the 8<sup>th</sup> Progress in Motor Control Meeting, Cincinnati, Ohio, USA, Jul 21-23, 2011.
- 2<sup>nd</sup> place award from Physical Therapy Association of Taiwan's student thesis competition Taichung city, Taiwan, 2008.

### **GRANTS 研究計畫**

University Grants Committee-Early Career Scheme (Project #: 25215519) Jan 2020 - Jan 2023

- Title: Clinically-based versus machine-learning enhanced video analysis of fidgety movements in infants with and without autism spectrum disorder
  - Role: Principal Investigator
  - Fund awarded: HK\$343,034
- (Early termination at Jan 2021)

**Departmental General Research Grant, Department of Rehabilitation Sciences, The Hong Kong Polytechnic University** May  
2018 - May 2021

- Title: Neural activity changes after learning with the mobile paradigm task
- Role: Principal Investigator

- Fund awarded: HK\$500,000  
(Early termination at Jan 2021)

**Cerebral Palsy Alliance AACPDM ‘Steptember’ Grant**  
- Jun 2017

Jul 2016

- Title: Perinatal Stroke: Understanding Brain Reorganization through Infant Neuroexcitability and Neuroimaging
- PI: Bernadette Gillick
- Role: Post-doc Associate, Grant Co-Author

**Academic Health Center (AHC) seed grant**  
2017

Apr 2016 - Mar

- Title: Perinatal Stroke: Understanding Brain Reorganization through Infant Neuroimaging and Measures of Neuro-excitability
- PI: Bernadette Gillick
- Role: Post-doc Associate, Grant Co-Author

**NIH/NICHD K01 HD078484-01A1**  
2014 - Aug 2019

Sept

- *Title: Novel Neuromodulatory Intervention in the Rehabilitation of Pediatric Hemiparesis*
- PI: Bernadette Gillick
- Role: Post-doctoral Associate

**Foundation for Physical Therapy: Magistro Family Award**  
Dec 2016

Jan 2014 -

- Title: Novel Neuromodulatory Intervention in the Rehabilitation of Pediatric Hemiparesis
- PI: Bernadette Gillick
- Role: Post-doctoral Associate

**Cerebral Palsy International Research Foundation**  
2016

Jan 2014 - Jan

- Title: Transcranial Direct Current Stimulation and Constraint-Induced Movement Therapy in Pediatric Hemiparesis
- PI: Bernadette Gillick
- Role: Post-doctoral Associate

**Foundation for Physical Therapy**  
2012 – 2013

- Title: Transcranial Magnetic Stimulation in Children with Hemiparesis
- PI: Jill Heathcock
- Role: Research Associate

**Foundation for Physical Therapy**  
2009 – 2011

- Title: Training in Infants with Neonatal Stroke
- PI: Jill Heathcock
- Role: Research Associate

