

## Shih-Chun (Alvin) Kao

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### Work Address

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Website: <https://sites.google.com/view/panchlab/home>

### Education

July 2017      Doctor of Philosophy in Kinesiology  
University of Illinois at Urbana-Champaign, IL, USA.  
Advisor: Charles H. Hillman, Ph.D.

January 2011    Master of Education in Physical Education  
National Taiwan Normal University, Taipei, Taiwan.  
Advisor: Tsung-Min (Ernest) Hung, Ph.D.

June 2008      Bachelor of Education in Physical Education.  
National Kaohsiung Normal University, Kaohsiung, Taiwan.

### Professional Experience

2018 – Present    **Assistant Professor**, Department of Health and Kinesiology, Purdue University, IN

2017 – 2018      **Postdoctoral Research Associate**, Center for Cognitive & Brain Health,  
Department of Psychology, Northeastern University, MA

2016 - 2017      **Graduate Research Assistant**, Body Composition and Nutritional Neuroscience  
Laboratory, Department of Kinesiology and Community Health, University of  
Illinois, Urbana-Champaign, IL

2013 - 2017      **Graduate Research Assistant**, Neurocognitive Kinesiology Laboratory, Department  
of Kinesiology and Community Health, University of Illinois, Urbana-Champaign, IL

### Service

2022 – present    **Review Editor**, Cognition and Movement section of Frontiers in Cognition

2020 – Present    **Editorial Board Member**, Asia Journal of Sport and Exercise Psychology

2011 - 2012      **Private 1st class**, Taiwanese Army

2011              **Private**, Taiwanese Army

### Research Funding

- Agency: Spencer Foundation  
Title of Grant: Repeating acute exercise effects to maximize brain function, cognition, and academic achievement in school-aged children.  
Duration of Funding: 2.33 year (09/01/2021-12/31/2023)  
Total Amount of Award: \$50,000  
Role: PI
- Agency: Purdue Research Foundation  
Title of Grant: Purdue PRF Research Grant  
Duration of Funding: 1 year (06/01/2019-05/31/2020)  
Total Amount of Award: \$31,119

Role: PI

3. Agency: Clifford B. Kinley Trust  
 Title of Grant: The acute effects of intense interval and continuous moderate exercise on executive function and declarative memory in children.  
 Duration of Funding: 2 year (05/01/2019-12/31/2022 [grant period extended due to COVID-19])  
 Total Amount of Award: \$19,998  
 Role: PI
4. Agency: Indiana Clinical and Translational Sciences Institute (CTSI)  
 Title of Grant: Acute exercise effects on hippocampus-dependent memory in children  
 Duration of Funding: 2 years (07/01/2019-08/31/2022 [grant period extended due to COVID-19])  
 Total Amount of Award: \$10,000  
 Role: PI
5. Agency: Ministry of Science and Technology in Taiwan  
 Title of Grant: Effect of cognitive warm-up on perceptual decision-making, neural complexity, and sports performance  
 Duration of Funding: 2 years (02/01/2019-07/31/2021)  
 Total Amount of Award: \$101,033  
 Role: Co-I (International PI), total funding directly responsible: \$9,333
6. Agency/Title of Grant: Ministry of Education in Taiwan/Effect of intensity of acute aerobic exercise on the executive function in ADHD children with different level of physical fitness  
 Duration of Funding: 2 years (6/2013-5/2015)  
 Total Amount of Award: \$32,000  
 Role: PI

## Honors & Awards

May 2017	Marsh Center Student Research Award for an accepted abstract presented at American College of Sports Medicine annual meeting in Denver, \$500.
Fall 2015 – Spring 2016	University of Illinois List of Teachers Ranked as Excellent by Their Students (KIN 140).
October 2015	Awarded a Sports Administration Ministry of Education in Taiwan funded scholarship for excellent research paper in sports science, \$2,500.

## Teaching Experience

Spring 2020 – Present	Instructor, Advanced Topics in Kinesiology (HK67000), Department of Health and Kinesiology, Purdue University
Fall 2020	Instructor, Physical Activity and Cognition (HK59000), Department of Health and Kinesiology, Purdue University
Spring 2019 – Present	Instructor, Sport and Exercise Psychology I (HK37200), Department of Health and Kinesiology, Purdue University
2014 - 2016	Teaching Assistant, Social Science of Human Movement (KIIN140), Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign

## Publications

### Peer-Reviewed Journal Articles (in print or accepted)

\*Indicates primary author(s); superscript numbers indicate co-author(s) mentored by the candidate: <sup>1</sup>undergraduate student, <sup>2</sup>graduate student, <sup>3</sup>postdoctoral scientist.

