

## Rosanne Rademaker, PhD

rosanne.rademaker@gmail.com  
sites.google.com/site/rosannerademaker

### Education

- 2016–present Post-doctoral researcher (supervisor: John Serences)  
Psychology department, University of California San Diego, USA
- 2014–2017 Research collaboration with Pascal Mamassian, Ecole Normale Supérieure, Paris, France  
Result was a PhD-thesis chapter with a computational model of visual short-term memory
- 2010–2015 PhD in cognitive neuroscience (supervisors: Alexander Sack & Peter De Weerd)  
Cognitive neuroscience department, Maastricht University, The Netherlands
- 2014 European summer school in visual neuroscience, Schloss Rauischholzhausen, Germany  
Funded by the Universities of Magdeburg, Marburg, & Giessen
- 2013 Two-month visit in the lab of Frank Tong, Vanderbilt University, Nashville, USA
- 2012–2015 Visiting graduate student in the visual computation lab (supervisor: Janneke Jehee)  
Donders Institute for Brain, Cognition and Behavior, Nijmegen, The Netherlands
- 2011–2014 Research collaboration with Dr. Daw-An Wu, California Institute of Technology, USA  
Result was an empirical publication on tool- and body-representations
- 2008–2010 MSc research internship (8 months) & subsequent position as visiting scholar (10 months) in  
the lab of Frank Tong, Vanderbilt University, Nashville, USA
- 2007–2009 Research master in neuropsychology (honors)  
Faculty of psychology & neuroscience, Maastricht University, The Netherlands
- 2002–2006 Bachelor of Science in psychology  
Faculty of behavioral and social sciences, University of Groningen, The Netherlands
- 1995–2001 VWO diploma (university preparatory highschool), Scholengemeenschap 'De Hogeberg',  
Texel, The Netherlands

### Awards

- 2017–2020 Marie Skłodowska-Curie Individual Fellowship (H2020-MSCA-IF-2016), European Union (role:  
postdoc, €260,929.80), start date 01.01.2018
- 2019 Travel award for the 2019 Organization for Computational Neuroscience (OCNS) meeting in  
Barcelona (€700)
- 2019 Dependent Care Professional Travel Grant for postdoctoral scholars, awarded by UCSD to  
finance professional travel with a dependent (\$1200)
- 2018 Chancellor's award for Excellence in Postdoctoral Scholar Mentoring to JT Serences (\$1000),  
plus a cash award (\$500) to the principal nominating postdoctoral scholar RL Rademaker
- 2017 Dependent Care Professional Travel Grant for postdoctoral scholars, awarded by UCSD to  
finance professional travel with a dependent (\$1000)
- 2016 Elsevier / Vision Research travel award (VSS student travel award) for the 2016 annual VSS  
meeting (\$500) (20 awarded, 200+ applicants)
- 2015 Grant (€500) from the University Fund Limburg (Maastricht University) to support student  
initiated activities (a symposium), awarded to S Kemmerer & RL Rademaker
- 2015 Student travel grant (€200) to the 7<sup>th</sup> Bernstein Sparks Workshop on Active Perceptual  
Memory, organized by the Bernstein Network Computational Neuroscience in Berlin
- 2012 Marble++ grant for continued research after 3rd year BSc thesis project (120 hrs). First author:  
IM Bloem, last author: RL Rademaker
- 2009 Women's travel award, Berlin school of Mind and Brain (full travel expenses Nashville–Berlin)

### Publications

(\*denotes equal contributions)

- Chunharas, C, **Rademaker, RL**, Brady, TF, & Serences, JT. Adaptive distortions in visual working memory.  
(preprint DOI: doi.org/10.31234/osf.io/e3m5a)
- **Rademaker, RL**, Chunharas, C, & Serences, JT (2019) Simultaneous representation of sensory and  
mnemonic information in human visual cortex. Nature Neuroscience, 22: 1336–1344
- Engelen, T\*, **Rademaker, RL\***, & Sack, AT (2019) Faded visual afterimages reappear after TMS over early  
visual cortex. Journal of Cognitive Neuroscience, 31(9), 1368–1379