**Peer-Reviewed Articles**

1. **Chen CY**, Chen IH, Pakpour AH, Lin CY, Griffiths MD. *Internet-Related Behaviors and Psychological Distress Among Schoolchildren During the COVID-19 School Hiatus*. *Cyberpsychology, Behavior, and Social Networking* 2021 Apr 20. doi: 10.1089/cyber.2020.0497. (Online ahead of print)
2. **Chen CY**, Chen IH, Hou WL, Potenza MN, O'Brien KS, Lin CY, Latner JD. *The Relationship Between Children's Problematic Internet-related Behaviors and Psychological Distress During the Onset of the COVID-19 Pandemic: A Longitudinal Study*. *Journal of Addiction Medicine*. 2021 Mar 24. doi: 10.1097/ADM.0000000000000845. (Online ahead of print)
3. Chen IH, **Chen CY**, Pakpour AH, Griffiths MD, Lin CY, Li XD, Tsang HWH. *Problematic internet-related behaviors mediate the associations between levels of internet engagement and distress among schoolchildren during COVID-19 lockdown: A longitudinal structural equation modeling study*. *Journal of Behavioral Addictions*. 2021 Feb 10. doi: 10.1556/2006.2021.00006. (Online ahead of print)
4. **Chen CY**, Chen IH, O'Brien KS, Latner JD, Lin CY. *Psychological distress and internet-related behaviors between schoolchildren with and without overweight during the COVID-19 outbreak*. *International Journal of Obesity*. 2021 Jan 25:1-10. doi: 10.1038/s41366-021-00741-5. (Online ahead of print)
5. **Chen CY**, Harrison T, McNally M, Heathcock JC. *Preliminary evidence of an association between spontaneous kicking and learning in infants between 3-4 months of age*. *Brazilian Journal of Physical Therapy*. 2020 Sep 26;S1413-3555(19)30751-8. doi: 10.1016/j.bjpt.2020.09.002. Online ahead of print.
6. Chen I-H, Ahorsu DK, Pakpour AH, Griffiths MD, Lin CY\*, **Chen CY**. *Psychometric Properties of Three Simplified Chinese Online-Related Addictive Behavior Instruments Among Mainland Chinese Primary School Students*. *Frontiers in Psychiatry*. Epub 2020 Sep 3.
7. Cheung BMF, Zhang JH, Chan ZYS, Ha SCW, **Chen CY**, Cheung RTH\*. *Reshaping Muscle Synergies through Fractionation and Merging during Development and Training of Human Runners*. *Nature Communications*. 2020 Aug 31;11(1):4356. doi: 10.1038/s41467-020-18210-4.
8. Chen I-H, **Chen CY**, Pakpour AH, Griffiths MD, Lin CY. *Internet-Related Behaviors and Psychological Distress Among Schoolchildren During COVID-19 School Suspension*. *Journal of the American Academy of Child and Adolescent Psychiatry*. Letter. Epub 2020 Jun 26.
9. Wei RXY, Chan ZYS, Zhang JH, Shum GL, **Chen CY\***, Cheung RTH. *Difference in the running biomechanics between preschoolers and adults*. *Brazilian Journal of Physical Therapy*. Epub 2020 May 26.
10. Lee SC, Wu LC, Chiang SL, Lu LH, **Chen CY**, Lin CH, Ni CH, Lin CH\*. *Validating the capability for measuring age-related changes in grip-force strength using a digital hand-held dynamometer in healthy young and elderly adults*. *BioMed Research International*. Eub 2020 Apr 21
11. Rich TL, Nemanich S, **Chen CY**, Sutter EN, Feyma T, Krach LE, Gillick BT\*. *Ipsilateral Corticospinal Tract Excitability Contributes to the Severity of Mirror Movements in Unilateral Cerebral Palsy: A Case Series*. *Clinical EEG and neuroscience*. 2020 May;51(3):185-190. doi: 10.1177/1550059419899323. Epub 2020 Jan 8.
12. Chien CW\*, Cheung P, **Chen CY**. *The Relationship between Sleep Duration and Participation in*

*Home, School, and Community Activities Among School-Aged Children*. *Frontiers in Neuroscience*. 2019 Aug 14;13:860. doi: 10.3389/fnins.2019.00860. eCollection 2019.

