

CURRICULUM VITAE

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中華民國

EDUCATIONS:

05/2006 – 博士 國立陽明大學 生命科學院 神經科學研究所
07/1996 – 醫學士 長庚大學 醫學系

POSITION HELD

09/2021—迄今 所長，國立陽明交通大學 神經科學研究所
08/2019—迄今 特聘教授，國立陽明交通大學 神經科學研究所
08/2014–07/2019 教授，國立陽明大學 神經科學研究所
02/2011–07/2014 副教授，國立陽明大學 神經科學研究所
02/2008–01/2011 助理教授，國立陽明大學 神經科學研究所
04/2008– 迄今 國立陽明交通大學附設醫院 (宜蘭)，復健科主治醫師 及 兒童
發展評估暨療育中心 負責醫師
02/2005–01/2006 研究員, Social Cognitive Neuroscience Laboratory, Institute for
Learning and Brain Sciences (I-LABS), University of Washington,
Seattle, USA (Advisor: Jean Decety)
09/2000–05/2006 博士，國立陽明大學 神經科學研究所 Laboratory for Cognitive
Neuroscience (指導教授: 曾志朗) ; 台北榮民總醫院 Integrated
Brain Research Unit (指導教授: 謝仁俊)
博士論文：The representation of the human mirror system in the
neural mechanism of response facilitation.
07/1997–06/2001 住院醫師，台灣大學醫學院附設醫院 復健醫學部
07/1996–06/1997 住院醫師，台灣大學醫學院附設醫院 神經部

AWARDS AND HONORS:

2022 台灣復健醫學會 卓越研究獎
2021 美國心理科學學會 會士

2020 (109 年度) 國立陽明大學 學術研究優良獎 (永久免接受評估)
2019 (108 年度) 國立陽明大學生命科學院 傑出校友
2019-2020 資深學者傅爾布萊特研究獎助金
2016 (104 年度) 科技部 傑出研究獎
2012 長庚大學 第十屆傑出校友
2011 (100 年度) 國科會 吳大猷先生紀念獎 及 優秀年輕學者研究計畫
2009 第二十屆 中華民國十大傑出女青年
2007 The Best Ten Abstracts in the 13th Annual Conference of the Organization of Human Brain Mapping (OHBM) (2007) in Chicago, IL, U.S.A.
2006 連倚南教授復健醫學教育基金會 新進主治醫師優秀論文獎
2006 中華民國基礎神經科學學會 北醫萬芳神經科學獎

PROFESSIONAL QUATIFICATION

- 復健科專科醫師
- 兒童復健專科醫師

PROFESSIONAL MEMBERSHIPS

- 台灣復健醫學會
- 台灣兒童復健醫學會 秘書長
- 台灣神經復健醫學會
- 台灣心理學會
- 台灣認知神經科學學會
- 中華民國基礎神經科學學會
- Organization of Human Brain Mapping (OHBM)
- Society for Neuroscience (SfN)
- Society for Social Neuroscience (S4SN)
- Cognitive Neuroscience Society (CNS)
- Association of Psychological Science (APS)
- Society for the Teaching of Psychology (STP)

REARCH INTEREST AND SKILLS:

- Social neuroscience
- Human mirror system
- Empathy and Morality
- Voice perception
- Autism spectrum disorder
- Psychopathy
- Developmental neuroscience
- Aging neuroscience
- fMRI, MEG, EEG/ERP, eye-tracking

