

# Taren Sanders

RESEARCHER & DATA SCIENTIST

Institute for Positive Psychology and Education, Australian Catholic University

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## Education

### Doctor of Philosophy

WESTERN SYDNEY UNIVERSITY

2016

- Thesis title: Investigating Associations Between Neighbourhood Green Space and Weight Status: A Longitudinal Study of Australian Children Aged 4 to 13 Years Old.

### Bachelor of Health Science (Honours; First Class)

WESTERN SYDNEY UNIVERSITY

2012

- Thesis title: Measuring adolescent boys' physical activity: Bout length and the influence of accelerometer epoch length.

### Bachelor of Health Science (PDHPE)

WESTERN SYDNEY UNIVERSITY

2011

## Employment History

### Deputy Program Leader

INSTITUTE FOR POSITIVE PSYCHOLOGY AND EDUCATION, AUSTRALIAN CATHOLIC UNIVERSITY

2017–Current

- Work with Institute Executive Management to support academic and professional staff to complete their duties.
- Developed and implemented new project management processes within the program, including making agile management strategies standard practice.
- Acting Program Leader Feb–March 2022.

### Research Fellow

INSTITUTE FOR POSITIVE PSYCHOLOGY AND EDUCATION, AUSTRALIAN CATHOLIC UNIVERSITY

2016–Current

- Conduct original, high-impact, and translational research in the areas of health, education, and psychology.
- Overseen the development and evaluation of multiple large-scale school-based research projects, including iPLAY (145 schools) and Transform-Us! (20 schools in NSW). Intervention content I created has been delivered to more than 2,500 teachers and impacted more than 40,000 students.
- Conducted analyses of primary and secondary data, and provided statistical support to colleagues including statistics workshops.
- Worked with industry partners (NSW Department of Education, NSW Health, Sport Australia) to provide project updates and seek input.
- Author and co-author academic outputs, including book chapters, journal articles, and grant applications, as well as non-academic outputs such as stakeholder reports and data visualisations.
- Mentor doctoral and honours students, including reviewing and evaluating their analyses and writing.

## Research Summary

Publications	Citations	h-Index	Mean CNCI	Mean Impact Factor	Funding
31	941	16	2.3	6.8	> \$1 million

## Technical Skills

### Programming Languages

R, PYTHON, STATA, JULIA

### Software Development

R PACKAGES (INCLUDING CRAN SUBMISSION), PYTHON PACKAGES

### Statistical Methods

MACHINE LEARNING (INCL. COMPUTER VISION), MULTILEVEL MODELLING, INTERVENTION EVALUATION, GROWTH CURVE MODELLING

### Research Methods

STUDY DESIGN, INTERVENTION DEVELOPMENT, ETHICS AND RECRUITMENT

# Publications

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## PEER-REVIEWED PUBLICATIONS

*Note:* In health and medicine the last author is considered the ‘senior’ author. Citations from Web of Science; JIF = Journal Impact Factor; CNCI = Category Normalised Citation Index.

Antczak, D., Lonsdale, C., del Pozo Cruz, B., Parker, P., & **Sanders, T.** (2021). Reliability of GENEActiv accelerometers to estimate sleep, physical activity, and sedentary time in children. *International Journal of Behavioral Nutrition and Physical Activity*, 18(1), 73. <https://doi.org/10.1186/s12966-021-01143-6> | Citations: 2; JIF: 6.5; CNCI: 1.7

Noetel, M., Griffith, S., Delaney, O., Harris, N. R., **Sanders, T.**, Parker, P., del Pozo Cruz, B., & Lonsdale, C. (2021). Multimedia Design for Learning: An Overview of Reviews With Meta-Meta-Analysis. *Review of Educational Research*. <https://doi.org/10.3102/00346543211052329> | JIF: 12.6

Parker, P. D., **Sanders, T.**, Anders, J., Parker, R. B., & Duineveld, J. J. (2021). Maternal Judgments of Child Numeracy and Reading Ability Predict Gains in Academic Achievement and Interest. *Child Development*, 92(5), 2020–2034. <https://doi.org/10.1111/cdev.13573> | JIF: 5.9