- Chunharas, C, **Rademaker, RL**, Sprague, TC, Brady, TF, & Serences, JT (2019) Separating memoranda in depth increases visual working memory precision and capacity. *Journal of Vision*, 19(1):4, 1–16
- **Rademaker, RL\***, Park, Y\*, Sack, AT, & Tong, F (2018) Evidence of gradual loss of precision for simple features and complex objects in visual working memory. *Journal of Experimental Psychology: Human Perception and Performance*, 44(6): 925–940
- **Rademaker, RL**, & Serences, JT (2017) Pinging the brain to reveal hidden memories. *Nature Neuroscience*, 20(6): 767–769
- **Rademaker, RL**, van de Ven, VG, Tong, F, & Sack, AT (2017) The impact of early visual cortex transcranial magnetic stimulation on visual working memory precision and guess rate. *Plos One*, 12(4): e0175230
- Pratte, MS, Park, Y, **Rademaker, RL**, & Tong, F (2017) Accounting for stimulus-specific variation in precision reveals a discrete capacity limit in visual working memory. *Journal of Experimental Psychology: Human Perception and Performance*, 43(1): 6–17
- Ester, E\*, **Rademaker, RL\***, & Sprague, T\* (2016) How do visual and parietal cortex contribute to visual short-term memory? *ENeuro*, 3(2), e0041-16: 1–3
- **Rademaker, RL**, Bloem, IM, De Weerd, P, & Sack, AT (2015) The impact of interference on working memory for visual orientation. *Journal of Experimental Psychology: Human Perception and Performance*, 41(6): 1650–1665
- **Rademaker, RL**, Wu D-A, Bloem, IM, & Sack, AT (2014) Intensive tool-practice and skillfulness facilitate the extension of body representations in humans. *Neuropsychologia*, 56: 196–203
- **Rademaker, RL**, Tredway, C, & Tong, F (2012) Introspective judgments predict the precision and likelihood of successful maintenance of visual working memory. *Journal of Vision*, 12(13): 1–13
- **Rademaker, RL**, & Pearson, J. (2012) Training visual imagery: Improvements of metacognition, but not imagery strength. *Frontiers in Perception Science*, 3(224): 1–11
- Pearson, J, **Rademaker, RL**, & Tong, F (2011) Evaluating the mind's eye: The metacognition of visual imagery. *Psychological Science*, 22: 1535–1542

## Seminars, Workshops & Invited Talks

---

- 2020.02 Talk at the Max Planck Gesellschaft (at the invitation of Patricia Drück), Berlin, Germany
- 2020.01 Talk & 2-day visit at the European Institute of Neuroscience (at the invitation of Mathias Bähr), Göttingen, Germany
- 2020.01 Talk & 2-day visit at the Institute of Ophthalmology, University College London (at the invitation of Andrew Dick), United Kingdom
- 2019.12 Talk & 1-day visit at the Stuttgart Center for Simulation Science (at the invitation of Prof. Dr. Thomas Ertl), Computer Science department, University of Stuttgart, Germany
- 2019.07 Workshop on "Dynamics and limitations of working memory" (at the invitation of Albert Compte & Zachary Kilpatrick), Annual Organization for Computational Neurosciences (OCNS) Meeting, Barcelona, Spain
- 2019.06 Colloquium talk on visual working memory, Royal Netherlands Academy of Arts and Sciences (at the invitation of Stefan van der Stigchel & Chris Olivers), Amsterdam, the Netherlands
- 2019.06 Masterclass on encoding models (at the invitation of Stefan van der Stigchel & Chris Olivers), Amsterdam, the Netherlands
- 2019.06 Talk & two-day visit at the Netherlands Institute for Neuroscience (at the invitation of Pieter Roelfsema), Amsterdam, the Netherlands
- 2019.05 Talk at the Cognition, Perception, and Cognitive Neuroscience Seminar Series (at the invitation of Thomas Sprague), Department of Psychological and Brain Sciences, UC Santa Barbara, USA
- 2019.02 Talk & 2-day visit at New York University (at the invitation of Clayton Curtis), Cognitive Neuroscience Department, New York, USA
- 2018.08 Symposium talk (at the invitation of Andreas Keil & Pierre Jolicoeur), Society for Psychophysiological Research Annual Meeting, Quebec City, Canada
- 2017.08 Talk at the Netherlands Institute for Neuroscience (at the invitation of Chris Klink & Pieter Roelfsema), Amsterdam, the Netherlands
- 2015.05 Lab meeting presentation (at the invitation of Sabine Kastner), Princeton University, USA
- 2015.02 Talk at the Laboratoire des Systèmes Perceptifs (at the invitation of Pascal Mamassian), Ecole Normale Supérieure, Paris, France
- 2014.01 Talk at Research Day, Faculty of Psychology and Neuroscience, Maastricht, the Netherlands

