

# Lina Teichmann

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## EDUCATION

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- 02/2016 – 02/2019 **Macquarie University, Department of Cognitive Science, Sydney, Australia**  
PhD. Thesis title: *Associations, expectations and meaning: Decoding the neural processes underlying conceptual representations*. Supervisors: Prof. Anina Rich, Dr. Thomas Carlson.  
Date of award: 18/09/2019
- 01/2015 – 01/2016 Master of Research. Thesis title: *Long term associations and serial recall: Using synaesthesia to probe memory for sequences*. Supervisors: Prof. Anina Rich, Dr. Mark Nieuwenstein, Dr. Thomas Carlson
- 09/2013 – 09/2014 **University of Groningen, Faculty of Behavioural and Social Sciences, Groningen, The Netherlands**  
Master of Science. Thesis title: *Red, green, blue equals 1,2,3: Investigating the bidirectionality of digit-colour synaesthesia*. Supervisors: Dr. Mark Nieuwenstein, Prof. Anina Rich
- 09/2010 – 09/2013 Bachelor of Science. Supervisor: Dr. Mark Nieuwenstein

## PROFESSIONAL APPOINTMENTS

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- 01/2020 – Present **National Institute of Mental Health, Laboratory of Brain and Cognition, Bethesda, MD, USA**  
Post-doctoral Visiting Fellow  
PI: Dr. Chris Baker
- 02/2019 – 10/2019 **Macquarie University, Department of Cognitive Science, Sydney, Australia**  
Research Assistant [Part-time]  
PIs: Prof. Anina Rich, Dr. Matthew Crossley
- Macquarie University, Department of Psychology, Sydney, Australia**  
Research Assistant [Part-time]  
PI: Dr. Kim Curby

## PEER-REVIEWED PUBLICATIONS

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1. **Teichmann, L.**, Moerel, D., Rich, A. N., Baker, C. I. (Registered Report Stage 1 – accepted 2021, Stage 2 – accepted 2022). The nature of neural object representations during dynamic occlusion. *Cortex*, in print.
2. **Teichmann, L.**, Moerel, D., Baker, C. I., Grootswagers, T. (2022). An empirically-driven guide on using Bayes Factors for M/EEG decoding. *Aperture Neuro*, 1(8) 1-10.
3. **Teichmann, L.**, Edwards, G., Baker, C. I. (2021). Resolving visual motion through perceptual gaps. *Trends in Cognitive Science*, 25(11), 978-991.

4. **Teichmann, L.**, Grootswagers, T., Moerel, D., Carlson, T. A., & Rich, A. N. (2021). Temporal dissociation of neural activity underlying synaesthetic and perceptual colours. *Proceedings of the National Academy of Sciences*, 118(6).
5. **Teichmann, L.**, Quek, G. L., Robinson, A. K., Grootswagers, T., Carlson, T. A., & Rich, A. N. (2020). The influence of object-color knowledge on emerging object representations in the brain. *Journal of Neuroscience*, 40(35), 6779-6789.
6. Wardle, S. G., Taubert, J., **Teichmann, L.**, Baker, C. I. (2020). Rapid and dynamic processing of face pareidolia in the human brain. *Nature Communications*, 11(1), 1-14.
7. **Teichmann, L.**, Grootswagers, T., Carlson, T. A., & Rich, A. N. (2019). Seeing versus knowing: The temporal dynamics of real and implied colour processing in the human brain. *NeuroImage* 200, 373-381.
8. **Teichmann, L.**, Grootswagers, T., Carlson, T. A., & Rich, A. N. (2018). Decoding digits and dice with Magnetoencephalography: Evidence for a shared representation of magnitude. *Journal of Cognitive Neuroscience*, 30(7), 999-1010.
9. Coltheart, M., Cox, R., Sowman, P., Morgan, H., Barnier, A., Langdon, R., Connaughton, E., **Teichmann, L.**, Williams, N., & Polito, V., (2018). Belief, delusion, hypnosis, and the right dorsolateral prefrontal cortex: A transcranial magnetic stimulation study. *Cortex*, 101, 234-248.
10. **Teichmann, A. L.**, Nieuwenstein, M. R., & Rich, A. N. (2017). Digit-colour synaesthesia only enhances memory for colours in a specific context: A new method of duration thresholds to measure serial recall. *Journal of Experimental Psychology: Human Perception and Performance*, 43(8), 1494-1503.
11. de Wit, B., Badcock, N. A., Grootswagers, T., Hardwick, K., **Teichmann, L.**, Wehrman, J., Williams, M., & Kaplan, D. M. (2017). Neurogaming Technology Meets Neuroscience Education: A Cost-Effective, Scalable, and Highly Portable Undergraduate Teaching Laboratory for Neuroscience. *Journal of Undergraduate Neuroscience Education (JUNE)*. 15(2): A104-A109.
12. **Teichmann, A. L.**, Nieuwenstein, M. R., & Rich, A. N. (2015). Red, green, blue equals 1, 2, 3: Digit-color synesthetes can use structured digit information to boost recall of color sequences. *Cognitive Neuroscience*, 6(2-3), 100-110.