- Early interventions of children with developmental delay

INVITED TALKS

- 2021 藍海學苑 精神健康四部曲：大腦、教育、醫療、飲食課程
- 2020 台灣復健醫學會會員大會暨聯合學術研討會 主講：從臨床到基礎解析
自閉症
- 2019 國立政治大學 腦思人文·潮科學-科技部心智科學腦影像研究計畫成果
發表
- 2019 臺灣認知神經科學學會年會之壁報論文摘要 審稿委員
- 2018 科學人 科創講堂·腦科學-社會化大腦：泛自閉症
- 2017 The 11th ICCS, Taipei, Taiwan: Neurobiological basis for lack of empathy in autism and psychopathy: evidence from empathy imbalance hypothesis (9/1-9/4).
- 2015 國立台灣師範大學科學教育研究所：Advances in Social Neuroscience: the Neural Mechanism of Empathy.
- 2014 國立台灣大學 腦與心智科學新知研討會：Aging changes in the neural circuits underlying empathy.
- 2014 國立成功大學 神經與人文社會科學工作坊：The Empathic Brain: Neurobiological Basis for Lack of Empathy in Autism and Psychopathy
- 2013 Society for Social Neuroscience in Guangzhou: Empathic arousal and Social understanding in individuals with Autism spectrum disorder
- 2012 Asia Sleep Research Society Congress, the 7th: Emotion processing in sleeping brain.
- 2012 第一屆青少年醫學營：腦內的社群網路
- 2011 台灣生物精神醫學暨神經精神藥理學學會：Empathy in Autism: Reduced pain threshold mediates somatosensory response to the pain of others.
- 2011 國立成功大學 職能治療學系：Broken mirror theory of autism: from mirror neurons to empathy.
- 2011 國立台灣大學醫學院附設醫院精神醫學部：The neural correlates of empathy imbalance in autism spectrum disorders.
- 2010 國立成功大學 認知神經科學研究所：Social neuroscience of empathy.
- 2010 Social Neuroscience and Its Benefits to Mental Health, Schizophrenia Translational Research Center (STRC), Seoul National University, Korea: Expertise modulates the perception of pain in others.

PUBLICATIONS

Published Journal Papers

1. Chen C, Martínez RM, Chen YC, Fan YT, Cheng Y* (2022) Anti-anxiety drug Lorazepam helps relieve from coercive power by changing implicit behavior under authoritative pressure. *Frontiers in Psychology* in press.
2. Syu, GD, Reymond Sutandy FX, Chen K, Cheng Y, Chen CS, Shih JC (2022) Autoantibody profiling of monoamine oxidase A knockout mice, an autism spectrum disorder model. *Brain, Behavior, and Immunity* 107, 193-2000.
3. Chen C, Chen YH, Cheng Y* (2022) Meta-analysis of functional neuroimaging and dispositional variables for clinical empathy. *Neuroscience and Biobehavioral Reviews* 142, 104874.
4. Chen YH, Chen C, Chen YC, Fan YT, Yang CY, Jian HY, Cheng Y* (2022) The neural correlates of emotional conflict monitoring as an early manifestation of affective and cognitive declines in persons with type 2 diabetes. *Brain Communication* accepted.
5. Cheng Y, Chen YC, Fan YT, Chen C (2022) Neuromodulation of the right temporoparietal junction alters amygdala functional connectivity to authority pressure. *Human Brain Mapping* open access.
6. Chen C, Martínez RM, Chen YC, Fan YT, Cheng Y* (2022) The neural mediators of moral attitudes and behavior. *Behavioural Brain Research* 430, 113934.
7. Chen YC, Chen C, Martínez RM, Fan YT, Liu CC, Chen CY, Cheng Y* (2021) An amygdala-centered hyper-connectivity signature of threatening face processing predicts anxiety in youths with autism spectrum conditions. *Autism Research* 14 (11):2287-99.
8. Cheng Y, Chou J, Martínez RM, Fan YT, Chen C (2021) Psychopathic traits mediate guilt-related anterior midcingulate activity under authority pressure. *Scientific Reports* 11: 14856.
9. Martínez RM, Chen CY, Liao TT, Cheng Y, Fan YT, Chou SH, Chen C (2020) The multifaceted effects of serotonin transporter polymorphism (5-HTTLPR) on anxiety, implicit moral attitudes, and harmful behaviors. *Frontiers in Psychology* 11: 1521.
10. Chen C, Martínez RM, Cheng Y* (2020) The key to group fitness: the presence of another synchronizes moral attitudes and neural responses during moral decision-making. *NeuroImage* 213: 116732.
11. Chen C, Martínez RM, Liao TT, Chen CY, Yang CY, Cheng Y* (2020) An integrative analysis of 5HTT-mediated mechanism of hyperactivity to non-threatening voices. *Communications Biology* 3: 113.
12. Samek A, Cowell JM, Cappelen AW, Cheng Y, Contreras-Ibáñez C, Gomez-Sicard N, Gonzalez-Gaeda ML, Huepe D, Ibáñez A, Lee K, Malcolm-Smith S, Salas N, Selcuk B, Tungodden B, Wong A, Zhou X, Decety J (2020) The development of social comparisons and sharing behavior across 12 countries. *Journal of Experimental Child Psychology* 192: 104778.
13. Chen C, Martínez RM, Chen Y, Cheng Y* (2020) Pointing fingers at others: the neural correlates of actor-observer asymmetry in blame attribution. *Neuropsychologia* 136: 107281.
14. Chen YC, Chen C, Martínez RM, Etnier J, Cheng Y* (2019) Habitual physical activity mediates the acute exercise-induced modulation of anxiety-related amygdala functional connectivity. *Scientific Reports* 9: 19787.
15. Huppert E, Cowell JC, Cheng Y, Contreras-Ibáñez C, Gomez-Sicard N, Gonzalez-Gaeda LM, Huepe D, Ibanez A, Lee K, Mahasneh R, Malcolm-Smith S, Salas N, Selcuk B, Tungodden B, Wong A, Zhou X, Decety J (2019) The development of children's preferences for equality and equity across 13 individualistic and collectivist cultures. *Developmental Science* 22: e12729.