1. **Kao, S. C.\***, Baumgartner, N.<sup>2</sup>, Noh, K.<sup>2</sup>, Wang, C. H., & Schmitt, S. (in press). Acute effects of intense interval versus aerobic exercise on children's behavioral and neuroelectric measures of inhibitory control. *Journal of Science and Medicine in Sport*.  
 Journal ranking: 17/88 (19.31%) in Sport Sciences [2021] Impact factor = 4.597  
 [X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
2. Kurth, J. D., Klenosky, D. B., **Kao, S. C.**, & Ruiz, Y. (in press). Factors impacting the anticipated pleasure of potential physical activity experiences: a conjoint investigation across involvement segments. *International Journal of Sport and Exercise Psychology*  
 Journal ranking: 31/83 (37.35%) in Psychology, Applied [2021] Impact factor = 4.048  
 [X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection

3. **Kao, S. C.**, Chen, F. T., Moreau, D., Drollette E. S., Amireault, S., Chu, C. H., & Chang, Y. K. (in press). Acute effects of exercise engagement on neurocognitive function: A systematic review and meta-analysis on P3 amplitude and latency. *International Review of Sport and Exercise Psychology*.  
Journal ranking: 12/83 (14.45%) in Psychology, Applied [2021] Impact factor = 7.423  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
1. Wang, C. H., Fu, H. L., **Kao, S. C.**, Moreau D., Yang, C. T. (2023). Systems factorial technology provides novel insights into the cognitive processing characteristics of open-skill athletes. *Psychology in Sport and Exercise*  
Journal ranking: 12/88 (13.63%) in Sport Sciences [2021] Impact factor = 5.118  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection
2. Chou, C. C., **Kao, S. C.**, Pan, C. C., McCullick, B., Fu, H. L., & Wang, C. H. (2023). Cognitively engaging movement games improve interference control and academic performance in overweight children: A randomized control trial. *Scandinavian Journal of Medicine & Science in Sports*  
Journal ranking: 12/88 (15.90%) in Sport Sciences [2021] Impact factor = 4.645  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection
3. **Kao, S. C.\***, Baumgartner, N.<sup>2</sup>, W., Pritt, T., Wu, S.<sup>1</sup>, Schmitt, S., Ullrich-French, S., & Wang, C. H. (2023). Acute effects of mindful interval exercise on cognitive performance in a higher education setting. *Psychology in Sport and Exercise*  
Journal ranking: 12/88 (13.63%) in Sport Sciences [2021] Impact factor = 5.118  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
4. Wang, C. H., Baumgartner, N.<sup>2</sup>, Nagy, C.<sup>2</sup>, Fu, H. L., Yang, C. T., & **Kao, S. C.\*** (2023). Protective effect of aerobic fitness on the detrimental influence of exhaustive exercise on information processing capacity. *Psychology in Sport and Exercise*, 12(1), 1-12.  
Journal ranking: 12/88 (13.63%) in Sport Sciences [2021] Impact factor = 5.118  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
5. **Kao, S. C.\***, Tsai, Y. J., Hsieh, S. S., Chen, I. F., Schmitt, S., & Hung, T. M. (2022). The relationship of muscular endurance and fine motor control with behavioral and neuroelectric indices of attention in preschool children. *Scientific Report*, 12(1), 1-12.  
Journal ranking: 19/74 (25.67%) in Multidisciplinary Sciences [2021] Impact factor = 4.997  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
6. Lin, C. C., Hsieh, S. S., Huang, C. J., **Kao, S. C.\***, Chang, Y. K.\*, & Hung, T. M.\* (2022). The unique contribution of motor ability to visuospatial working memory in school-age children: Evidence from event-related potentials. *Psychophysiology*, e14182.  
Journal ranking: 18/91 (19.78%) in Psychology, Experimental [2021] Impact factor = 4.348  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection
7. Wu, C. H., Nien, J. T., Lin, C. Y., Li, R. H., Chu, C.H., **Kao, S. C.\***, & Chang, Y. K.\* (2022). Cardiorespiratory fitness is associated with sustained neurocognitive function during a prolonged inhibitory control task in young adults: An ERP study. *Psychophysiology*, e14086.  
Journal ranking: 18/91 (19.78%) in Psychology, Experimental [2021] Impact factor = 4.348  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection
8. **Kao, S. C.\***, Baumgartner, N.<sup>2</sup>, Nagy, C.<sup>2</sup>, Fu, H. L., Yang, C. T., & Wang, C. H. (2022). Acute effects of aerobic exercise on conflict suppression, response inhibition, and processing efficiency underlying inhibitory control processes: An ERP and SFT study. *Psychophysiology*, e14032.  
Journal ranking: 18/91 (19.78%) in Psychology, Experimental [2021] Impact factor = 4.348  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
9. Chaddock-Heyman, L., Weng, T. B., Loui, P., Kienzler, C., Weissshappel, R., Drollette, E. S., Raine, L. B., Westfall, D. R., **Kao, S. C.**, ... & Kramer, A. F. (2021). Brain network modularity predicts changes in cortical thickness in children involved in a physical activity intervention. *Psychophysiology*, 58(10), e13890.  
Journal ranking: 18/91 (19.78%) in Psychology, Experimental [2021] Impact factor = 4.348  
[ ] research design [ ] statistical analysis [ ] drafted manuscript [X] revised manuscript [X] data collection
10. Hsieh, S. S., Chueh, T. Y., Huang, C. J., **Kao, S. C.**, Hillman, C. H., Chang, Y. K., Hung, T. M. (2021). Systematic review of the acute and chronic effects of high-intensity interval training on executive function across the lifespan. *Journal of Sports Science*, 39(1), 10-22.  
Journal ranking: 26/88 (29.54%) in Sports Sciences [2021] Impact factor = 3.943  
[ ] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection
11. **Kao, S. C.\***, Wang, C. H., Kamijo, K., Khan, N., & Hillman, C. H. (2021). Acute effects of highly intense interval and moderate continuous exercise on the modulation of neural oscillation during working memory. *International Journal of Psychophysiology*, 160, 10-17.  
Journal ranking: 36/91 (39.56%) in Psychology, Experimental [2021] Impact factor = 2.903  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection

12. Hsieh, S. S., Chueh, T. Y., Morris, T. P., **Kao, S. C.**, Westfall, D. R., Raine, L. B., ... & Hillman, C. H. (2020). Greater childhood cardiorespiratory fitness is associated with better top-down cognitive control: A midfrontal theta oscillation study. *Psychophysiology*, 57(12), e13678.  
Journal ranking: 15/91 (15.93%) in Psychology, Experimental [2020] Impact factor = 4.016  
[ ] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
13. Raine, L. B., **Kao, S. C.**, Drollette, E. S., Pontifex, M. B., Pindus, D., Hunt, J., ... & Hillman, C. H. (2020). The role of BMI on cognition following acute physical activity in preadolescent children. *Trends in Neuroscience and Education*, 100143.  
Journal ranking: 229/293 (77.99%) in Neurosciences [2020] Impact factor = na  
[ ] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
14. Chaddock-Heyman, L., Weng, T. B., Kienzler, C., Weissshappel, R., Drollette, E. S., Raine, L. B., Westfall, D. R., **Kao, S. C.**, Baniqued, P., Castelli, D. M., Hillman, C. H., & Kramer, A. F. (2020). Brain Network Modularity Predicts Improvements in Cognitive and Scholastic Performance in Children Involved in a Physical Activity Intervention. *Frontiers in Human Neuroscience*, 14, 346.  
Journal ranking: 27/77 (34.42%) in Psychology [2020] Impact factor = 3.169  
[ ] research design [ ] statistical analysis [ ] drafted manuscript [X] revised manuscript [X] data collection
15. Hussey, E. K., Fontes, E. B., Ward, N., Westfall, D. R., **Kao, S. C.**, Kramer, A. F., & Hillman, C. H. (2020). Combined and isolated effects of acute exercise and brain stimulation on executive function in healthy young adults. *Journal of Clinical Medicine*, 9(5), 1410.  
Journal ranking: 39/167 (23.05%) in Medicine, General & Internal [2020] Impact factor = 4.242  
[X] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
16. **Kao, S. C.\***, Cadenas-Sanchez, C., Shigeta, T. T., Walk, A. M., Chang, Y. K., Pontifex, M. B., & Hillman, C. H. (2020). A systematic review of associations of physical activity and cardiorespiratory fitness on P3b. *Psychophysiology*, 5(7), e13425. Recognized as a top cited article 2020-2021 in *Psychophysiology*.  
Journal ranking: 15/91 (15.93%) in Psychology, Experimental [2020] Impact factor = 4.016  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
17. **Kao, S. C.\***, Wang, C. H., & Hillman, C. H. (2020). Acute effects of aerobic exercise on response variability and neuroelectric indices during a serial n-back task. *Brain and Cognition*, 138, 105508  
Journal ranking: 51/91 (55.49%) in Psychology, Experimental [2020] Impact factor = 2.310  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
18. Tsai, Y. J., Huang, C. J., Hung, C. L., **Kao, S. C.**, Lin, C. F., Hsieh, S. S., & Hung, T. M. (2020). Muscular fitness, motor competence, and processing speed in preschool children. *European Journal of Developmental Psychology*, 17(3), 415-431.  
Journal ranking: 54/77 (60.48%) in Psychology, Developmental [2020] Impact factor = 2.081  
[ ] research design [ ] statistical analysis [ ] drafted manuscript [X] revised manuscript [ ] data collection
19. Wang, C. H., Moreau, D., & **Kao, S. C.** (2019). From the lab to the field: The potential applications of dry EEG systems to understand brain-behavior relationship in sports. *Frontiers in Neuroscience*, 13, 893  
Journal ranking: 96/271 (35.24%) in Neurosciences [2019] Impact factor = 3.707  
[X] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection
20. Chen, F. T., Chen, Y. P., Schneider, S., **Kao, S. C.**, Huang, C. M., & Chang, Y. K. (2019). Effect of exercise modes on neural processing of working memory in late middle-aged adults: An fMRI study. *Frontiers in Aging Neuroscience*, 11, 224.  
Journal ranking: 9/51 (16.67%) in Geriatrics & Gerontology [2019] Impact factor = 4.362  
[ ] research design [ ] statistical analysis [ ] drafted manuscript [X] revised manuscript [ ] data collection
21. Wu, C. H., Karageorghis, C. I., Wang, C. C., Chu, C. H., **Kao, S. C.**, Hung, T. M., & Chang, Y. K. (2019). Effects of acute aerobic and resistance exercise on executive function: An ERP study. *Journal of Science and Medicine in Sport*, 22(12), 1367-1372.  
Journal ranking: 12/85 (13.53%) in Sports Sciences [2019] Impact factor = 3.607  
[ ] research design [ ] statistical analysis [ ] drafted manuscript [X] revised manuscript [ ] data collection
22. Pindus, D. M., Drollette, E. D., Raine, L. B., **Kao, S. C.**, Khan, N., Westfall, D., Hamill, M., Shorin, R., Calobrisi, E., John, D., Kramer, A., & Hillman, C. H. (2019) Moving fast, thinking fast: The relations of physical activity levels and bouts to neuroelectric indices of inhibitory control in preadolescents. *Journal of Sport and Health Science*, 8(4), 301-314.  
Journal ranking: 5/85 (5.3%) in Sports Sciences [2019] Impact factor = 5.200  
[ ] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
23. Chaddock-Heyman, L., Erickson, K. I., Kienzler, C., Drollette, E. S., Raine, L. B., **Kao, S. C.**, Bensken, J., Weissshappel, R., Castelli, D. M., Hillman, C. H., & Kramer, A. F. (2018). Physical activity increases white matter microstructure in children. *Frontiers in Neuroscience*, 12, 950.  
Journal ranking: 92/267 (34.27%) in Neurosciences [2018] Impact factor = 3.648