13. Nemanich S\*, **Chen CY**, Chen M, Zorn E, Mueller B, Peyton C, Elison J, Stinear J, Rao R, Georgieff M, Men J, Rudser K, Gillick B\*. *Safety and feasibility of transcranial magnetic stimulation as an exploratory assessment of corticospinal connectivity in infants after perinatal brain injury: an observational study*. *Physical Therapy*. 2019 Jun 1;99(6):689-700. doi: 10.1093/ptj/pzz028.
14. Nemanich ST\*, Rich TL, **Chen CY**, Menk J, Rudser K, Chen M, Meekins G, Gillick BT. *Influence of Combined Transcranial Direct Current Stimulation and Motor Training on Corticospinal Excitability in Children With Unilateral Cerebral Palsy*. *Frontiers in Human Neuroscience*. 2019 Apr 24;13:137. doi: 10.3389/fnhum.2019.00137. eCollection 2019.
15. Keller-Ross M\*, Chantigian D, Rich T, Chen M, **Chen CY**, Gillick BT. *Stability of the cardiovascular response during single-pulse TMS in perinatal stroke*. *Brain Stimulation*. 2019 Mar - Apr;12(2):371-373.
16. Harrison T\*, **Chen CY**, Phyllis S, Brown R, Heathcock JC. *Neonatal skin-to-skin contact: Implications for learning and autonomic nervous system function in infants with congenital heart disease*. *Biological Research for Nursing*. 2019 May;21(3):296-306. doi: 10.1177/1099800419827599. Epub 2019 Feb 5.
17. Pakpour AH, **Chen CY**, Lin CY, Strong C, Tsai MC, Lin YC. *The relationship between children's overweight and quality of life: A comparison of Sizing Me Up, PedsQL and Kid-KINDL*. *International Journal of Clinical and Health Psychology*. 2019 Jan;19(1):49-56.
18. Lixandrão MC, Stinear JW, Rich T, **Chen CY**, Feyma T, Meekins GD, Gillick BT\*. *EMG breakthrough during cortical silent period in congenital hemiparesis: A descriptive case series*. *Brazilian Journal of Physical Therapy*. 2020 Jan - Feb;24(1):20-29. Epub 2018 Nov 21. pii: S1413-3555(17)30677-9.
19. Gillick B\*, Rich T, Nemanich S, **Chen CY**, Menk J, Mueller B, Chen M, Ward M, Meekins G, Feyma T, Krach L, Rudser K. *Transcranial direct current stimulation and constraint-induced therapy in cerebral palsy: A randomized, blinded, sham-controlled clinical trial*. *European Journal of Paediatric Neurology*. 2018 May;22(3):358-368.
20. **Chen CY\***, McGee C, Rich T, Prudente C, Gillick B. *Reference Values of Intrinsic Muscle Strength of the Hand of Adolescents and Young Adults*. *Journal of Hand Therapy*. 2018 Jul - Sep;31(3):348-356. doi: 10.1016/j.jht.2017.05.012. Epub 2017 Aug 12.
21. **Chen CY**, Georgieff M, Elison J, Chen M, Mueller B, Stinear J, Rao R, Rudser K, Gillick B\*. *Understanding Brain Reorganization in Infants with Perinatal Stroke through Neuroexcitability and Neuroimaging: Study Protocol*. *Pediatric Physical Therapy*. 2017 Apr;29(2):173-178.
22. **Chen CY**, Rich T, Cassidy J, Gillick B\*. *Corticospinal Excitability in Children with Congenital Hemiparesis*. *Brain Sciences*. 2016 Dec; 6(4): 49.
23. **Chen CY**, Harrison T, Heathcock J\*. *Infants with complex congenital heart diseases show poor short-term memory in the mobile paradigm at 3 months of age*. *Infant Behavioral and Development*. 2015 Aug;40:12-9.
24. **Chen CY**, Tafone S, Lo W, Heathcock JC\*. *Perinatal stroke causes abnormal trajectory and laterality in reaching during early infancy*. *Research in Developmental Disabilities*. 2015 Mar;38:301-8.
25. **Chen CY**, Lo WD, Heathcock JC\*. *Neonatal stroke causes poor midline motor behaviors and poor fine and gross motor skills during early infancy*. *Research in Developmental Disabilities*. 2013 Mar;34(3):1011-7.

26. Shih YF\*, **Chen CY**, Chen WY, Lin HC. Lower extremity kinematics in children with and without flexible flatfoot: a comparative study. *BMC Musculoskeletal Disorders*. 2012 Mar 2;13:31.
27. Chen YS, Lin CY, **Chen CY**, Shih YF\*, Lee HC, Chen WY. Systemic Review and Meta-Analysis: Intrinsic Factors for Ankle Sprains in Athletes. *Formosan Journal of Physical Therapy*. 2008;33(1): 1-13.