16. Chen C, Martínez RM, Cheng Y* (2018) The developmental origins of the social brain: empathy, morality, and justice. *Frontiers in Psychology* 9: 2584.
17. Chen C, Chen YC, Chen KL, Cheng Y* (2018) Atypical anxiety-related amygdala reactivity and functional connectivity in Sant Mat meditation. *Frontiers in Behavioral Neuroscience* 12: 298.
18. Chen C, Chan CW, Cheng Y* (2018) Test-retest reliability of mismatch negativity (MMN) to emotional voices. *Frontiers in Human Neuroscience* 12: 453.
19. Cheng Y*, Chen C, Decety J (2017) How situational context impacts empathic responses and brain activation pattern. *Frontiers in Behavioral Neuroscience* 11: 165.
20. Chen C, Hu CH, Cheng Y* (2017) Mismatch negativity (MMN) stands at the crossroads between explicit and implicit emotional processing. *Human Brain Mapping* 38(1): 140-150.
21. Chen C, Liu CC, Weng PY, Cheng Y* (2016) Mismatch negativity to threatening voices associated with positive symptoms in schizophrenia. *Frontiers in Human Neuroscience* 10: 362.
22. Chen C, Hung AY, Fan YT, Tan S, Hong H, Cheng Y* (2016) Linkage between pain sensitivity and empathic response in adolescents with autism spectrum conditions and conduct disorder symptoms. *Autism Research* 10(2): 267-275.
23. Chen C, Sung JY, Cheng Y* (2016) Neural dynamics of emotional salience processing in response to voices during the stages of sleep. *Frontiers in Behavioral Neuroscience* 10: 117.
24. Chen C, Decety J, Huang PJ, Chen CY, Cheng Y* (2016) Testosterone administration in females modulates moral judgment and patterns of brain activation and functional connectivity. *Human Brain Mapping* 37(10): 3417-3430.
25. Fan YT, Chen C, Cheng Y* (2016) The neural mechanisms of social learning from fleeting experience with pain. *Frontiers in Behavioral Neuroscience* 10: 11.
26. Chen C, Chen CY, Yang CY, Lin CH, Cheng Y (2015) Testosterone modulates preattentive sensory processing and involuntary attention switches to emotional voices. *Journal of Neurophysiology* 113(6): 1842-1849.
27. Zhang D, Liu Y, Hou X, Sun G, Cheng Y, Luo Y (2014) Discrimination of fearful and angry emotional voices in sleeping human neonates: a study of the mismatch responses. *Frontiers in Behavioral Neuroscience* 8: 422.
28. Chen C, Lee YH, Cheng Y* (2014) Anterior insular cortex activity to emotional salience of voices in a passive oddball paradigm. *Frontiers in Human Neuroscience* 8: 743.
29. Cheng Y*, Chen CY, Decety J (2014) An EEG/ERP investigation of the development of empathy in early and middle childhood. *Developmental Cognitive Neuroscience* 10: 160-169.
30. Fan YT, Cheng Y* (2014) Atypical mismatch negativity in response to emotional voices in people with autism spectrum conditions. *PLoS ONE* 9(7): e102471.
31. Hung AY, Cheng Y* (2014) Sex differences in pre-attentive perception of emotional voices and acoustic attributes. *NeuroReport* 25 (7): 464-469.
32. Chen YC, Chen CC, Decety J, Cheng Y* (2014) Aging is associated with changes in the neural circuits underlying empathy. *Neurobiology of Aging* 35 (4): 827-836.
33. Fan YT, Chen CY, Chen SC, Decety J, Cheng Y* (2014) Empathic arousal and social understanding in individuals with autism: evidence from fMRI and ERP measurements. *Social Cognitive and Affective Neuroscience* 9(8): 1203-1213.
34. Fan YT, Hsu YY, Cheng Y* (2013) Sex matters: n-back modulates emotional mismatch negativity. *NeuroReport* 24(9): 457-463.