- [ ] research design [ ] statistical analysis [ ] drafted manuscript [X] revised manuscript [X] data collection
24. **Kao, S. C.\***, Drollette, E. S., Ritondale, J. P., Khan, N., & Hillman, C. H. (2018). The acute effects of high-intensity interval training and moderate-intensity continuous exercise on declarative memory and inhibitory control. *Psychology of Sport and Exercise*, *38*, 90-99.  
Journal ranking: 21/83 (25.30%) in Sports Sciences [2018] Impact factor = 2.710  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
25. Raine, L. B., Drollette, E. S., **Kao, S. C.**, Westfall, D. R., Chaddock-Heyman, L., Kramer, A. F., Khan, N. A., & Hillman, C. H. (2018). The association between adiposity, cognitive function, and achievement in children. *Medicine & Science in Sports & Exercise*. *50*(9), 1868-1874.  
Journal ranking: 6/83 (6.63%) in Sports Sciences [2018] Impact factor = 4.478  
[ ] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
26. Chaddock-Heyman, L., Weng, T. B., Kienzler, C., Erickson, K. I., Voss, M. W., Drollette, E. S., Raine, L. B., **Kao, S. C.**, Hillman, C. H., Kramer, A. F. (2018). Scholastic performance and functional connectivity of brain networks in children. *PloS one*, *13*(1), e0190073.  
Journal ranking: 15/64 (23.43%) in Multidisciplinary Sciences [2018] Impact factor = 2.766  
[ ] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
27. Raine, L. B., **Kao, S. C.**, Pindus, D., Westfall, D. R., Shigeta, T. T., Logan, N., Li, J., Sanchez, C., Drollette, E. S., Pontifex, M. B., Khan, N., Kramer, A., Hillman, C. H. (2018). A Large-scale Reanalysis of Childhood Fitness and the Flanker P3-ERP. *Journal of Cognitive Enhancement*, *2*(2), 170-192. <https://doi.org/10.1007/s41465-018-0070-7>.  
Journal ranking: na [2018] Impact factor = na  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
28. Drollette, E. S., Pontifex, M. B., Raine, L. B., Scudder, M. R., Moore, R. D., **Kao, S. C.**, Westfall, D. R., Wu, C. T., Kamijo, K., Castelli, D. M., Khan, N. A., Kramer, A. F., & Hillman, C. H. (2018). Effects of the FITKids physical activity randomized controlled trial on conflict monitoring in youth. *Psychophysiology*, *55*(3), e13017.  
Journal ranking: 14/85 (13.53%) in Psychology, Experimental [2018] Impact factor = 3.378  
[ ] research design [ ] statistical analysis [ ] drafted manuscript [X] revised manuscript [X] data collection
29. **Kao, S. C.\***, Westfall, D. R., Soneson, J., Gurd, B. J., & Hillman, C. H. (2017). Comparison of the acute effects of high-intensity interval training and continuous aerobic walking on inhibitory control. *Psychophysiology*, *54*(9), 1335-1345.  
Journal ranking: 3/14 (14.11%) in Psychology, Experimental [2017] Impact factor = 3.118  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
30. **Kao, S. C.\***, Drollette, E. S., Scudder, M. R., Raine, L. B., Daniel, R. W., Pontifex, N. B., & Hillman, C. H. (2017). Aerobic fitness is associated with cognitive control strategy in preadolescent children. *Journal of Motor Behavior*, *49*(2), 150-162.  
Journal ranking: 55/81 (67.90%) in Sports Sciences [2017] Impact factor = 1.513  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection
31. **Kao, S. C.\***, Westfall, D. R., Parks, A. C., Pontifex, M. B., & Hillman, C. H. (2017). Muscular and aerobic fitness, working memory, and academic achievement in children. *Medicine & Science in Sports & Exercise*, *49*(3), 500-508.  
Journal ranking: 7/81 (8.64%) in Sports Sciences [2017] Impact factor = 4.291  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
32. Westfall, R. W., **Kao, S. C.**, Scudder, M. R., Pontifex, M. B., & Hillman, C. H. (2017). The association between aerobic fitness and congruency sequence effects in preadolescent children. *Brain and Cognition*, *113*, 85-92.  
Journal ranking: 25/85 (29.41%) in Psychology, Experimental [2017] Impact factor = 2.574  
[ ] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
33. Chaddock-Heyman, L., Erickson, K. I., Chappell, M. A., Johnson, C. I., Kienzler, C., Knecht, A., Drollette, E. S., Raine, L. B., Scudder, M. R., **Kao, S. C.**, Hillman, C. H., & Kramer, A. F. (2016). Aerobic fitness is associated with greater hippocampal cerebral blood flow in children. *Developmental Cognitive Neuroscience*, *20*, 52-58.  
Journal ranking: 60/259 (23.16%) in Neurosciences [2016] Impact factor = 4.321  
[ ] research design [ ] statistical analysis [ ] drafted manuscript [X] revised manuscript [X] data collection
34. Luque-Casado, A., Perakakis, P., Hillman, C. H., **Kao, S. C.**, Llorens, F., Guerra, P., & Sanabria, D. (2016). Differences in sustained attention capacity as a function of aerobic fitness. *Medicine & Science in Sports & Exercise*. *48*(5), 887-895.  
Journal ranking: 6/81 (7.40%) in Sports Sciences [2016] Impact factor = 4.141  
[ ] research design [X] statistical analysis [ ] drafted manuscript [X] revised manuscript [ ] data collection
35. Fong, D. Y., Huang, Y. C., Kuo, C. Y., & **Kao, S. C.\***. (2016). The effect of physical activity on the function of executive control in older adults. *Physical Education Journal*, *49*(S), 17-31.  
Journal ranking: na [2016] Impact factor = na

