

Darren Rhodes

Curriculum Vitae

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Personal Data

D.O.B: 05/01/1987

Nationality: British

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Current Academic Position

Postdoctoral Researcher at the University of Sussex

Supervisor: *Prof. Anil Seth*

Projects: Bayesian Modelling of Perception, Contextual Effects in Temporal Perception, Virtual Reality & Timing, Deep Learning of Temporal Features, Interoceptive Timing.

Professional History

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|-------------------------|--|
| 1/9/2012-01/11/2015 | Ph.D. University of Birmingham, England, UK.
Ph.D. Title: Bayesian Time Perception <ul style="list-style-type: none">• Computational Modelling / Psychophysics• Design and construction of laboratory experiments• Supervision of student interns |
| 16/9/2014-01/02/2015 | Visiting Researcher. NTNU, Trondheim, Norway.
Bayesian Modelling of Speech Perception |
| 01/06/2011 – 30/6/2012 | Research Assistant. Universität Des Saarlandes, Germany & Chinese Academy of Science, Beijing, China. <i>Prof. Hubert Zimmer.</i>
The role of selective attention in visual working memory |
| 10/10/2009 – 01/07/2011 | Internship. Boehm Lab. Bangor University. Wales, UK. <i>Dr. Stephan Boehm.</i>
The role of the temporal lobes in episodic long-term memory |
| 10/09/2009 – 01/07/2011 | Hospital Internship. St. Asaph Stroke Hospital. <i>Prof. Robert Rafal MD.</i>
Interacting with stroke patients and tutoring of MRI/CT scans of Brain anatomy. |
| 05/01/2009 – 01/09/2011 | Senior Oral Presentation Skills Tutor. Bangor University, Wales, UK.
Co-ordination of module and tutors of psychology oral presentation skills. |
| 10/01/2009 – 09/09/2009 | Internship. HIVE Lab. Bangor University. Wales, UK. <i>Dr. Nick Davis.</i>
Non-Invasive Brain stimulation & Computer-Human interfacing. |
| 20/06/2007 – 20/12/2007 | Assistant Director. Manice Education Center. MA, United States.
Experiential education supervisor in a wilderness setting. Administration. |

Education

Higher Education 2008 - 2011: Bangor University – Psychology with Neuroscience (First Class with Honours)

- **Degree Classification** – First Class with honours
- **Undergraduate Thesis** – Supervisor: *Prof. Kimron Shapiro*

Title: Change detection accuracy is influenced by the degree of similarity between novel objects

Secondary School 1998 - 2003: Wood Green High School College of Sport

- **Grades:** 1 A*, 9 A's, 4 B's

Further Education 2007 - 2008: Walsall College of Arts and Humanities

- **Grades:** Diploma in Social Policy (Distinction)

Teaching

University of Birmingham, England:

- Research Methods and Statistics – Undergraduate Workshops
- Neural Basis of Movement – Undergraduate Workshops
- Vision Perception – Undergraduate Workshops / Seminars
- Cognitive Psychology – Undergraduate Workshops
- MATLAB Programming – Postgraduate Workshops
- Mind, Brain & Models – Postgraduate Course

Bangor University, Wales:

- Psychology Oral Presentation Skills – Undergraduate Seminars and Head Mentor
- Psychology Information Technology Skills – Undergraduate Seminars

Manice Education Center, United States:

- Environmental Science – Lectures and Field Seminars

Professional Skills

MATLAB, JASP, Bayesian Statistics, PsychoPy, PsychToolBox, SPSS, Microsoft Office Suite, Movie Production, Stimulus Creation, Web Design, Adobe Illustrator, Apple Office Suite, HTML, Hearing Sensitivity Testing, Visual Sensitivity Testing.

Educational Oversight / Public Engagement

Wood Green Academy Board of Governors: Co-Opted School Governor
Google Science Fair Judging Team: Semi-Final Judge
I'm a Scientist... Get Me Out Of Here! Winner 2016

Professional Affiliations

Timing Research Forum (TRF), Open Science Framework (OSF), Peer Reviewers' Openness Initiative (PRO), European Human Behaviour and Evolution Society, Society for Neuroscience, Cognitive Neuroscience Society.

Reviewer

Scientific Reports, Cognition, Journal of Experimental Psychology: HPP, Behaviour Research & Therapy, Acta Psychologica, Attention, Perception & Psychophysics, Experimental Brain Research, CogSci Meeting.

Collaborative Partners

Prof. Anil Seth, *University of Sussex*; Dr. Warrick Roseboom, *University of Sussex*; Dr. Massimiliano Di Luca, *University of Birmingham*; Dr. Keisuke Suzuki, *University of Sussex*; Dr. Martin Riemer, *DZNE*; Prof. Thomas Wolbers, *DZNE*; Prof. Alan Wing, *University of Birmingham*; Dr. Mark Elliott, *University of Warwick*; Dr. Stuart Derbyshire, *NUS Singapore*; Dr. Maria Wimber, *University of Birmingham*; Dr. Dawn Marie Behne, *NTNU Norway*; Cai Matthews, *Professional Artist*.

Student Supervision

Annabelle Deane, *University of Sussex*
(Undergraduate MSc.)
Min Susan Li, *University of Birmingham* (Postgraduate MSc.)
Sijie Ko, *NUS Singapore* (Undergraduate BSc.)
Sarah Warnes, *University of Birmingham*
(Undergraduate MSc.)
Stephanie Mason, *University of Birmingham*
(Undergraduate MSc.) 2013.