35. Hung AY, Ahveninen J, Cheng Y* (2013) Atypical mismatch negativity to distressful voices associated with conduct disorder symptoms. *Journal of Child Psychology and Psychiatry* 54(9): 1017-1027.
36. Chen CY, Yang CY, Cheng Y* (2012) Sensorimotor resonance is an outcome but not a platform to anticipating harm to others. *Social Neuroscience* 7(6): 578-590.
37. Cheng Y, Lee SY, Chen HY, Wang PY, Decety J (2012) Voice and emotion processing in the human neonatal brain. *Journal of Cognitive Neuroscience* 24(6): 1411-1419.
38. Cheng Y*, Hung AY*, Decety J (2012) Dissociation between affective sharing and emotional understanding in juvenile psychopaths. *Development and Psychopathology* 24: 623-636.
39. Cheng Y, Chou KH, Fan YT, Lin CP (2011) ANS: Aberrant neurodevelopment of the social cognition network in adolescents with autism spectrum disorders. *PLoS ONE* 6(4): e18905.
40. Chou KH, Cheng Y, Chen IY, Lin CP, Chu WC (2011) Sex-linked white matter microstructure of the social and analytic brain. *NeuroImage* 54 (1): 725-733.
41. Fan YT, Decety J, Yang CY, Liu JL, Cheng Y* (2010) Unbroken mirror neurons in autism spectrum disorders. *The Journal of Child Psychology and Psychiatry* 51(9): 981-988.
42. Cheng Y*, Chen C, Lin CP, Chou KH, Decety J (2010) Love hurts: an fMRI study. *NeuroImage* 51(2): 923-929.
43. Decety J, Yang CY, Cheng Y* (2010) Physicians down-regulate their pain empathy response: an event-related brain potential study. *NeuroImage* 50(4): 1676-1682.
44. Cheng Y, Chou KH, Chen IY, Fan YT, Decety J, Lin CP (2010) Atypical development of white matter microstructure in adolescents with autism spectrum disorders. *NeuroImage* 50(3): 873-882.
45. Yang CY, Decety J, Lee SY, Chen CY, Cheng Y* (2009) Gender differences in the mu rhythm during empathy for pain: an electrophysiologic study. *Brain Research* 1251: 176-184.
46. Cheng Y, Chou KH, Decety J, Chen IY, Hung D, Tzeng OJL, Lin CP (2009) Sex differences in the neuroanatomy of human mirror-neuron system: a voxel-based morphometric investigation. *Neuroscience* 158(2): 713-720.
47. Cheng Y, Lee PL, Yang CY, Lin CP, Hung D, Decety J (2008) Gender differences in the mu rhythm of the human mirror-neuron system. *PLoS ONE* 3(5): e2113.
48. Cheng Y, Yang CY, Lin CP, Lee PL, Decety J (2008) The perception of pain in others suppresses somatosensory oscillations: a magnetoencephalography study. *NeuroImage* 40(4): 1833-1840.
49. Cheng Y, Lin CP, Liu HL, Hsu YY, Lim KE, Hung D, Decety J (2007) Expertise modulates the perception of pain in others. *Current Biology* 17(9): 1708-1713.
50. Cheng Y*, Decety J, Lin CP, Hsieh JC, Hung D, Tzeng OJL (2007) Sex differences in spinal excitability during observation of bipedal locomotion. *NeuroReport* 18(8): 887-890.
51. Cheng Y, Meltzoff A, Decety J* (2007) Motivation modulates the activity of the human mirror-neuron system. *Cerebral Cortex* 17(8): 1979-1986.
52. Cheng Y, Tzeng OJL, Decety J, Imada T, Hsieh JC (2006) Gender differences in the human mirror system: a magnetoencephalography study. *NeuroReport* 17(11): 1115-1119.
53. Cheng Y*, Tzeng OJL, Hung D, Decety J, Hsieh JC (2005) Modulation of spinal excitability during observation of bipedal locomotion. *NeuroReport* 16(15): 1711-1714.