- [ ] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection
36. Hillman, C. H., Khan, N. A., & **Kao, S. C.** (2015). The Relationship of Health Behaviors to Childhood Cognition and Brain Health. *Annals of Nutrition and Metabolism*, 66(Suppl. 3), 1-4.  
Journal ranking: 37/80 (46.25%) in Nutrition & Dietetics [2015] Impact factor = 2.461  
[ ] research design [ ] statistical analysis [ ] drafted manuscript [X] revised manuscript [ ] data collection
37. **Kao, S. C.\***, Huang, C. J., & Hung, T. M. (2014). Neurofeedback training reduces frontal midline theta and improves putting performance in expert golfers. *Journal of Applied Sport Psychology*, 26(3), 271-286.  
Journal ranking: 19/43 (44.18%) in Hospitality, Leisure, Sport & Tourism [2014] Impact factor = 1.062  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
38. **Kao, S. C.\***, Huang, C. J., & Hung, T. M. (2013). Frontal midline theta is a specific indicator of optimal attentional engagement during skilled putting performance. *Journal of Sport & Exercise Psychology*, 35(5), 470-478.  
Journal ranking: 3/39 (7.69%) in Hospitality, Leisure, Sport & Tourism [2013] Impact factor = 2.593  
[X] research design [X] statistical analysis [X] drafted manuscript [X] revised manuscript [X] data collection
39. **Kao, S. C.\***, Huang, C. J., & Hung, T. M. (2010). Biofeedback training and self-control of arousal and attention in sport. *International Journal of Sport & Exercise Psychology (Chinese section)*, 8, 223-245.  
Journal ranking: na [2010] Impact factor = na  
[X] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection
40. **Kao, S. C.\***, Huang, C. J., & Hung, T. M. (2009). EEG signatures of attention in superior sport performance. *Quarterly of Chinese Physical Education*, 23, 1-16.  
Journal ranking: na [2009] Impact factor = na  
[X] research design [ ] statistical analysis [X] drafted manuscript [X] revised manuscript [ ] data collection

#### Abstracts (in print or accepted)

Superscript numbers indicate co-author(s) mentored by the candidate: <sup>1</sup>undergraduate student, <sup>2</sup>graduate student, <sup>3</sup>postdoctoral scientist.

1. Wang, C. H., <sup>2</sup>Baumgartner, N. W., <sup>2</sup>Nagy, C., Fu, H. L., Yang, C. T., & **Kao, S. C.** (2022). The moderating effect of cardiovascular fitness on the detrimental influence of exhaustive exercise on processing capacity underlying cognitive control. The 27th Annual Congress of the European College of Sport Science (ECSS), Sevilla, Spain.
2. Hsieh, W. L., Wu, C. T., **Kao, S. C.**, & Wang, C. H. (2022). From the lab to the field: The relationship between inhibitory control and sports performance in Taekwondo. The 27th Annual Congress of the European College of Sport Science (ECSS), Sevilla, Spain.
3. **Kao, S. C.**, Chen, F. T., Moreau, D., Drollette, E., Amireault, S., Chu, C. H., & Chang, Y. K. (2022). A systematic review and meta-analysis on the acute effects of exercise on P3 amplitude and latency. *Psychophysiology*, 59, S44-45
4. <sup>2</sup>Baumgartner, N., Wang, C. H., Pritt, T., & **Kao, S. C.** (2022). The acute effect of mindful high-intensity interval training on inhibitory control, attention, and cognitive flexibility. *Medicine & Science in Sports & Exercise*, 54(9s), 59-60.
5. **Kao, S. C.**, Chen, F. T., Moreau, D., Drollette, E., Amireault, S., Chu, C. H., Chang, Y. K., & Baumgartner, N. (2022). Acute exercise effects on neurocognitive function: a meta-analysis on P3 amplitude and latency. *Medicine & Science in Sports & Exercise*, 54(9s), 593.
6. Ai, J. Y., Chen, F. T., Hsieh, S. S., **Kao, S. C.**, Hung, T. M., and Chang, Y. K. (2021). A systematic review of evidence on the effects of acute high-intensity interval training on executive function. *International Journal of Sport and Exercise Psychology*, 19(sup), s187.
7. <sup>2</sup>Baumgartner, N., <sup>2</sup>Nagy, C., and **Kao, S. C.** (2021). The effects of an acute bout of aerobic exercise on hippocampal-dependent memory in children. *International Journal of Sport and Exercise Psychology*, 19(sup), s466.
8. Chen, F. T., Soya, H., Nagano-Saito, A., **Kao, S. C.**, and Chang, Y. K. (2021). Effects of exercise modes on white matter microstructure in late midlife: a diffusion tensor imaging study. *International Journal of Sport and Exercise Psychology*, 19(sup), s468.
9. Cheng, M. H., Fu, H. L., Tung, P. C., Yang, C. T., **Kao, S. C.**, and Wang, C. H. (2021). Motor complexity modulates the acute effect of coordinative exercise on cognitive control. *International Journal of Sport and Exercise Psychology*, 19(sup), s305.
10. Fu, H. L., **Kao, S. C.**, Moreau, D., Yang, C. T., and Wang, C. H. (2021). The effects of environmental factor on aerobic exercise-induced neurocognitive changes during cognitive control. *International Journal of Sport and Exercise Psychology*, 19(sup), s306.
11. **Kao, S. C.**, Tsai, Y. J., Hsieh, S. S., Schmitt, S., and Hung, T. M. (2021). The relationship of physical fitness and motor competence with behavioral and neuroelectric indices of attention in preschool children. *International*