- 2010.11 Talk at M-Bic Graduate School Grand Opening, UM Campus, Brussels, Belgium
- 2010.02 Weekly Cognition and Cognitive Neuroscience brown bag talks, Peabody campus, Vanderbilt University, Nashville, USA

## Conference Presentations

- **Rademaker, R.** & Serences, J (2019, May) Manipulating attentional priority creates a trade-off between memory and sensory representations in human visual cortex. *Poster*. Vision Sciences Society, St Pete Beach, USA (*Journal of Vision*, 19(10): 205b)
- Henderson, M, **Rademaker, R.** & Serences, J (2019, May) Complimentary visual and motor-based strategies for encoding information in working memory. *Talk*. Vision Sciences Society, St Pete Beach, USA (*Journal of Vision*, 19(10): 91)
- **Rademaker, R.**, Chunharas, C. & Serences, J (2018, August) Simultaneous representation of mnemonic and sensory information in human visual cortex. *Talk*. European Conference on Visual Perception, Trieste, Italy
- **Rademaker, R.**, Chunharas, C. & Serences, J (2018, May) Simultaneous representation of mnemonic and sensory information in human visual cortex. *Talk*. Vision Sciences Society, St Pete Beach, USA (*Journal of Vision*, 18(10): 369)
- Chunharas, C, Brady, T, **Rademaker, R.** & Serences, J (2018, May) Similar items repel each other in visual working memory. *Poster*. Vision Sciences Society, St Pete Beach, USA (*Journal of Vision*, 18(10): 679)
- **Rademaker, R.**, Chunharas, C. & Serences, J (2017, November) Visual working memory representations persist in visual cortex even in the presence of distracting visual inputs. *Talk*. Society for Neuroscience, Washington DC, USA
- **Rademaker, R.**, Ling, S. & Sack, A (2017, August) Arousal state enhances contrast sensitivity under conditions of exogenous attention. *Talk*. European Conference on Visual Perception, Berlin, Germany
- **Rademaker, R.**, Chunharas, C, Mamassian, P, & Serences, J (2017, May) Dissociable biases in orientation recall: The oblique effect follows retinal coordinates, while repulsion from cardinal follows real-world coordinates. *Poster*. Vision Sciences Society, St Pete Beach, USA (*Journal of Vision*, 17(10): 107)
- Chunharas, C, **Rademaker, R.**, Sprague, T, & Serences, J (2017, May) Remembering stimuli in different depth planes increases visual working memory precision and reduces swap errors. *Poster*. Vision Sciences Society, St Pete Beach, USA (*Journal of Vision*, 17(10): 848)
- **Rademaker, R.**, Ling, S. & Sack, A (2016, May) Arousal state enhances contrast sensitivity under conditions of exogenous attention. *Talk*. Vision Sciences Society, St Pete Beach, USA (*Journal of Vision*, 16(12): 1135)
- **Rademaker, R.**, van de Ven, V, Tong, F, & Sack, A (2015, May) Topographically specific effects of TMS over early visual cortex during visual working memory. *Poster*. Vision Sciences Society, St Pete Beach, USA (*Journal of Vision*, 15(12): 303)
- Pratte, MS, Park, Y, **Rademaker, RL.** & Tong, F (2015, May) Accounting for variable precision in visual working memory reveals a discrete capacity limit. *Talk*. Vision Sciences Society, St Pete Beach, USA (*Journal of Vision*, 15(12): 1296)
- Park, Y, **Rademaker, RL.** & Tong, F (2014, May) Both variations in perceptual sensitivity and decisional response bias contribute to visual working memory performance. *Poster*. Vision Sciences Society, Naples FL, USA (*Journal of Vision*, 14(10): 1375)
- **Rademaker, RL.**, Bloem, IM, De Weerd, P, & Sack, AT (2013, May). Properties of high-fidelity visual working memory representations for orientation. *Poster*. Vision Sciences Society, Naples FL, USA (*Journal of Vision*, 13(9): 804)
- Tong, F, **Rademaker, R.** & Cohen, E (2012, May) Working memory for complex objects revealed by fMRI decoding of human visual cortex activity. *Talk*. Vision Sciences Society, Naples FL, USA (*Journal of Vision*, 12(9): 1271)
- **Rademaker, RL.**, Tredway, C, & Tong, F (2011, October) Introspective judgments predict working memory precision, and likelihood of forgetting. *Poster*. Donders Discussions, Nijmegen, the Netherlands
- **Rademaker, RL.**, Wu, D-A, Bloem, IM, & Sack, A (2011, October) Lifetime-built motor fluency and training enable an extended sense of the body beyond classical first-order extensions in humans. *Poster*. Donders Discussions, Nijmegen, the Netherlands
- **Rademaker, RL.** & Tong, F (2010, May) An investigation of the precision and capacity of human visual working memory. *Poster*. Vision Sciences Society, Naples FL, USA (*Journal of Vision*, 10(7): 726)
- **Rademaker, RL.** & Tong, F (2010, March) Picture perfect: the training of visual imagery. *Poster*. 24<sup>th</sup> Annual Graduate Student Research Symposium, Vanderbilt University, Nashville, USA
- **Rademaker, RL.**, Pearson, J, & Tong, F (2009, December). Picture perfect: the training of visual imagery. *Poster*. Berlin Brain days. Berlin, Germany

