Dr Charles Ludowici

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www.charlieludowici.com
www.github.com/cludowici

Research Interests: Vision, psychophysics, cognitive science, use-inspired basic research, attention, crowding, behaviour, eyetracking

Research Tools: Eyelink, R, Python, Matlab, Qualtrics, Mixture Modelling

Education

2016 - 2020: **PhD (Science, Psychology), The University of Sydney**

Temporal Selection in Dynamic Displays: Sensory Information Persists Despite Masking

Supervision: Prof. Alex O. Holcombe

2011 — 2015: **Bachelor of Arts (Psychology Honours, First Class), The University of Sydney**

Scaffolding Individual Differences in Category Learning

Supervision: Dr Micah Goldwater

Scholarships and Funding

2017 - 2019: **Commonwealth Research Training Program**

2017: **Attention Allocation and Binding Supplementary Scholarship**

2017: **Postgraduate Research Support Scheme**

Research Experience

Feb 2020 - Ongoing **Postdoctoral Scholar, The School of Optometry, The University of California, Berkeley**

Psychophysical research into visual function and fixational eye movements using traditional methods in addition to a tracking scanning laser ophthalmoscope. http://selab.berkeley.edu/

Feb 2019 - June 2019 **Visiting PhD student, The Visual Attention Lab, Harvard University**

Eyetracking analysis and explperimental design for research related to medical image perception and prevalence effects on visual categorisation.

Tools: Matlab, R, Eyelink

2016 - 2017 **Research Assistant, Prof. Alex Holcombe, The University of Sydney**

Experimental design and statistical analysis of experiments investigating the temporal properties of vision and the visual system's ability to process multiple stimuli simultaneously.

Tools: R, Python, Matlab, Eyelink.

2014 - 2016 **Research Assistant, Dr Micah Goldwater, The University of Sydney**

Experimental design and statistical analysis of research investigating higher-order cognitive functioning and psychological development.

Tools: R, Qualtrics

Teaching

2016 - 2018 **Tutor, The School of Psychology, The University of Sydney**

Statistics and Research Methods for Psych (PSYC2012), Cognitive and Social Psychology (PSYC2013) and Analytical Thinking (ATHK1001).

2016 - 2016 **Tutor and Lecturer, School of Health Sciences, The University of Sydney**

Quantitative Research Methods in Health (HSBH3018)

Publications

Ludowici, C,. Holcombe, A. O., (Under review) *The Dynamics of Buffered and Triggered Selection from RSVP Streams*

Goldwater, M. B., Gershman, S., Moul, C., Ludowici C., Burton, A., Killer, B., Kuhnert, R., Ridgway, K. (2020). *Children's Understanding of Habitual Behavior* Developmental Science

Conference Presentations

Ludowici, C., Holcombe, A. (2019) *Selection from concurrent RSVP streams: attention shift or buffer read-out?* Poster presented at the Annual Meeting of the Vision Sciences Society, St. Pete Beach

Holcombe, A., Ludowici, C., Haroz, S. (2019) *Is there a reproducibility crisis around here? Maybe not, but we still need to change.* Poster presented at the Annual Meeting of the Vision Sciences Society, St. Pete Beach

Ludowici, C., Holcombe, A. (2017) *Was That a Shift of Attention or Binding in a Buffer?* Talk presented at the 58th Annual Meeting of the Psychonomic Society, Vancouver

Ludowici, C., Holcombe, A. (2017) *System Factorial Technology's Power is Greater for Capacity Than Architecture When Recovering the Processing Qualities of Models That Simulate Lexical Processing Data.* Poster presented at the 58th Annual Meeting of the Psychonomic Society, Vancouver

Ludowici, C., Holcombe, A. (2017) *Not a shift of attention: Buffering and binding of visual stimuli.* Poster presented at the 40th European Conference on Visual Perception, Berlin

Holcombe, A., Ludowici, C. (2017) *When do cues work by summoning attention to a target and when do they work by binding to it?* Talk presented at the 44th Experimental Psychology Conference, Shoal Bay

Ludowici, C., Holcombe, A. , Donkin, C. (2017) *Can SFT identify a model's processing characteristics when faced with reaction time variability?* Talk presented at the 44th Experimental Psychology Conference, Shoal Bay

Goldwater, M., Kurtz, K., Loewenstein, J., Ludowici, C., (2014) *Abstracting a Schema From Comparing and Retrieving a Series of Cases.* Poster presented at the 55th Annual Meeting of the Psychonomic Society, Long Beach, California

Invited Talks

Reproducible Manuscripts with R and R Markdown, Workshop, Macquarie University, Sydney

References

Prof. Jeremy Wolfe
Brigham and Womens Hospital
Harvard Medical School
wolfe@search.bwh.harvard.edu

Prof. Alex Holcombe
The School of Psychology
The University of Sydney
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