Published Book Chapter

- Cheng Y. (2016) Lifespan Developmental Changes in the Neural Underpinnings of Empathy. In: Sommerville J, Decety J editors. *Frontiers in Developmental Science Series: Social Cognition*. Psychology Press/ Taylor and Francis Group.

Patent

- 2013 情緒性腦電波造影方法 System Method for Diagnosing Autism 台灣 P120037-TW

科普文章

2022 年三月科技部人文司《人文與社會科學簡訊》第 23 卷第 2 期【人文社會科學研究新趨勢】專題：從心理到心智形塑社交力

2022 年六月科技部人文司「人文．島嶼」網站：每個人都有道德感嗎？從社會神經科學探討「道德感」

Conferences Abstracts

1. Chu L, Chen HF, Cheng Y, Wong CC, Huang CM, Tzeng O.J.L., Fan YT. Atypical sensory responsiveness as an endophenotype in individuals with autism spectrum disorder (ASD). Cognitive Neuroscience Society (CNS), San Francisco, U.S.A., 2018.
2. Chen YC, Chen C, Cheng Y. Emotional empathy imbalance of autism: amygdala reactivity to conscious and nonconscious emotional processing. Society for Social Neuroscience, Washington, U.S.A., 2017.
3. Chou J, Cheng Y. The Relationship between Experienced Guilt, Moral Attitudes, and Psychopathic Traits. Society for Social Neuroscience, Washington, U.S.A., 2017.
4. Huang Y, Cheng Y. Atypical Mismatch Negativity to Threatening Voices in Generalized Anxiety Disorder. Society for Social Neuroscience, Washington, U.S.A., 2017.
5. Chen YC, Chen C, Decety J, Cheng Y. Actor-observer bias in moral evaluation: an fMRI study. Society for Neuroscience, Chicago, USA, 2015.
6. Chen C, Huang PC, Chen YJ, Chen YC, Chen KL, Decety J, Cheng Y. Testosterone administration modulates neural responses to morally-laden scenarios in females. Society for Neuroscience, Chicago, USA, 2015.
7. Chen YC, Chen C, Hu CH, Cheng Y. Dissociated linkage between serotonin-related gene polymorphisms, fearful voice and face processing, amygdala activity and trait anxiety: a combined fMRI and ERP study. Society for Neuroscience, Chicago, USA, 2015.