- Journal of Sport and Exercise Psychology*, 19(sup), s489.
12. **Kao, S. C.**, <sup>2</sup>Nagy, C., <sup>2</sup>Baumgartner, N., Fu, H. L., Yang, C. T., and Wang, C. H. (2021). Acute effects of moderate-intensity aerobic exercise on inhibitory control and its underlying processing efficiency. *International Journal of Sport and Exercise Psychology*, 19(sup), s490.
  13. Lin, C. C., **Kao, S. C.**, Hsieh, S. S., Chang, Y. K., Huang, C. J., and Hung, T. M. (2021). The unique contribution of motor ability to visuospatial working memory in school-age children evidence from event-related potentials. *International Journal of Sport and Exercise Psychology*, 19(sup), s350.
  14. Wang, C. H., Fu, H. L., Yang, C. T., and **Kao, S. C.** (2021). Systems factorial technology provides new insights on the cognitive superiority of athletes with different domains of expertise. *International Journal of Sport and Exercise Psychology*, 19(sup), s450.
  15. **Kao, S. C.**, <sup>2</sup>Baumgartner, N., <sup>2</sup>Nagy, C., & Wang, C. H. (2021). Unaffected memory consolidation following acute bouts of intense interval and moderate-intensity continuous exercise in young adults. *Journal of Sport & Exercise Psychology*, 43(sup), s73.
  16. <sup>2</sup>Baumgartner, N., <sup>2</sup>Nagy, C., Wang, C. H., & **Kao, S. C.** (2021). Aerobic fitness and task strategy moderate the acute effects of maximum exercise on inhibitory control in young adults. *Journal of Sport & Exercise Psychology*, 43(sup), s54.
  17. <sup>2</sup>Nagy, C., <sup>2</sup>Baumgartner, N., Wang, C. H., & **Kao, S. C.** (2021). The acute effect of moderate-intensity aerobic exercise on resting state EEG oscillations and subsequent divergent creativity performance in young adults. *Journal of Sport & Exercise Psychology*, 43(sup), s80.
  18. Fu, H. L., **Kao, S. C.**, Yang, C. T., & Wang, C. H. (2020, October). Aerobic fitness level modulates workload capacity for faster decisions in young adults. The 25<sup>th</sup> Annual Congress of the European College of Sport Science (ECSS), Sevilla, Spain, International; poster presentation.
  19. Fu, H.-L., **Kao, S. C.**, Moreau, D., Yang, C. T., & Wang, C. H. (2020, November). Exercise enrichment modulates neural oscillations associated with cognitive control. 2020 seminar on sport and exercise psychology of Taiwan (SSEPT), Taipei, Taiwan; oral presentation.
  20. **Kao, S. C.**, Wang, C. H., & Hillman, C. H. (2020). Acute bouts of intense interval and moderate continuous exercise alter neural oscillation during working memory. Cognitive Neuroscience Society annual meeting, Boston MA, USA – March 14-17, 2020. International; oral/poster presentation.
  21. **Kao, S. C.**, Wang, C. H., & Hillman, C. H. Acute effects of aerobic exercise on response variability and neuroelectric indices during a serial n-back task. *Journal of Sport & Exercise Psychology*, 41(sup), s71.
  22. Hussey, E. K., Fontes, E. B., Ward, N., Westfall, D. R., **Kao, S. C.**, Kramer, A. F., & Hillman, C. H. Investigating the impact of acute exercise and brain stimulation on cognitive control in healthy adults. *Medicine & Science in Sports & Exercise*, 51(6), 896.
  23. Raine, L. B., **Kao, S. C.**, Pnidus, D., Westfall, D. R., Drollette, E. S., Shigeta, T. T., Logan, N., Cadenas-Sanchez, C., Li, J., Drollette, E. S., Pontifex, M. B., Khan, N., Kramer, A. F., & Hillman, C. H. (2018). Moving fast, thinking fast: The relations of accelerometer measured physical activity to P3. *Psychophysiology*, 55, S66.
  24. Pnidus, D., Drollette, E. S., Raine, L. B., Khan, N., Westfall, D. R., **Kao, S. C.**, John, D., Kramer, A. F., & Hillman, C. H. (2018). Moving fast, thinking fast: The relations of accelerometer measured physical activity to P3. *Psychophysiology*, 55, S66.
  25. Westfall, D. R., **Kao, S. C.**, Drollette, E. S., Raine, L. B., Kramer, A. F., & Hillman, C. H. (2018). Higher aerobic fitness is associated with upper alpha event-related desynchronization. *Psychophysiology*, 55, S39.
  26. **Kao, S. C.**, Ritondale, J., Kamijo, K., Drollette, E., Khan, N., & Hillman, C. H. (2018). The acute effects of moderate-intensity aerobic exercise and high-intensity interval exercise on working memory. *Cognitive Neuroscience Society*, S80
  27. Pnidus, D., Raine, L. B., Drollette, E. S., Westfall, D. R., **Kao, S. C.**, Khan, N. A., Kramer, A. F., & Hillman, C. H. (2018). Daily intermittent moderate-to-vigorous and vigorous physical activity is related to faster P3 latency in preadolescents. *Cognitive Neuroscience Society*, S72.
  28. Raine, L. B., Drollette, E. S., **Kao, S. C.**, Westfall, D. R., Chaddock-Heyman, L., Kramer, A. F., Khan, N., & Hillman, C. H. (2018). The associations between obesity and visceral adipose tissue with cognitive function and academic achievement in children. *Cognitive Neuroscience Society*, S48-S49.
  29. Westfall, D. R., Raine, L. B., Drollette, E. S., Scudder, M. R., **Kao, S. C.**, Pontifex, M. B., Kramer, A. F., & Hillman, C. H. (2018). Investigation of latent inhibitory control variables and aerobic fitness. *Cognitive Neuroscience Society*, S79.
  30. **Kao, S. C.**, Drollette, E. S., Ritondale, J., & Hillman, C. H. (2017). The effects of acute high-intensity continuous exercise on memory and cognitive control. *Psychophysiology*, 54, S54.
  31. Drollette, E. S., Pontifex, M. B., Raine, L. B., Scudder, M. R., Moore, R. D., **Kao, S. C.**, Castelli, D. M., Khan, N. A., Kramer, A. F., & Hillman, C. H. (2017). Effects of the FITKids randomized controlled trial on cognitive control and conflict monitoring in children. *Medicine & Science in Sports & Exercise*, 49(5S), 308.



