# Lina Teichmann

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## EDUCATION

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

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

(* = equal contribution)

1. Corriveau, A.*, Kidder, A.*, **Teichmann, L.**, Wardle, S., Baker, C. I. (2023). Sustained neural representations of personally familiar people and places during cued recall. *Cortex*, 158, 71-82.
2. **Teichmann, L.***, Moerel, D.*, Rich, A. N., Baker, C. I. (2022). The nature of neural object representations during dynamic occlusion. *Cortex*, 153, 66-86.

3. **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.
4. Curby, K. M., & **Teichmann, L.** (2022). The time course of holistic processing is similar for face and non-face Gestalt stimuli. *Attention, Perception, & Psychophysics*, 84, 1234-1247.
5. **Teichmann, L.,** Edwards, G., Baker, C. I. (2021). Resolving visual motion through perceptual gaps. *Trends in Cognitive Science,* 25(11), 978-991.
6. **Teichmann, L.**, Grootswagers, T., Moerel, D., Carlson, T. A., & Rich, A. N. (2021). Temporal dissocation of neural activity underlying synaesthetic and perceptual colours. *Proceedings of the National Academy of Sciences,* 118(6).
7. **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.
8. 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.
9. **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.
10. **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.
11. 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.
12. **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.
13. 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.*
14. **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

1. **Teichmann, L.**, Hebart, M., Baker, C. I. (2022). How behaviorally-relevant object dimensions unfold over time during visual processing. *Society for Neuroscience Meeting, San Diego, USA* [Talk].
2. **Teichmann, L.**, Behel, A. K., Edwards, G., Baker, C. I. (2022). Visual integration plays a critical role when processing motion through periods of occlusion. *European Conference on Visual Perception, Nijmegen, The Netherlands.* [Talk].
3. **Teichmann, L.**, Hebart, M., Baker, C. I. (2022). The temporal dynamics underlying behaviorally-relevant object properties during visual perception. *Organization for Human Brain Mapping, Glasgow, Scotland.* [Talk & Poster].
4. **Teichmann, L.*,** Moerel, D.*, Rich, A. N., Baker, C. I. (2022). The temporal dynamics of object representation during dynamic occlusion. *Vision Science Society Annual Meeting, St Pete, FL, USA.* [Talk].
5. **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].
6. **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. *8th Australasian Cognitive Neuroscience Conference, Melbourne, Australia* [Talk].

7. **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].
8. **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. *40th European Conference on Visual Perception (ECVP), Berlin, Germany* [Talk].
9. **Teichmann, L.**, Grootswagers, T., Carlson, T., Rich, A. (2017). Decoding digits and dice with Magnetoencephalography: Evidence for a shared representation of magnitude. *13th International Conference on Cognitive Neuroscience (ICON-XIII), Amsterdam, The Netherlands* [Poster].
10. **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].
11. **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].
12. **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].
13. **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].
14. **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].
15. **Teichmann, L.**, Grootswagers, T., Carlson, T., Rich, A. (2016). Decoding dice and digits with Magnetoencephalography: How long does it take to access magnitude? *6th Australasian Cognitive Neuroscience Conference, Shoal Bay, Australia* [Talk].
16. **Teichmann L.,** Nieuwenstein M., Rich A. (2015). Red, green, blue equals 1, 2, 3: Investigating the bidirectionality of digit-colour synaesthesia. *12th International Conference on Cognitive Neuroscience (ICON-XII), Brisbane, Australia* [Poster].
17. **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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| 08/2022 | MRC Cognition and Brain Sciences Unit, University of Cambridge, UK |
| 08/2022 | Department of Cognitive Neuroscience, University of Maastricht, the Netherlands |
| 06/2022 | Visual and Cognitive Neuroscience Lab, University of Fribourg, Switzerland |
| 06/2022 | Brain Mind Institute, Swiss Federal Institute of Technology, Lausanne, Switzerland |
| 06/2022 | Applied Face Cognition Lab, University of Lausanne, Switzerland |
| 06/2022 | Vision and Cognition Lab, University of Tubingen, Germany |
| 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 |

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| 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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| 2022 | Merit Award Organization for Human Brain Mapping |
| 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

**Extended lab visits**

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| 05/2017 – 08/2017 | **Cognitive Neuroimaging Lab, NeuroSpin**, Saclay, France. Advisor: Prof. Stanislas Dehaene (funded by CCD student exchange grant) |
| 01/2014 – 08/2014 | **Perception in Action Research Centre, Macquarie University**, 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 |

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

## CONTINUED LEARNING

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| 2022 | Scikit-learn course on machine learning |
| 2021 | BIOF509: Applied Machine Learning (Academic Program at NIH) |

## SCIENCE OUTREACH & COMMUNICATION

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

**Dr. Chris Baker**
Laboratory of Brain and Cognition, Section on Learning and Plasticity
National Institutes of Health, USA
Email: bakerchris@mail.nih.gov

**Prof. Anina Rich**
Department of Cognitive Science
Macquarie University, Australia
Email: anina.rich@mq.edu.au