Lee, J., **Sanders, T.**, Antczak, D., Parker, R., Noetel, M., Parker, P., & Lonsdale, C. (2021). Influences on User Engagement in Online Professional Learning: A Narrative Synthesis and Meta-Analysis. *Review of Educational Research*, 91(4), 518–576. <https://doi.org/10.3102/0034654321997918> | JIF: 12.6

Kennedy, S. G., **Sanders, T.**, Estabrooks, P. A., Smith, J. J., Lonsdale, C., Foster, C., & Lubans, D. R. (2021). Implementation at-scale of school-based physical activity interventions: A systematic review utilizing the RE-AIM framework. *Obesity Reviews*, 22(7). <https://doi.org/10.1111/obr.13184> | Citations: 4; JIF: 9.2; CNCI: 2

Lonsdale, C., **Sanders, T.**, Parker, P., Noetel, M., Hartwig, T., Vasconcellos, D., Lee, J., Antczak, D., Kirwan, M., Morgan, P., Salmon, J., Moodie, M., McKay, H., Bennie, A., Plotnikoff, R. C., Cinelli, R., Greene, D., Peralta, L., Cliff, D., ... Lubans, D. R. (2021). Effect of a Scalable School-Based Intervention on Cardiorespiratory Fitness in Children: A Cluster Randomized Clinical Trial. *JAMA Pediatrics*, 175(7), 680. <https://doi.org/10.1001/jamapediatrics.2021.0417> | Citations: 2; JIF: 16.2; CNCI: 2.5

Parker, P., **Sanders, T.**, Anders, J., Sahdra, B., Shure, N., Jerrim, J., & Cull, N. (2021). Does school average achievement explain the effect of socioeconomic status on math and reading interest? A test of the Information Distortion Model. *Learning and Instruction*, 73, 101432. <https://doi.org/10.1016/j.learninstruc.2020.101432> | Citations: 1; JIF: 5.1; CNCI: 1.5

Noetel, M., Griffith, S., Delaney, O., **Sanders, T.**, Parker, P., del Pozo Cruz, B., & Lonsdale, C. (2021). Video Improves Learning in Higher Education: A Systematic Review. *Review of Educational Research*, 91(2), 204–236. <https://doi.org/10.3102/0034654321990713> | Citations: 4; JIF: 12.6; CNCI: 4

del Pozo Cruz, B., Hartwig, T. B., **Sanders, T.**, Noetel, M., Parker, P., Antczak, D., Lee, J., Lubans, D. R., Bauman, A., Cerin, E., & Lonsdale, C. (2021). The effects of the Australian bushfires on physical activity in children. *Environment International*, 146, 106214. <https://doi.org/10.1016/j.envint.2020.106214> | Citations: 4; JIF: 9.6; CNCI: 2.2

Vella, S. A., Swann, C., Batterham, M., Boydell, K. M., Eckermann, S., Ferguson, H., Fogarty, A., Hurley, D., Liddle, S. K., Lonsdale, C., Miller, A., Noetel, M., Okely, A. D., **Sanders, T.**, Schweickle, M. J., Telenta, J., & Deane, F. P. (2021). An Intervention for Mental Health Literacy and Resilience in Organized Sports. *Medicine and Science in Sports and Exercise*, 53(1), 139–149. <https://doi.org/10.1249/mss.0000000000002433> | Citations: 8; JIF: NA; CNCI: 8.8

Hartwig, T. B., **Sanders, T.**, Vasconcellos, D., Noetel, M., Parker, P. D., Lubans, D. R., Andrade, S., Ávila-García, M., Bartholomew, J., Belton, S., Brooks, N. E., Bugge, A., Caverio-Redondo, I., Christiansen, L. B., Cohen, K., Coppinger, T., Dyrstad, S., Errisuriz, V., Fairclough, S., ... del Pozo Cruz, B. (2021). School-based interventions modestly increase physical activity and cardiorespiratory fitness but are least effective for youth who need them most: An individual participant pooled analysis of 20 controlled trials. *British Journal of Sports Medicine*. <https://doi.org/10.1136/bjsports-2020-102740> | Citations: 12; JIF: 13.8; CNCI: 7.9