## Professional Activities

**Ad-hoc reviewer:** Nature Neuroscience | Journal of Neuroscience | PLOS Biology | PLOS Computational Biology | Journal of Cognitive Neuroscience | eNeuro | Journal of Vision | Journal of Experimental Psychology: General | Journal of Experimental Psychology: Human Perception and Performance | Journal of Experimental Psychology: Learning, Memory, and Cognition | Nature Scientific Report | Attention Perception and Psychophysics | Quarterly Journal of Experimental Psychology | Frontiers in Psychology | Brain Research

**Grant reviewer:** The National Science Center, Poland

- 2017–present Member of UCSD Psychology Department Climate Committee. Aim: understand departmental issues (i.e. harassment/ other injustices) and formulate recommendations
- 2018.10 Panel member: "Experiences in science", UCSD Psychology department retreat
- 2018.08 Symposium organizer: "The neural codes that support visual working memory representation". Speakers: A Compte, J Martinez-Trujillo, T Christophel, D Mendoza-Halliday & R Rademaker. European Conference on Visual Perception (ECPV) in Trieste, Italy
- 2017.11 Co-chair of Society for Neuroscience (SfN) nanosymposium 281 ("Mechanisms of Working Memory") in Washington DC, USA
- 2017.08 Symposium organizer: "Getting excited about visual perception: The impact of physiological arousal on visual perception". Speakers: M Carandini, T Bullock, A Keil, S Gayet, & R Rademaker. European Conference on Visual Perception (ECPV) in Berlin, Germany
- 2015.12 Symposium organizer & moderator: "A Sensational World – Representations of the Brain's Visual System". Speakers: S Ling, M Self, M Mur, B Harvey, & T Knapen. Maastricht University, the Netherlands
- 2011–2015 Certified User TMS and MR systems, Maastricht University – Authorized to run TMS and fMRI experiments safely and independently
- 2011 Trained as a tutor in Problem Based Learning pedagogy at Maastricht University
- 2007–2008 Track representative for the Research Master program at Maastricht University. Attended monthly meetings on behalf of the two-year Neuropsychology Master program
- 2007–2010 Writer & photographer for the magazines 'Code Maastricht' (Dutch) and 'Crossroads' (English) Articles have included a series of profiles of academic expatriates

## Teaching

- 2016–present Supervising undergraduate students for Psych 199, a research course to gain experience working in a lab. Psychology Department at UCSD
- 2016–2018 Mentoring a freshman (A. Chakraborty) through the Regents Scholars Research Initiative (RSRI), a program providing early research opportunities to talented undergraduates, UCSD
- 2017 Mentor for the Summer Training Academy for Research Success (STARS) program, a highly competitive program for recent graduates to work in a lab for 8 weeks at UCSD
- 2014 Tutor for 1<sup>st</sup> year BSc course "Introduction to Psychology", University College Maastricht
- 2012–2013 Bachelor thesis advisee of Marleen van Tetering, Maastricht University  
Thesis title: "Mechanisms underlying real-world visual search"
- 2012 Lab tour of TMS facilities (plus TMS demonstration) for graduate-level course "From Human Neuroanatomy to Psychopathology", Maastricht University
- 2012 Lecture (20 min) for 1<sup>st</sup> year BSc course "Psychological Perspectives", subsection "Future Research". Psychology and Neuroscience department, Maastricht University
- 2012 MSc course "Interdisciplinary Research", Maastricht University. Supervision of interdisciplinary study groups throughout the development, writing, and presentation of a research proposal
- 2012 Course planning committee member for 3<sup>rd</sup> year BSc course "Theoretical perspectives" at Maastricht University. Tasks included: creating, organizing & grading the final exam, supervising exam inspection, and writing a compensatory assignment.
- 2012 Bachelor thesis advisee of Ilona Bloem, Maastricht University  
Thesis title: "Mental imagery and eye-movements"
- 2011–2013 "Research practical", Maastricht University. Intensive 3 month course where small groups of 2<sup>nd</sup> year students design, conduct, and analyze a fully comprehensive research study
- 2010–2012 Tutor for 3<sup>rd</sup> year Neuroscience course "Theoretical perspectives", Maastricht University  
Topics such as consciousness, object based attention, multisensory processing, etc.