### **Manuscripts under review**

1. Corticospinal excitability of scapular muscles in individuals with shoulder impingement syndrome (*Under review: Musculoskeletal Science and Practice*)
2. **Chen CY**, Chen, IH, Pakpour AH, Lin CY, Griffiths MD. Internet-related behaviors and psychological distress among schoolchildren during COVID-19 school hiatus. (*Under review: Cyberpsychology, Behavior, and Social Networking*)
3. **Chen CY**, Chen IH, Hou WL, Potenza MN, O'Brien K, Lin CY, Latner JD. The relationship between children's problematic internet-related behaviors and psychological distress during the onset of the COVID-19 pandemic: A longitudinal study. (*Under review: Journal of Addiction Medicine*)
4. Chen IH, **Chen CY**, Pakpour AH, Griffiths MD, Lin CY. (in revision). Time spent on internet-related behaviors, problematic internet-related behaviors, and psychological distress among mainland Chinese schoolchildren during COVID-19 school suspension: A longitudinal study. (*Under review: Journal of Behavioral Addictions*)

### **Conference Paper**

1. Xiaoyu Guo, Janet Zhang, Roy T. H. Cheung, Rosa H. M. Chan<sup>1</sup>, and Chao-Ying Chen\*. Right Temporal Oscillations of Infants in Relation to Contingent Learning. *42nd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society in conjunction with the 43rd Annual Conference of the Canadian Medical and Biological Engineering Societ*, July 20-24

### **Thesis and Dissertation**

1. Ph.D. Dissertation: Cognitive, motor, and autonomic function in infants with complex congenital heart diseases, infants born preterm, and infants born full-term.
2. M.S. Thesis: Effect of insole application on lower extremity kinematics in children with flexible flatfoot.

### **INVITED SPEAKER 受邀演講**

1. Shwn-Jen Lee, Chao-Ying Chen. 臺灣推動長照輔具及居家無障礙環境改善服務系統發展、現況與展望. 15<sup>th</sup> World Congress on Long Term Care in Chinese Communities. Cum 25th Annual Congress of Gerontology & 7th Cross-border Elderly Care Seminar. November 30, 2018
2. Chao-Ying Chen. *Early Outcomes in Infants at Risk for Long-term Developmental Impairments: Neuroplasticity, Assessment, and Intervention*. Department of Physical Therapy, College of Medicine, Tzu Chi University, Hualien, Taiwan. October 28, 2016.
3. Chao-Ying Chen. *Early Outcomes in Infants at Risk for Long-term Developmental Impairments: Neuroplasticity, Assessment, and Intervention*. School and Graduate Institute of Physical Therapy, College of Medicine, National Taiwan University, Taipei, Taiwan. November 4, 2015.
4. Chao-Ying Chen. *Early Outcomes in Infants at Risk for Long-term Developmental Impairments:*



*Neuroplasticity, Assessment, and Intervention*. Department of Physical Therapy, Graduate Institute of Rehabilitation Science, College of Medicine, Chang Gung University, Taoyuan, Taiwan, November 2, 2015.

5. Chao-Ying Chen. *Early Outcomes in Infants at Risk for Long-term Developmental Impairments: Neuroplasticity, Assessment, and Intervention*. Department of Physical Therapy, College of Medical Science and Technology, Chung Shan Medical University, Taichung, Taiwan, October 28, 2015.
6. Chao-Ying Chen. *Early Outcomes in Infants at Risk for Long-term Developmental Impairments: Neuroplasticity, Assessment, and Intervention*. Department of Physical Therapy and Assistive Technology, School of Biomedical Science and Engineering, National Yang-Ming University, Taipei, Taiwan, October 26, 2015.

