LUKE STRICKLAND

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ABOUT ME

I'm a scientist and computational modeller. In my current position, I develop biomathematical models of human fatigue. I apply these models to predict and visualize fatigue in the workplace, informing work design. In my previous work, I developed computational models of cognition, in order to understand how people perform cognitively demanding workplace tasks such as air traffic control.

WORK EXPERIENCE

2020-PRESENT

Curtin University
Post-doctoral Research Fellow

Developing and applying biomathematical models of human fatigue. Creating visualizations for stakeholders and multidisciplinary team.

2019

University of Western Australia
Research Associate

Statistical modelling in R and Python. Writing scientific manuscripts. Supervising the research projects of PhD and honours students. Programming experiments.

2016 - 2018

University of Tasmania
Post-doctoral Research Fellow

Coordinating a highly successful research program across three universities. Developing computational cognitive models to understand and predict workplace performance. Programming experiments.

TECHNICAL SKILLS

Advanced R, Python, SQL
Programming

Unix, Git and GitHub, LaTeX
Computing

Dynamic data visualisation and document creation
Computing

Advanced statistical modelling
Statistics

Developing and evaluating bespoke computational models
Statistics

RESEARCH

- Fourteen high-impact publications
- Eleven conference presentations and an invited keynote lecture
- Peer-reviewed R software

EDUCATION

2012 – 2017	**Doctor of Philosophy** DEAN'S LIST Psychology *University of Western Australia*
2011	**Bachelor of Arts, Honours** FIRST CLASS Psychology *University of Western Australia*
2008 – 2010	**Bachelor of Arts, Major in Psychology** *University of Western Australia*

AWARDS

2020-2023	**ARC Discovery Project** *University of Western Australia*
2020	**Curtinnovation Faculty Winner** *Curtin University*
2019	**Research Highlight** *Nature Human Behaviour*
2019	**Early Career Publication Impact Award** *University of Western Australia*
2016-2019	**Collaborative Research Project** *CSIRO, University of Tasmania, UniSA*
2018	**Invited Keynote Presentation** *Heidelberg University*
2017	**Honourable mention, Dean's list, PhD thesis** *University of Western Australia*

REFERENCES

On request

PEER-REVIEWED PUBLICATIONS

Strickland, L., Loft, S., Remington, R.W., & Heathcote, A. (2018). Racing to remember: A theory of decision control in event-based prospective memory *Psychological Review*, *125*, 851-887.

Strickland, L., Heathcote, A., Remington, R.W., & Loft, S. (accepted 13/10/2020). Target learning in event-based prospective memory. *Journal of Experimental Psychology: Learning, Memory & Cognition*.

Strickland, L., Heathcote, A., Remington, R.W., & Loft, S. (2017). Accumulating evidence about what prospective memory costs actually reveal. *Journal of Experimental Psychology: Learning, Memory & Cognition*, *43*, 1616-1629.

Strickland, L., Elliott, D., Wilson, M.D., Loft, S., Neal, A., & Heathcote, A.(2019). Prospective memory in the red zone: Cognitive control and capacity sharing in a complex, multi-stimulus task. *Journal of Experimental Psychology: Applied*, *25*, 695-715.

Strickland, L., Loft, S., & Heathcote, A.(2020). Investigating the effects of ongoing-task bias on prospective memory. *Quarterly Journal of Experimental Psychology*, *73*, 1495-1513.

Boag, R., **Strickland, L.**, Loft., S. & Heathcote, A. (2019). Strategic attention and decision control support prospective memory in a complex dual-task environment *Cognition*, *191*, 103974.

Boag, R., **Strickland, L.**, Heathcote, A., Neal, A., & Loft., S.(2019). Cognitive Control and Capacity for Prospective Memory in Simulated Air Traffic Control *Journal of Experimental Psychology: General*, *148*, 2181-2206.

Heathcote, Lin, Y.-S., Reynolds, A., **Strickland, L.**, Gretton, M., & Matzke, D. (2019). Dynamic models of choice. *Behavior Research Methods*, *51*, 961-985

Wilson, M. D., Ballard, T., **Strickland, L.**, Boeing, A., Cham, B., Griffin, M., & Jorritsma, K. (accepted 12/01/2021). Understanding fatigue in a naval submarine: Applying biomathematical models and workload measurement in an intensive longitudinal design. *Applied Ergonomics*.

Wilson, M. D., **Strickland, L.**, & Ballard, T. (2020). FIPS: An R Package for Biomathematical Modelling of Human Fatigue Related Impairment. *Journal of Open Source Software*.

Wilson, M. D., **Strickland, L.**, Farrell, S., Visser, T. A. W., & Loft, S. (2019). Prospective Memory Performance in Simulated Air Traffic Control: Robust to Interruptions but Impaired by Retention Interval. *Human Factors*.

Wilson, M. D., Boag, R. J., & **Strickland, L.** (2019). All models are wrong, some are useful, but are they reproducible? Commentary on Lee et al. (2019). *Computational Brain & Behavior*, *2*, 239-240.

Lin, Y.-S., & **Strickland, L.** (2019). Evidence accumulation models with R: A practical guide to hierarchical Bayesian methods.*The Quantitative Methods for Psychology*, *16*, 133-153

Strickland, L., Loft, S., & Heathcote, A. (2019). Evidence Accumulation Modeling of Event-Based Prospective Memory. In J. Rummel & M.A. McDaniel (Eds), *Current Issues in Memory: Prospective Memory* (pp. 78-94). London, United Kingdom: Taylor & Francis.