- 2010–2011 Yearly 1-hour lectures for Arts & Culture students: "A glimpse at Cognitive Neuroscience". Including discussion on the relevance of the sciences in society, Maastricht University
- 2007 Teaching at a senior secondary school in Ghana for the non-profit organisation OCEP  
Remedial classes in genetics and statistics
- 2007 Teaching Assistant at the Medical Sciences Department, University of Groningen  
Second year med-school course in communication and conversational techniques
- 2005–2006 Teaching Assistant at the Department of Psychology, University of Groningen  
First year psychology course in research and interview techniques

## Public Outreach

- 2016–present Volunteer for the Salk mobile lab, San Diego. Visiting local highschools to supplement the biology curriculum. Assisting small groups of students with DNA extraction (day 1) and gel electrophoresis (day 2)
- 2016–present Member of "FabFems", an online forum aimed to inspire girls and young women, and a resource for those considering a career in science
- 2017–2018 Role model for "SciTech for girls". Visiting schools in the San Diego area for the Fleet Science Center after-school program, giving talks and answering questions about a career in STEM
- 2018 SciTech judge during the Tech Challenge at the Fleet Science Center (competition between the top 5 teams from the SciTech for girls program)
- 2016–2017 Steward for the Union for Postdocs (local UAW) at UCSD
- 2016 Lectures (40 min) for highschool students participating in the "Academic Connections" program during summer sessions at UCSD
- 2014 Lecture (30 min) and demo (30 min) for several groups of highschool students during "Class Day". Aimed at introducing students to research and science, Maastricht University
- 2013 Three biology guest lectures (45 min each) at a senior level Dutch Highschool in St Michielsgestel. In-depth lecture on the brain, and a bird's-eye view of own research
- 2012 General audience lecture (1 hr) on cognitive neuroscience and working memory at the "Night of the brain" organized by Studium Generale, Maastricht
- 2012 Lecture (20 min) about a future in research during the "Master your future day", organized by the Dutch national organization of psychology students SPS-NIP, Maastricht
- 2011–2012 Series of demos about "the Positive Afterimage" at the Continium Science Museum, Kerkrade, the Netherlands
- 2011–2012 Series of lectures (40 min each) for a general audience (in Dutch) about brain research & visual neuroscience at the Continium Science Museum, Kerkrade, The Netherlands
- 2011 Lab tour of TMS and fMRI facilities at Maastricht University for dean & students of University College Maastricht
- 2008–2009 Brain Blast at the Adventure Science Centre, Nashville. Yearly event organized to familiarize kids and the general community with brain science
- 2008 Host for the Fulbright gateway orientation, Vanderbilt University, Nashville.

## Miscellaneous

**Languages** English (fluent) | Dutch (fluent) | German (conversational) | French (broken)

**Software & programming** Proficient with: Matlab | FSL | Freesurfer | retinotopic mapping | Adobe Illustrator  
Experience with: Stata | R | SPSS | git | shell scripting | Brainvoyager

**Orientation discrimination threshold** of less than  $1^\circ$  for gratings oriented at  $135^\circ$  in the left visual hemifield

**Emergency Response Officer** at Maastricht University. Trained to put out small fires, perform CPR, bandage wounds, emergency evacuation, etc.

**Professional memberships** Society for Neuroscience (SfN), Vision Sciences Society (VSS), Organization for Computational Neurosciences (OCNS)

**Meeting attendance** Society for Neuroscience Annual Meeting (2008, 2016, 2018) | Vision Sciences Society Annual Meeting (2009 & 2012) | MeetingDonders Discussions (2012) | Brain stimulation and brain repair mechanisms (2010 in Greifswald Germany)