Antczak, D., **Sanders, T.**, del Pozo Cruz, B., Parker, P., & Lonsdale, C. (2020). Day-to-day and longer-term longitudinal associations between physical activity, sedentary behavior, and sleep in children. *Sleep*. <https://doi.org/10.1093/sleep/zsaa219> | Citations: 2; JIF: 5.8; CNCI: 1.7

Ronto, R., Rathi, N., Worsley, A., **Sanders, T.**, Lonsdale, C., & Wolfenden, L. (2020). Enablers and barriers to implementation of and compliance with school-based healthy food and beverage policies: A systematic literature review

and meta-synthesis. *Public Health Nutrition*, 23(15), 2840–2855. <https://doi.org/10.1017/S1368980019004865> | Citations: 12; JIF: 4; CNCI: 1.2

Alfonso-Rosa, R. M., García-Hermoso, A., **Sanders, T.**, Parker, P., Oriol-Granado, X., Arnott, H., & del Pozo Cruz, B. (2020). Lifestyle behaviors predict adolescents bullying victimization in low and middle-income countries. *Journal of Affective Disorders*, 273, 364–374. <https://doi.org/10.1016/j.jad.2020.04.065> | Citations: 5; JIF: 4.8; CNCI: 1

Antczak, D., Lonsdale, C., Lee, J., Hilland, T., Duncan, M. J., del Pozo Cruz, B., Hulteen, R. M., Parker, P. D., & **Sanders, T.** (2020). Physical activity and sleep are inconsistently related in healthy children: A systematic review and meta-analysis. *Sleep Medicine Reviews*, 51, 101278. <https://doi.org/10.1016/j.smr.2020.101278> | Citations: 13; JIF: 11.6; CNCI: 1.6

del Pozo-Cruz, B., Perales, F., Parker, P., Lonsdale, C., Noetel, M., Hesketh, K. D., & **Sanders, T.** (2019). Joint physical-activity/screen-time trajectories during early childhood: Socio-demographic predictors and consequences on health-related quality-of-life and socio-emotional outcomes. *International Journal of Behavioral Nutrition and Physical Activity*, 16(1), 55. <https://doi.org/10.1186/s12966-019-0816-3> | Citations: 13; JIF: 6.5; CNCI: 1.6

Vella, S. A., Swann, C., Boydell, K. M., Eckermann, S., Fogarty, A., Hurley, D., Liddle, S. K., Lonsdale, C., **Sanders, T.**, Schweickle, M. J., Telenta, J., & Deane, F. P. (2019). Sports-based mental health promotion in Australia: Formative evaluation. *Psychology of Sport and Exercise*, 45, 101560. <https://doi.org/10.1016/j.psychsport.2019.101560> | Citations: 6; JIF: 4.8; CNCI: 1

Hartwig, T. B., del Pozo-Cruz, B., White, R. L., **Sanders, T.**, Kirwan, M., Parker, P. D., Vasconcellos, D., Lee, J., Owen, K. B., Antczak, D., Lubans, D. R., & Lonsdale, C. (2019). A monitoring system to provide feedback on student physical activity during physical education lessons. *Scandinavian Journal of Medicine & Science in Sports*, 29(9), 1305–1312. <https://doi.org/10.1111/sms.13438> | Citations: 7; JIF: 4.2; CNCI: 1.2

Costigan, S. A., Lubans, D. R., Lonsdale, C., **Sanders, T.**, & del Pozo Cruz, B. (2019). Associations between physical activity intensity and well-being in adolescents. *Preventive Medicine*, 125, 55–61. <https://doi.org/10.1016/j.ypmed.2019.05.009> | Citations: 27; JIF: 4; CNCI: 4.5

**Sanders, T.**, Parker, P. D., del Pozo-Cruz, B., Noetel, M., & Lonsdale, C. (2019). Type of screen time moderates effects on outcomes in 4013 children: Evidence from the Longitudinal Study of Australian Children. *International Journal of Behavioral Nutrition and Physical Activity*, 16(1), 1–10. | Citations: 32; JIF: 6.5; CNCI: 3.9