## PLATFORM PRESENTATIONS 口頭報告

1. **Chen CY**, Harrison TM, Heathcock JC. *Altered autonomic function in the mobile paradigm task in three-month-old infants with complex congenital heart disease*. Platform presentation at annual Combined Section Meetings (CSM) of American Physical Therapy Association. February 5, 2015, Indianapolis, Illinois. USA.
2. **Chen CY**, Heathcock JC, Harrison TM. *Impaired Performance during the Mobile Paradigm in Infants with Complex Congenital Heart Defects at Three Months*. Platform presentation at annual Combined Section Meetings (CSM) of American Physical Therapy Association. February 5, 2014, Las Vegas, Nevada, USA.
3. **Chen CY**, Heathcock JC, Harrison TM. *Parasympathetic Activities during the Mobile Paradigm in Infants at Three Months*. Oral presentation at Edward F. Hayes Graduate Research Forum. March 1, 2013, Columbus, Ohio, USA.
4. **Chen CY**, Mrowzinski S, Heathcock JC. *Early Compensatory Reaching Movements in Full-Term Infants with and without Neonatal Stroke*. Platform presentation at annual Combined Section Meetings (CSM) of American Physical Therapy Association. January 23, 2013, San Francisco, California, USA.
5. **Chen CY**, Mrowzinski S, Heathcock JC. *The Development of Midline Movements in Infants with and without Neonatal Stroke*. Platform presentation at annual Combined Section Meetings (CSM) of American Physical Therapy Association. February 9, 2012 Chicago, Illinois, USA.
6. **Chen CY**, Chen WY, Shih YF. *Effect of insole application on lower extremity kinematics in children with flexible flatfoot*. Oral presentation in the Physical Association of Taiwan. 2008, Taichung City, Taiwan.

## POSTER PRESENTATIONS 海報發表

1. Guo YU, Zhang HW, Cheung Roy T.H, Chan Rosa H.M, and **Chen CY**. *Right Temporal Oscillations of Infants in Relation to Contingent Learning*. 42<sup>nd</sup> Annual International Conferences of the IEEE Engineering in Medicine and Biology Society in conjunction with the 43rd Annual Conference of the Canadian Medical and Biological Engineering Society. July 20-24, 2020, Montréal, Québec, Canada
2. **Chen CY**, Peyton C, Chan R, Cheung R. *Predicting Neurodevelopmental Disorders in Infants Utilizing Video-based Fidgety Movements (FMs) Analysis with Machine Learning Algorithm*. International Society on Early Intervention (ISEI) Conference 2019. Jun. 25-28, 2019. Sydney, Australia.
3. **Chen CY**, McNally MP, Harrison TD, Heathcock JC. *Learning though spontaneous kicking: The*

*potential influence of joint coordination*. 11<sup>th</sup> Pan-Pacific Conference on Rehabilitation. Nov. 17-18, 2018. Hong Kong.