32. **Kao, S. C.**, Westfall, D. R., Gurd, B., & Hillman, C. H. (2017). Acute high-intensity interval training and moderate-intensity continuous exercises differentially facilitate cognitive control. *Medicine & Science in Sports & Exercise*, *49(5S)*, 309.
33. Westfall, D. R., **Kao, S. C.**, Scudder, M. R., Pontifex, M. B., & Hillman, C. H. (2016). The association between aerobic fitness and congruency sequence effects in preadolescent children. *Medicine & Science in Sports & Exercise*, *48(5S)*, 1048.
34. **Kao, S. C.**, Park, A. C., Komisarz, C. E., Neufield, M., Pontifex, M. B., & Hillman, C. H. (2016). Cardiorespiratory and muscular fitness is related to working memory and mathematics in preadolescent children. *Medicine & Science in Sports & Exercise*, *48(5S)*, 1047-1048.
35. Scudder, M. R., Drollette, E. S., Raine, L. B., Pontifex, M. B., Moore, R. D., **Kao, S. C.**, Khan, N. A., Kramer, A. F., & Hillman, C. H. (2015). The influence of socioeconomic factors on neuroelectric, cognitive, and academic achievement in preadolescent children. *Psychophysiology*, *52*, S50.
36. Drollette, E. S., Raine, L. B., Scudder, M. R., Pontifex, M. B., Moore, R. D., **Kao, S. C.**, Pindus, D. M., Khan, N. A., Kramer, A. F., & Hillman, C. H. (2015). Dimorphic sex differences in conflict monitoring and the flexible modulation of cognitive control in young children: an ERP investigation. *Psychophysiology*, *52*, S50.
37. Luque-Casado, A., Perakakis, P., Guerra, P., Llorens, F., **Kao, S. C.**, Hillman, C. H., & Sanabria, D. (2015). Sport practice, cardiorespiratory fitness and vigilance in young adults: an event-related brain potential study. *European College of Sport Science*.
38. Khan, K. A., Raine, L. B., Drollette, E. S., Scudder, M. R., **Kao, S. C.**, Kramer, A. F., Donovan, S. M., & Hillman, C. H. (2015). Gestational Deficits have Selectively Negative Long-Term Effects on Cognitive Control among Female Preadolescents. *Journal of the Federation of American Societies for Experimental Biology*, *29*, 900-18.
39. **Kao, S.**, & Hung, T. (2010). Examining attention-related EEG differences between best and the worst shooting performances in consideration of separate aiming times. *International Journal of Psychophysiology*, *77(sup)*, s297-298.
40. Hung, S., Chan, Y., Ho, C., Hung, C., **Kao, S.**, Tsai, Y., Liao, J., & Hung, T. (2010). Physical fitness and event-related potentials in ADHD children. *International Journal of Psychophysiology*, *77(sup)*, s247.
41. Hung, T., Chan, Y., Ho, C., Hung, C., Liao, J., **Kao, S.**, Tsai, Y., & Hung, S. (2010). Motor ability and cognitive performance: Event-related brain potential and task performance indices of executive control in children with attention-deficit / hyperactivity disorder. *International Journal of Psychophysiology*, *77(sup)*, s248.
42. Hung, C., Chan, Y., Ho, C., Liao, J., **Kao, S.**, Tsai, Y., Hung, S., & Hung, T. (2010). An event-related potentials study to examine the relationship between motor ability and inhibitory control in children with ADHD. *International Journal of Psychophysiology*, *77(sup)*, s247-248.
43. Liao, J., Chan, Y., Ho, C., Hung, C., **Kao, S.**, Tsai, Y., Hung, S., & Hung, T. (2010). Physical fitness and neurocognitive function in attention-deficit / hyperactivity disorder (ADHD) children. *International Journal of Psychophysiology*, *77(sup)*, s248.
44. Liao, J., Chan, Y., Ho, C., Hung, C., **Kao, S.**, Tsai, Y., Hung, S., & Hung, T. (2010). Physical fitness and neurocognitive function in attention-deficit / hyperactivity disorder (ADHD) children. *International Journal of Psychophysiology*, *77(sup)*, s248.
45. **Kao, S. C.**, & Hung, T. M. (2010). Comparison of different aiming time on shooting performance and EEG in skilled pistol shooters. *Journal of Sport & Exercise Psychology*, *32(sup)*, s181.