Vella, S. A., Swann, C., Batterham, M., Boydell, K. M., Eckermann, S., Fogarty, A., Hurley, D., Liddle, S. K., Lonsdale, C., Miller, A., Noetel, M., Okely, A. D., **Sanders, T.**, Telenta, J., & Deane, F. P. (2018). Ahead of the game protocol: A multi-component, community sport-based program targeting prevention, promotion and early intervention for mental health among adolescent males. *BMC Public Health*, 18(1), 390. <https://doi.org/10.1186/s12889-018-5319-7> | Citations: 20; JIF: 3.3; CNCI: 2.2

Stanaway, J. D., Afshin, A., Gakidou, E., Lim, S. S., Abate, D., Abate, K. H., Abbafati, C., Abbasi, N., Abbastabar, H., Abd-Allah, F., Abdela, J., Abdelalim, A., Abdollahpour, I., Abdulkader, R. S., Abebe, M., Abebe, Z., Abera, S. F., Abil, O. Z., Abraha, H. N., ... Murray, C. J. L. (2018). Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990: A systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, 392(10159), 1923–1994. [https://doi.org/10.1016/S0140-6736\(18\)32225-6](https://doi.org/10.1016/S0140-6736(18)32225-6)

Nooijen, C. F. J., Del Pozo-Cruz, B., Nyberg, G., **Sanders, T.**, Galanti, M. R., & Forsell, Y. (2018). Are changes in occupational physical activity level compensated by changes in exercise behavior? *European Journal of Public Health*, 28(5), 940–943. <https://doi.org/10.1093/eurpub/cky007> | Citations: 12; JIF: 3.4; CNCI: 1.3

MacMillan, F., George, E., Feng, X., Merom, D., Bennie, A., Cook, A., **Sanders, T.**, Dwyer, G., Pang, B., Guagliano, J., Kolt, G., & Astell-Burt, T. (2018). Do Natural Experiments of Changes in Neighborhood Built Environment Impact Physical Activity and Diet? A Systematic Review. *International Journal of Environmental Research and Public Health*, 15(2), 217. <https://doi.org/10.3390/ijerph15020217> | Citations: 29; JIF: 3.4; CNCI: 1

Lonsdale, C., **Sanders, T.**, Cohen, K. E., Parker, P., Noetel, M., Hartwig, T., Vasconcellos, D., Kirwan, M., Morgan, P., Salmon, J., Moodie, M., McKay, H., Bennie, A., Plotnikoff, R., Cinelli, R. L., Greene, D., Peralta, L. R., Cliff, D. P., Kolt, G. S., ... Lubans, D. R. (2016). Scaling-up an efficacious school-based physical activity intervention: Study protocol for the “Internet-based Professional Learning to help teachers support Activity in Youth” (iPLAY) cluster randomized

controlled trial and scale-up implementation evaluation. *BMC Public Health*, 16(1), 873. <https://doi.org/10.1186/s12889-016-3243-2> | Citations: 15; JIF: 3.3; CNCI: 1.1

**Sanders, T.**, Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2015). The influence of neighbourhood green space on children's physical activity and screen time: Findings from the longitudinal study of Australian children. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), 126. <https://doi.org/10.1186/s12966-015-0288-z> | Citations: 45; JIF: 6.5; CNCI: 2.3

**Sanders, T.**, Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2015). Greener neighbourhoods, slimmer children? Evidence from 4423 participants aged 6 to 13 years in the Longitudinal Study of Australian children. *International Journal of Obesity*, 39(8), 1224–1229. <https://doi.org/10.1038/ijo.2015.69> | Citations: 40; JIF: 5.1; CNCI: 1.8

**Sanders, T.**, Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2015). Green Space and Child Weight Status: Does Outcome Measurement Matter? Evidence from an Australian Longitudinal Study. *Journal of Obesity*, 2015, 1–8. <https://doi.org/10.1155/2015/194838>

**Sanders, T.**, Cliff, D. P., & Lonsdale, C. (2014). Measuring Adolescent Boys' Physical Activity: Bout Length and the Influence of Accelerometer Epoch Length. *PLoS ONE*, 9(3). <https://doi.org/10.1371/journal.pone.0092040> | Citations: 114; JIF: 3.2; CNCI: 5.9