8. Chen K, Cheng Y, Chen CS, Yang CY, Shih JC. In search of biomarkers and treatment for a subpopulation of autism spectrum disorder (ASD) with high serotonin (sASD). Society for Neuroscience, Washington DC, U.S.A., 2014.
9. Zhang D, Liu Y, Hou X, Cheng Y, Sun G, Luo Y. The mismatch brain responses to negative emotional voices in sleeping human neonates. Society for Social Neuroscience, Guangzhou, China, 2013
10. Chen YJ, Lee SY, Cheng Y. Emotional mismatch negativity as a potential neurophysiological biomarker for autism spectrum disorder. The Organization of Human Brain Mapping, Seattle, U.S.A., 2013.
11. Kuan YF, Lee SY, Weng PY, Cheng Y. Emotional mismatch negativity (MMN) in chronic schizophrenia. The Organization of Human Brain Mapping, Seattle, U.S.A., 2013.
12. Chen YC, Chen CC, Decety J, Cheng Y. Growing with more or less aging: an fMRI study. Society for Social Neuroscience, New Orleans, USA, 2012.
13. Chou YH, Decety J, Cheng Y. Social contexts modulate pain empathy in nurses. Society for Neuroscience, New Orleans, USA, 2012.
14. Tsai SJ, Chen C, Lee SY, Sung JY, Cheng Y. Emotion processing in the sleeping brain. The Organization of Human Brain Mapping, Peking, China, 2012.
15. Cheng Y. Autism and psychopathy as diametrically opposed disorders with empathy imbalance. Society of Social Neuroscience, Washington DC, U.S.A., 2011.
16. Chen CY, Jean D, Cheng Y. I know how you are going to be hurt. The Organization of Human Brain Mapping, Barcelona, Spain, 2010.
17. Hung AY, Feng YJ, Cheng Y. Neural dynamics in preattentive perception of emotional prosody. The Organization of Human Brain Mapping, Barcelona, Spain, 2010.
18. Lee SY, Lin CP, Cheng Y. Early detection of emotional prosody in newborn. The Organization of Human Brain Mapping, Barcelona, Spain, 2010.
19. Fan YT, Decety J, Lin CP, Cheng Y. Atypical cortical mechanism of pain empathy in persons with autism spectrum disorders: an fMRI study. The Organization of Human Brain Mapping, Barcelona, Spain, 2010.
20. Cheng Y, Chou KH, Fan YT, Chen IY, Lan TH, Lin CP. Aberrant development of the social cognition network during adolescents in autism spectrum disorder. The Organization of Human Brain Mapping, San Francisco, U.S.A., 2009.
21. Cheng Y, Lin CP, Yang CY, Wang CC, Hung D, Tzeng OJL, Hsieh JC, Decety J. The pain perception in others modulates somatosensory oscillations. The Organization of Human Brain Mapping, Chicago, U.S.A., 2007.
22. Cheng Y, Melzoff A, Decety J. Motivation modulates the activity of the human mirror system. Cognitive Neuroscience Society, San Francisco, U.S.A., 2006.
23. Cheng Y, Tzeng OJL, Cheng CM, Imada T, Hsieh JC. Women differ from men in the perception of social versus non-social stimuli. Society for Neuroscience, Washington D.C., U.S.A., 2005 (oral presentation).
24. Cheng Y, Tzeng OJL, Hung D, Hsieh JC. Modulation of spinal excitability during observation of bipedal locomotion in humans. Cognitive Neuroscience Society, San Francisco, U.S.A., 2004.
25. Cheng Y, Cheng CM, Chou CC, Tzeng OJL, Hung D, Hsieh JC. Action perception in the patient with blindsight. The Organization of Human Brain Mapping, Hungary, 2004.