4. **Chen CY**, Nemanich S, Chen M, Zorn E, Mueller B, Elison J, Stinear J, Rao R, Georgieff M, Gillick B. *Assessing neurophysiologic responses using transcranial magnetic stimulation in infants with perinatal brain injuries: an observational study*. 11th Pan-Pacific Conference on Rehabilitation. Nov. 17-18, 2018. Hong Kong.
5. Nemanich S, **Chen CY**, Chen Mo, Peyton C, Rao R, Stinear J, Georgieff M, Gillick B. *Non-invasive brain stimulation in infants at high risk for cerebral palsy: a case series*. American Academy Cerebral Palsy Developmental Medicine. Oct 9-13, 2018. Cincinnati, Ohio, USA.
6. **Chen CY**, Chen M, Stinear J, Elison J, Nemanich S, Peyton C, Mueller B, Georgieff M, Rao R, Rudser K, Gillick B. *Predicting motor outcomes in infants with brain hemorrhage using transcranial magnetic stimulation with brain imaging and the general movements assessment: Two case reports*. The 18th International Conference and Workshops of Early Intervention for Children with Developmental Delays (第十八屆兒童早期療育國際論文發表大會暨工作坊). Nov 3-5, 2017. Taichung, Taiwan.
7. Gillick B, Rich T, **Chen CY**, Nemanich S, Rudser K, Menk J, Ward M, Gregg K, Feyma T. Combined transcranial direct current stimulation and constraint-induced movement therapy intervention in children with unilateral cerebral palsy: Behavioral and neurophysiological findings from a randomized clinical trial. . American Academy Cerebral Palsy Developmental Medicine. Sept. 13-16, 2017. Montreal, Quebec, Canada.
8. **Chen CY**, Gillick B. *Perinatal Stroke: Understanding Brain Reorganization through Infant Neuroimaging and Measures of Neuro-excitability*. MnDrive Brain Conditions Retreat 2017. May 22, 2017. Minneapolis, Minnesota, USA
9. **Chen CY**, Chen M, Georgieff M, Elison J, Nemanich S, Mueller B, Stinear J, Rao R, Rudser K, Gillick B. *Feasibility of Performing TMS assessment of Infants with Perinatal Stroke by Incorporating Stereotactic Neuronavigation with EMG Intensity Threshold-Triggered TMS*. Neuromodulation Symposium 2017. Apr 14, 2017. Minneapolis, Minnesota, USA.
10. Chantigian DP, Rich T, **Chen CY**, Lixandrão M, Gillick BT, Keller-Ross ML. *The Effect of Transcranial Magnetic Stimulation on the Autonomic Nervous System in Pediatric Stroke*. Neuromodulation Symposium 2017. Apr 14, 2017. Minneapolis, Minnesota, USA.
11. Nemanich S, Rich T, **Chen CY**, Lixandrão M, Meekins G, Feyma T, Ward T, Krach L, Gillick B. *Changes in cortical excitability following a combined transcranial direct current stimulation and rehabilitation intervention in children with unilateral cerebral palsy*. Neuromodulation Symposium 2017. Apr 14, 2017. Minneapolis, Minnesota, USA.
12. Rich T, **Chen CY**, Feyma T, Meekins G, Ward M, Krach L, Gillick B. *Child and caregiver perspectives of a combined brain stimulation and constraint-induced movement therapy trial*. American Occupational Therapy Association Conference. Mar 30-Apr 2, 2017. Philadelphia, Pennsylvania, USA.
13. **Chen CY**, Georgieff M, Elison J, Chen M, Mueller B, Rao R, Rudser K, Stinear J, Gillick B. *Understanding Brain Reorganization through Neuroexcitability and Neuroimaging in Infant with Perinatal Stroke: Modifications from Adult to Pediatric Protocols*. Institute for Engineering in Medicine (IEM) Annual Conference and Retreat. Sept 26, 2016. Minneapolis, Minnesota, USA.
14. Lixandrão M, Stinear J, Meekins G, Feyma T, Rich T, **Chen CY**, Gillick B. *Ipsilesional and*

*Contralesional Cortical Silent Period in Congenital Hemiparesis: Preliminary Reports*. Institute for Engineering in Medicine (IEM) Annual Conference and Retreat. Sept 26, 2016. Minneapolis, Minnesota, USA.