Grants

£2000: MATLAB Workshop funding – NTNU, Norway.
£5000: Visiting Researcher Fellowship – NTNU, Norway.
600€: Timely Conference Funding – March. 2014.
500€: Timely Travel Conference Scholarship – Sept. 2013.
500€: Timely Travel Conference Scholarship – Feb. 2013.
£500: HIVE internship – May. 2009.

Awards

Wellcome Trust: I'm a Scientist... Get Me Out Of Here! Winner 2016
Cognitive Neuroscience Departmental Prize
Best Poster: Timely Conference 2014

Conference & Symposium Organization

Symposium: RPPW 2017 (Birmingham City University) – Bayesian Time Perception

Scientific Publications

Di Luca, M. & **Rhodes, D.** (2016). Optimal Perceived Timing: Integrating Sensory Information with Dynamically Updated Expectations. *Nature Scientific Reports*.
Rhodes, D. & Di Luca, M. (2016). Temporal Regularity of the Environment Drives Time Perception. *PLoS ONE*.
Riemer, M., **Rhodes, D.**, & Wolbers, T. (2016). Systematic Underproduction of Time is Independent of Judgment Certainty. *Neural Plasticity*.
Li, M., **Rhodes, D.** & Di Luca, M. (2016). For The Last Time: Temporal Sensitivity and Perceived Timing of the Final Stimulus in an Isochronous Sequence, *Timing & Time Perception*.
Rhodes, D. & Woodgate, P.J.W. (2015). Guidance of Movements by Prior Experience: A Bayesian Account of Reach Performance. *The Journal of Neuroscience*, 35(2). 439-441.

Papers on the way

Rhodes, D. & Di Luca, M. (under review). Human perceived timing follows principles of Bayesian inference.
Rhodes, D. (under review). Bayesian Inference in Human Time Perception.
Rhodes, D., Li, M., & Di Luca, M. (in submission). Changing Expectations in Temporal Perception.
Rhodes, D., Roseboom, W.* & Seth, A.K. (in submission). Prior Acquisition, Maintenance, and Contingency in Perceptual Bayesian Inference.
Rhodes, D. (in prep). What are we Really Measuring in Time Perception Tasks?
Rhodes, D. & Roach, N. (in prep). Bayesian models of time perception
Roseboom, W., **Rhodes, D.** & Seth, A.K. (in prep). Serial Dependence for Multisensory Relative Timing is not Sensory Adaptation.
Rhodes, D., & **Roseboom, W.** (in prep). A Primer for Bayesian Decision Theory in Psychological Science.
*Co-First Authored Paper

Oral & Poster Presentations

Rhodes, D., Seth, A.K., & Roseboom, W. (2017, January). Dynamic Bayesian Models for Interval Timing. Talk presented at EPS Time Perception Workshop, Liverpool, UK.
Rhodes, D., Seth, A.K., & Roseboom, W. (2016, October). Dynamic Bayesian Models for Time and Timing. Talk presented at Time in Tokyo 2016, Tokyo, Japan.
Roseboom, W., Seth, A.K., & **Rhodes, D.** (2016, October). Death to the Internal Clock "Model". Talk presented at Time in Tokyo 2016, Tokyo, Japan.
Rhodes, D., Roseboom, W. & Seth, A.K. (2016, August). Multiple modality dependent priors in human temporal perception. Talk presented at European Conference of Visual Perception 2016, Barcelona, Spain.
Roseboom, W., **Rhodes, D.** & Seth, A.K. (2016, August). Serial dependence for multisensory relative timing is not sensory adaptation. Talk presented at European Conference of Visual Perception 2016, Barcelona, Spain.
Rhodes, D. (2014, March). Bayesian perception of isochronous sequences. Talk presented at Timely Conference 2014, Corfu, Greece.
Di Luca, M., and **Rhodes, D.** (2014, January). Multisensory temporal expectations. Experimental Psychology Society, London Meeting.
Rhodes, D. & Di Luca, M. (2013, October). Exposure to anisochronous rhythms negates the Bayesian prior effect on temporal expectations. Poster presented at TIMELY workshop, Granada, Spain.

Rhodes, D. (2013, September). Bayesian perception of isochronous sequences. Talk at RPPW 2013, Birmingham, UK.

Di Luca, M., and **Rhodes, D.** (2014, January). Multisensory temporal expectations. Experimental Psychology Society, London Meeting.

Rhodes, D. & Di Luca, M. (2013, August). Time and time again: Isochronous sequences create temporal expectations. Poster presented at ECVF 2013, Bremen, Germany.

Rhodes, D. & Di Luca, M. (2013, February). Time and time again: Repeated stimuli create temporal expectations. Poster presented at TIMELY workshop and conference, Corfu, Greece.

Rhodes, D. (2011, March). Change-detection accuracy is influenced by the degree of similarity between novel objects. Talk at the Welsh branch of the British Psychological Society's Annual Conference, Swansea, Wales.

Rhodes, D. (2011). Change-detection accuracy is influenced by the degree of similarity between novel objects. Undergraduate Thesis.

Invited Speaker

09/12/2016 – University of Copenhagen, Denmark, UK. Dynamic Bayesian Models of Time and Timing. Host: Claus Bundesen & Signe Vangkilde

17/09/2014 – NTNU, Norway. On the measurement of temporal properties of stimuli. Host: Dawn Behne.

26/03/2014 – Swansea University, Wales, UK. Multisensory Temporal Expectations. Host: Christoph Weidemann

Referees

Prof. Anil Seth

Dr. Massimiliano Di Luca

Prof. Dawn Marie Behne

Further details available on request.