## CONFERENCE PRESENTATIONS

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1. **Teichmann, L.\***, Moerel, D.\*, Rich, A. N., Baker, C. I. (2021). How are objects represented during dynamic occlusion? *Vision Science Society Annual Meeting, virtual event* [Poster].
2. **Teichmann, L.**, Quek, G., Robinson, A., Grootswagers, T., Carlson, T., Rich, A. (2018). Yellow strawberries and red bananas: Examining the temporal dynamics of object-colour knowledge. *8<sup>th</sup> Australasian Cognitive Neuroscience Conference, Melbourne, Australia* [Talk].
3. **Teichmann, L.**, Grootswagers, T., Carlson, T., Rich, A. (2018). Tomatoes are red, cucumbers are green: Decoding the temporal dynamics of object-colour knowledge using Magnetoencephalography. *Vision Science Society Annual Meeting, St Pete, FL, USA* [Poster].
4. **Teichmann, L.**, Grootswagers, T., Carlson, T., Rich, A. (2017). Seeing colour where there is none: Decoding the implied colour of grey-scale objects using MEG. *40<sup>th</sup> European Conference on Visual Perception (ECVP), Berlin, Germany* [Talk].
5. **Teichmann, L.**, Grootswagers, T., Carlson, T., Rich, A. (2017). Decoding digits and dice with Magnetoencephalography: Evidence for a shared representation of magnitude. *13<sup>th</sup> International Conference on Cognitive Neuroscience (ICON-XIII), Amsterdam, The Netherlands* [Poster].
6. **Teichmann, L.**, Grootswagers, T., Carlson, T., & Rich, A. (2017). Decoding Digits and Dice – Evidence for a format-independent representation of magnitude. *Brain and Mind Centre Symposium, University of Sydney, Sydney* [Poster].
7. **Teichmann, L.**, Grootswagers, T., Carlson, T., & Rich, A. (2017). Seeing colour where there is none: Decoding the implied colour of grey-scale objects using MEG. *Neuroscience Workshop Saclay: Neural Circuits and Behaviour - from cells to connectivity and function, Paris, France* [Talk].

8. **Teichmann, L.** (2017). *The temporal dynamics of real and implied colour processing in the human brain: An MEG decoding study.* ARC Centre of Excellence in Cognition and its Disorders-KIT MEG Workshop, Macquarie University, Sydney, Australia [Talk].
9. **Teichmann, L.,** Grootswagers, T., Carlson, T., & Rich, A. (2017). *Seeing colour where there is none: Decoding the implied colour of grey-scale objects using MEG.* ARC Centre of Excellence in Cognition and its Disorders Annual Workshop, Hunter Valley, Australia [Talk].
10. **Teichmann, L.,** Carlson, T., & Rich, A.N. (2016). *Decoding digits and dice: How long does it take to access magnitude?* ARC Centre of Excellence in Cognition and its Disorders Annual Workshop, Leura, Australia [Poster].
11. **Teichmann, L.,** Grootswagers, T., Carlson, T., Rich, A. (2016). *Decoding dice and digits with Magnetoencephalography: How long does it take to access magnitude?* 6<sup>th</sup> Australasian Cognitive Neuroscience Conference, Shoal Bay, Australia [Talk].
12. **Teichmann L.,** Nieuwenstein M., Rich A. (2015). *Red, green, blue equals 1, 2, 3: Investigating the bidirectionality of digit-colour synaesthesia.* 12<sup>th</sup> International Conference on Cognitive Neuroscience (ICON-XII), Brisbane, Australia [Poster].
13. **Teichmann, L.,** Nieuwenstein, M., & Rich, A. (2015). *Long term associations and serial recall: Using synaesthesia to probe memory for sequences.* ARC Centre of Excellence in Cognition and its Disorders Annual Workshop, Macquarie University, Sydney [Poster].

## INVITED TALKS

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|         |  |
|---------|--|
| 12/2021 | Brain Dynamics Lab, University of Salzburg, Salzburg, Austria  |
| 03/2021 | Fellows Afternoon Neuroscience Seminar, National Institute of Mental Health, Bethesda, USA   |
| 11/2018 | Donders Institute for Brain, Cognition, and Behaviour, Nijmegen, the Netherlands   |
| 06/2018 | Parvizi Lab, Stanford University, Palo Alto, USA   |
| 05/2018 | Kanwisher Lab, the Massachusetts Institute of Technology (MIT), Cambridge, USA   |
| 05/2018 | Harvard Vision Lab, Harvard University, Cambridge, USA   |
| 01/2017 | French National Institute for Health and Medical Research (INSERM), Cognitive Neuroimaging Unit, NeuroSpin Research Centre, Saclay, France |
| 01/2017 | Department of Experimental Psychology, University of Groningen, the Netherlands  |