15. **Chen CY**, Georgieff M, Elison J, Chen M, Mueller B, Rao R, Rudser K, Stinear J, Gillick B. *Perinatal Stroke: Understanding Brain Reorganization through Infant Neuroexcitability and Neuroimaging*. American Academy Cerebral Palsy Developmental Medicine. Sept 22, 2016. Hollywood, Florida, USA.
16. Rich TR, Keller-Ross M, Chantigian D, **Chen CY**, Meekins G, Feyma T, Krach L, Gillick BT. *Autonomic nervous system monitoring during transcranial magnetic stimulation: Making a difference in monitoring responses and adverse events in children with hemiparetic cerebral palsy*. American Academy Cerebral Palsy Developmental Medicine. Sept 22, 2016. Hollywood, Florida, USA.
17. Lixandrão M, Stinear J, Meekins G, Feyma T, Rich T, **Chen CY**, Gillick B. *Ipsilesional and Contralesional Cortical Silent Period in Congenital Hemiparesis: Preliminary Reports*. 6<sup>th</sup> International Conference on Transcranial Brain Stimulation. Sept 7-10, 2016. Göttingen, Germany.
18. **Chen CY**, Chen Mo, Gillick B. *Identifying Optimal Electromyography Responses in Infants with Perinatal Stroke: The Foundation for a Novel Transcranial Magnetic Stimulation Protocol*. Neuromodulation Symposium 2016. Apr 15, 2016. Minneapolis, Minnesota, USA.
19. Lixandrão M, Rich T, **Chen CY**, Gillick B. *Bilateral cortical silent period evoked by transcranial magnetic stimulation in a child with perinatal stroke: understanding cortical inhibitory circuits*. Neuromodulation Symposium 2016. Apr 15, 2016. Minneapolis, Minnesota, USA.
20. **Chen CY**, Bush K, Lo W, Chaudhari A, McNally M, Heathcock J. *Repetitive Transcranial Magnetic Stimulation in Children with Hemiparesis: A Case Series*. Neuromodulation Symposium 2015. Apr 17, 2015. Minneapolis, Minnesota, USA.
21. **Chen CY**, Mrowzinski S, Heathcock JC. *Arm and Hand Control during the Emergence of Reaching in Infants with Neonatal Stroke*. Poster presentation at the conference of Progress in Motor Control (PMC) IV. Jul 16, 2013. Montreal, Canada.
22. **Chen CY**, Mrowzinski S, Heathcock JC. *Midline Toy Exploration in Infants with Neonatal Stroke*. Poster presentation at the International Society of Infant Studies. Jun 7, 2012. Minneapolis, Minnesota, USA.
23. **Chen CY**, Mrowzinski S, Heathcock JC. *Reaching and Grasping Behaviors in Infants with and without Neonatal Stroke*. Poster presentation at the conference of Progress in Motor Control (PMC) VIII. Jul 21, 2011. Cincinnati, Ohio, USA.
24. **Chen CY**, Heathcock JC. *Symmetrical Postures and Midline Movements Are Less Common in Infants with Neonatal Stroke*. Poster presentation at annual Combined Section Meetings (CSM) of American Physical Therapy Association. Feb 19, 2011. New Orleans, Louisiana, USA.
25. **Chen CY**, Heathcock JC. *Symmetrical Postures in Infants with and Without Neonatal Stroke*. Poster presentation at the International Society of infant Studies. Mar 12, 2010. Baltimore, Maryland, USA.

## **LICENSURE and CERTIFICATION 證照**

- Licensed Physical Therapist, 2006 – Present, Taiwan
- Certification of advanced course of Precht's Method on the Qualitative Assessment of General Movements, 2019

- Certification of basic course of Prechtl's Method on the Qualitative Assessment of General Movements, 2015

## **SERVICES 校外服務**

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- Member of the Scientific Committee, World Confederation for Physical Therapy – Asia Western Pacific Region (WCPT-AWP Congress) 2020
- MnDRIVE Brain Conditions Research at the Minnesota State Fair, 2016
- Brain Bee MnDRIVE Challenge Development, 2016

## **ADDITIONAL INFORMATION 其他資訊**

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### **Manuscript Review**

- Journal of Child Neurology
- Hong Kong Physiotherapy Journal
- BMJ open
- PLOS ONE
- Journal of Child Neurology
- JAMA Pediatrics
- Journal of Neonatal-Perinatal Medicine
- Frontiers Neuroscience
- Disability and Rehabilitation, May 2020
- Social Health and Behavior, Dec 2020

### **Book Review**

- Physical Therapy for Children with Cerebral Palsy: An Evidence-Based Approach. May-June, 2015.