Lonsdale, C., Rosenkranz, R. R., **Sanders, T.**, Peralta, L. R., Bennie, A., Jackson, B., Taylor, I. M., & Lubans, D. R. (2013). A cluster randomized controlled trial of strategies to increase adolescents' physical activity and motivation in physical education: Results of the Motivating Active Learning in Physical Education (MALP) trial. *Preventive Medicine*, 57(5), 696–702. <https://doi.org/10.1016/j.ypmed.2013.09.003> | Citations: 53; JIF: 4; CNCI: 2.7

Rosenkranz, R. R., Lubans, D. R., Peralta, L. R., Bennie, A., **Sanders, T.**, & Lonsdale, C. (2012). A cluster-randomized controlled trial of strategies to increase adolescents' physical activity and motivation during physical education lessons: The Motivating Active Learning in Physical Education (MALP) trial. *BMC Public Health*, 12(1), 834. <https://doi.org/10.1186/1471-2458-12-834> | Citations: 22; JIF: 3.3; CNCI: 1

## BOOK CHAPTERS

Parker, P., Guo, J., & **Sanders, T.** (2019). Socioeconomic Inequality and Student Outcomes in Australia. In L. Volante, S. V. Schnepf, J. Jerrim, & D. A. Klinger (Eds.), *Socioeconomic Inequality and Student Outcomes: Cross-National Trends, Policies, and Practices* (pp. 189–204). Springer Singapore. [https://doi.org/10.1007/978-981-13-9863-6\\_11](https://doi.org/10.1007/978-981-13-9863-6_11)

## Research Funding

<b>Australian Research Council</b>	\$658,544
CHIEF INVESTIGATOR — DISCOVERY PROJECT DP200101912	2020–2023
SQUARE EYES OR ALL LIES? UNDERSTANDING CHILDREN'S EXPOSURE TO SCREENS.	
<b>NSW Department of Education</b>	\$20,000
CHIEF INVESTIGATOR	2019–2020
IPLAY FOR INCLUSION	
<b>Sport Australia</b>	\$248,802
CHIEF INVESTIGATOR — 'MOVE IT AUS' PARTICIPATION GRANT PROGRAM	2019–2020
IPLAY FOR INCLUSION	
<b>Australian Sports Commission</b>	\$54,546
CHIEF INVESTIGATOR	2019–2019
IPLAY SPORTING SCHOOLS PILOT PROJECT	
<b>Australian Catholic University</b>	\$7,865
CHIEF INVESTIGATOR (LEAD) — FACULTY OF HEALTH SCIENCES RESEARCH PROJECT GRANT SCHEME	2018–2018
INVESTIGATING THE CORRELATES OF CHILDREN'S SCREEN TIME	
<b>NSW Department of Education</b>	\$11,500
CHIEF INVESTIGATOR	2018–2018
IPLAY NUTRITION PROOF-OF-CONCEPT MODULE	

## Awards

- 2013 **Australian Postgraduate Award** Western Sydney University. \$105,000AUD plus tuition fees.
- 2017 **ACU Discipline Winner and National Finalist** 5 Minute Research Pitch.
- 2021 **Excellence and Innovation in Public Health Education and Research** Council of Academic Public Health Institutions Australasia. Team Award
- 2021 **Vice-Chancellor's Staff Excellence Award: Excellence in Research and Research Partnership** Australian Catholic University. Team Award

## Students

### DOCTOR OF PHILOSOPHY

2016–2020	Jane Lee	Assistant Supervisor
2016–2021	Devan Antcazk	Assistant Supervisor
2019–	Katrina Wilhite	Principal Supervisor
2020–	Bridget Booker	Principal Supervisor
2021–	Ella Tremaine	Co-supervisor

### HONOURS

2019–2019	Bridget Booker	Principal Supervisor
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## Conference Presentations

(Presenting author presentations listed only)

Lonsdale, C., Lubans, D., Noetel, M., & **Sanders, T.** (2019). Scaling-up an Efficacious Comprehensive School-based Physical Activity Intervention: Development, Evaluation and Dissemination of the iPLAY Program. *Sports Medicine Australia*.