#### Invited Presentations & Symposia (not included in Abstracts)

1. **Kao, S. C.** (2020, July). *The relation of childhood fitness and physical activity to brain and cognition*. Institute of Cognitive Neuroscience, National Central University, Taoyuan, Taiwan, International; Oral presentation (English).
2. **Kao, S. C.** (2019, December). *Acute Exercise Effects on Executive Processes Underlying Learning and Memory*. Department of Physical Education, National Taiwan Normal University, Taipei, Taiwan, International; Oral presentation.
3. **Kao, S. C.** (2019, February). *Childhood physical activity & cognitive*. COREC Fitness Summit. West Lafayette, IN. Local; Oral presentation.
4. **Kao, S. C.** (2018, December). *From a graduate student to an assistant professor in U.S.* Department of Physical Education, National Taiwan Normal University, Taipei, Taiwan, International; Oral presentation.
5. **Kao, S. C.** (2018, December). *Physical activity and childhood cognition*. Department of Physical Education, National Taiwan Normal University, Taipei, Taiwan, International; Oral presentation.



6. **Kao, S. C.** (2018, December). *Exercise - A brain energizer to keep your mind sharp*. Institute of Physical Education, Health & Leisure Studies, National Cheng-Kung University, Tainan, Taiwan. International; Oral presentation.
7. **Kao, S. C.** (2018, December). *My academic journey in U.S. – Physical activity and childhood cognition*. Institute of Physical Education, Health & Leisure Studies, National Cheng-Kung University, Tainan, Taiwan, International; Oral presentation.
8. **Kao, S.**, Shih, C., Chang, C., Hsieh, T., Huang, C., & Hung, T. (2011). *Frontal Midline Theta Differences between Successful and Unsuccessful Golf Putts*. Paper presented at the 13th European Congress of Sport Psychology, Madeira, Portugal.
9. Hung, T., & **Kao, S.** (2011). *Effects of Neurofeedback Training on Competitive Mental State and Golf Putting Performance*. Paper presented at the 13th European Congress of Sport Psychology, Madeira, Portugal.
10. Lin, J., Chen, H., **Kao, S.**, & Hung, T. (2011). *A Comparison of EEG Alpha Power between Successful and Failed Putts for an Amateur Golf Player*. Paper presented at the 13th European Congress of Sport Psychology, Madeira, Portugal.
11. **Kao, S. C.**, & Hung, T. M. (2009). *Biofeedback training and self-control of arousal and attention in sport*. International Sport & Exercise Psychology Conference, Taipei, Taiwan.
12. **Kao, S. C.**, & Hung, T. M. (2009). *The EEG signatures of superior performance*. Paper presented at the 12th International Society of Sport Psychology, Morocco, Marrakesh.
13. Hung, T. M., & **Kao, S. C.** (2009). *Enhance concentration by EEG & HR biofeedback training [Workshop]*. The 12th International Society of Sport Psychology, Morocco, Marrakesh.

### Ad-Hoc Journal Reviewer

Behavioral Brain Research, Brain and Cognition, British Journal of Psychology, Child Development, eLife, European Journal of Sport Science, Human Brain Mapping, International Journal of Psychophysiology, International Journal of Sport & Exercise Psychology, Journal of Clinical Medicine, Journal of Motor Behavior, Journal of Science and Medicine in Sport, Journal of Exercise Science & Fitness, Medicine & Science in Sports & Exercise, Mental Health & Physical Activity, Neuroscience, Neuroscience & Biobehavioral Reviews, PeerJ, Physiology and Behavior, Psychophysiology, Psychology of Sport & Exercise, Psychological Research, Research Quarterly for Exercise & Sport, Scandinavian Journal of Medicine & Science in Sports, Sports Medicine

### Professional Development

Spring 2022	NIH Enrichment Program
Fall 2020	Faculty Success Program
Fall 2017	Understanding NIH workshop
Fall 2017	Understanding NSF workshop
Spring 2017	Writing Effective Fellowship Proposals in Social Science & Humanities
Fall 2014	Mini ERP boot camp
Summer 2010	Sport counseling workshop

### Certificate/License

2017	UIUC center for Teaching Excellence, Graduate Teacher Certificate.
2014	UIUC center for Teaching Excellence, Certificate in Foundations of Teaching.
2013 - Present	Certificate in American Heart Association CPR/First Aid.

### Professional Affiliations

2015 - present	American College of Sports Medicine
2019 - present	North American Society for Psychology of Sport and Physical Activity
2017 - present	Society for Psychophysiological Research
2019 - present	International Society of Sport Psychology
2017 - present	Cognitive Neuroscience Society
2010	International Organization of Psychophysiology