## SCHOLARSHIPS & FUNDING

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| 2020 | Intramural Visiting Research Fellowship. National Institute of Mental Health.   |
| 2018 | Postgraduate Research Fund Faculty of Human Sciences, Macquarie University for conference travel and laboratory visits.   |
| 2017 | Australian Research Council Centre of Excellence in Cognition and its Disorders (CCD) Student Exchange Scheme 2017: “Combining reach-to-touch methods and MEG to investigate neural correlates of the operational momentum effect”. |
| 2015 | International Macquarie University Research Training Program Scholarship (Masters and PhD).   |
| 2013 | Marco Polo Travel Grant, University of Groningen for a research internship at Macquarie University (Australia).   |
| 2012 | Marco Polo Travel Grant, University of Groningen for a semester abroad at Queen’s University (Canada).  |

## AWARDS

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| 2019 | Macquarie University Research Excellence Awards. Finalist for the Excellence in Higher Degree Research Award for Human and Social Science. |
| 2018 | Macquarie University Higher Degree Research Excellence Award. Winner of the Excellence Award for the Faculty of Human Sciences.            |
| 2018 | Australasian Cognitive Neuroscience Society (ACNS) Student Travel Award (2018)   |
| 2017 | ARC Centre of Excellence in Cognition and its Disorders (CCD) Annual Workshop Joint Winner of Best PhD Poster Award                        |
| 2016 | CCD Annual Workshop Highly Commended Poster Award  |
| 2016 | CCD Excellence in Research Student Award: Outstanding 2015 Publication   |
| 2015 | CCD Annual Workshop Best Postgrad Poster Award   |

## ADDITIONAL RESEARCH EXPERIENCE

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### Extended lab visits

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| 05/2017 – 08/2017 | <b>Cognitive Neuroimaging Lab, NeuroSpin</b> , Saclay, France. Advisor: Prof. Stanislas Dehaene (funded by CCD student exchange grant)                  |
| 01/2014 – 08/2014 | <b>Perception in Action Research Centre, Macquarie University</b> , Sydney, Australia. Advisor: Prof. Anina Rich (supported by Marco Polo travel grant) |

### Casual research assistant positions

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| 2018        | Examining associations between actions and visual cues with MEG. PI: Dr. Simmy Poonian               |
| 2017        | Examining the temporal dynamics of face processing using MEG. PI: Dr. Susan Wardle                   |
| 2016 – 2017 | Investigating the neural correlates of hypnosis using TMS. PI: Emer. Prof. Max Coltheart             |
| 2016        | Identifying the neural correlates of feature-selective attention with TMS. PI: Dr. Alexandra Woolgar |
| 2015 – 2018 | Investigating the impact of western-style diets on memory functions. PI: Prof. Richard Stevenson     |

## TEACHING EXPERIENCE

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| 2021        | Teaching assistant for <i>Deep Learning Summer School</i> . Neuromatch, global & virtual initiative.  |
| 2016 – 2019 | Tutor for <i>COGS100 Introduction to Cognitive and Brain Sciences</i> , Macquarie University, Sydney, Australia. Course convenor: Prof. Mark Williams         |
| 2016        | Tutor for <i>COGS101 Delusions and Disorders of the Mind and Brain</i> , Macquarie University, Sydney, Australia. Course convenor: Prof. Anne Castles         |
| 2015 – 2016 | Tutor for <i>PSYC352 Appetite – The Psychology of Eating and Drinking</i> , Macquarie University, Sydney, Australia. Course convenor: Prof. Richard Stevenson |

## SCIENCE OUTREACH & COMMUNICATION

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1. Public Lecture Colour Society of Australia (NSW branch): Yellow tomatoes and red bananas - what does synaesthesia tell us about object-colour knowledge? (September, 2018)
2. Synaesthesia interviews
  - UNSW Art and Design Students, Sydney, via phone (August, 2018)
  - Rockport Fulton High School, Texas, via email (March, 2017)

- American School Tokyo for Science Day via video-call (February, 2016)
  - High school science project (USA) via email (January, 2016)
  - Honi Soit Newspaper of University of Sydney via email (November, 2015)
  - Media Class Sydney University for a video documentary (October, 2015)
3. Science volunteering
- Neuromatch Deep Learning Summer School (2021). Project teaching assistant.
  - BrainPost Neuroscience Blog writer (2021-Present). Summarizing recent scientific papers for the general public.
  - Neuromatch Summer School (2020). Content reviewer and volunteer for outreach team.
  - Open Day Macquarie University (2018). Cognitive Science volunteer.
  - Seminar Coordination ARC Centre of Excellence for Cognition and its Disorders (2017).
  - Neuroscience for Kindy Mona Vale Primary School (2017). Perception in Action Research Centre volunteer.
  - Taster Day for Health and Medical Science Macquarie University (2016). Cognitive Science Presentation.
  - High School Work Experience ARC Centre of Excellence for Cognition and its Disorders (2016). Higher Degree Research volunteer.
  - 12th International Conference on Cognitive Neuroscience (ICON) Brisbane (2014). Conference volunteer.

## ACADEMIC REFERENCES

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### **Dr. Chris Baker**

Laboratory of Brain and Cognition, Section on Learning and Plasticity  
 National Institutes of Health, USA  
 Email: [bakerchris@mail.nih.gov](mailto:bakerchris@mail.nih.gov)

### **Prof. Anina Rich**

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 Macquarie University, Australia  
 Email: [anina.rich@mq.edu.au](mailto:anina.rich@mq.edu.au)