**Sanders, T.**, Parker, P. D., Del Pozo-Cruz, B., Noetel, M., & Lonsdale, C. (2019). Content of Screen Time Moderates the Effects of Exposure on Physical Health, Psychological and Educational Outcomes in a Longitudinal Study of 4,013 Children. *International Society for Behavioral Nutrition and Physical Activity*.

**Sanders, T.**, Lonsdale, C., & Del Pozo-Cruz, B. (2018). Sleep quality mediates the relationship between screen time and depression in adults: A cross-sectional study of the NHANES 2005-2006 cycle. *International Society for Behavioral Nutrition and Physical Activity*.

**Sanders, T.**, Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2017). Neighbourhood Green Space and Children’s Enjoyment of Physical Activity: Evidence from the Longitudinal Study of Australian Children. *SELF Conference*.

**Sanders, T.**, Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2016). Does Physical Activity Explain the Relationship Between Green Space and Children’s BMI? Mediation Analyses from the Longitudinal Study of Australian Children. *International Society for Physical Activity and Health*.

**Sanders, T.**, Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2015). The Longitudinal Influence of Neighbourhood Green Space on Children’s Physical Activity, Screen Time, and Body Mass Index. *International Society for Behavioral Nutrition and Physical Activity*.

## Invited Talks

- 2018 **Australian Council for Health, Physical Education and Recreation**. Keynote Lecture. K-6 Physical Activity and Health Conference
- 2021 **ResBaz Sydney**. Keystory.

## Selected Software

For a complete list of the software I have developed or contributed to, please see my Github page.

### R PACKAGES

## cloudstoR

[CRAN Link](#)

PROVIDES PROGRAMMATIC ACCESS TO AARNET'S CLOUDSTOR CLOUD STORAGE SERVICE

- Author and Maintainer.
- Available on CRAN - approx 400 downloads per month.

## sleepIPD

[GitHub Link](#)

A STANDARDISED METHOD FOR REPROCESSING ACCELEROMETRY DATA FOR A VERY LARGE SLEEP AND PHYSICAL ACTIVITY

POOLED ANALYSIS

- Author and Maintainer.
- Used by teams all over the world to reprocess data exactly as required for our study.

## gt3x2csv

[GitHub Link](#)

CONVERT ACTIGRAPH GT3X FILES TO CSV, IN A FRACTION OF THE TIME

- Author and Maintainer.
- Approximately 7x faster than using the proprietary software.

## PYTHON PACKAGES

### faceblurring

[GitHub Link](#)

AN IMPLEMENTATION OF A FACE DETECTION MODEL USED TO PROTECT PRIVACY IN AN ARC PROJECT

- Author and Maintainer.
- Working version available, still in development.

## Service

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### University Service

INSTITUTIONAL SERVICE

- Faculty of Health Sciences Research Methods Consultancy
- IPPE Publications Committee

### Guest Journal Reviewer

PROVIDING PEER-REVIEW SUPPORT FOR JOURNALS

- BMC Public Health
- BMJ Open
- Cyberpsychology, Behavior, and Social Networking
- Health and Place
- Health Education Journal
- International Journal of Behavioral Nutrition and Physical Activity
- International Journal of Environmental Research and Public Health
- Journal of Adolescent Health
- Journal of Applied Sport Psychology
- Journal of Science and Medicine in Sport
- Journal of Sport Sciences
- Learning and Individual Differences
- Pediatric Obesity
- Pediatrics
- PLoS One
- Prevention Science
- Psychology of Sport & Exercise
- Scientific Reviews

### Invited Grant Reviewer

PROVIDING PEER-REVIEW SUPPORT FOR GRANT AGENCIES

- Australian Research Council (ARC)
- National Health and Medical Research Council (NHMRC)
- The Netherlands Organisation for Scientific Research (NWO)

## Self-Development

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- 2012 **Multilevel Modeling Master Class.** University of Western Sydney
- 2013 **Social Epidemiology Short Course.** University of Otago, New Zealand
- 2016 **Physical Activity and Public Health Postdoctoral Research Course.** University of South Carolina, USA
- 2016 **Clinical Trials Master Class.** NHMRC Trials Center, University of Sydney
- 2022 **Masters of Data Science (Applied).** University of Adelaide