LUKE STRICKLAND

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ABOUT ME

I'm a scientist and computational modeller. In my current position at Curtin's Future of Work Institute, I develop biomathematical models of fatigue. I apply these models to predict human fatigue in the workplace, informing work design. In my previous work, I focused on developing computational models of cognition, in order to understand how people perform cognitively demanding, safety-critical workplace tasks.

WORK EXPERIENCE

2020-PRESENT

Curtin University
Post-doctoral Research Fellow

Developing Bayesian methods to evaluate and apply models of human fatigue. Predicting fatigue to inform rostering decisions.

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 Bayesian methods to estimate the parameters of computational cognitive models and to evaluate the models. Programming experiments.

TECHNICAL SKILLS

Advanced R, Python, Bash, 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

- Twelve 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 Finalist**
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. (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*.

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

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*, *191*, 103974.

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., **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.