# Rose Cooper, PhD

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### ACADEMIC AND EMPLOYMENT HISTORY

06/2017 – present Postdoctoral Scholar, Boston College

Department of Psychology and Neuroscience Memory Modulation Lab; PI: Dr. Maureen Ritchey

2013 – 2017 PhD Psychology, University of Cambridge

Department of Psychology, Memory Lab

Supervisor: Professor Jon Simons

Thesis: The neurocognitive basis of recollection in autism

2012 – 2013 MSc Cognitive & Decision Sciences, University College London

Department of Experimental Psychology, Affective Brain Lab Supervisors: Professor Tali Sharot & Dr. Stephanie Lazzaro

Award: Distinction

2009 – 2012 BSc (Hons) Psychology, University of Nottingham

Supervisor: Dr. Danielle Ropar

Award: First Class

#### AWARDS AND FUNDING

## **Scholarships & Research Grants**

2013-16	UK Economic and Social Research Council (ESRC) Doctoral Studentship
2013-16	St John's College, Cambridge Benefactors' Scholarship

#### **Prizes**

2019	Frith Prize, Experimental Psychology Society: Exceptional PhD thesis
2012	British Psychological Society Undergraduate Award: Highest degree score
2012	University of Nottingham Psychology Prize: Highest grades

2011 University of Nottingham Psychology Prize: Highest grades

### **Education & Travel Awards**

2019	Kavli Summer Institute in Cognitive Neuroscience (SICN) Fellow
2019	Boston College Department of Psychology Trainee Education Grant
2019	Boston College Postdoctoral Association Knowledge Dissemination Award
2018	eLife Early Career Travel Award
2018	Boston College Postdoctoral Association Knowledge Dissemination Award
2017	Methods in Neuroscience at Dartmouth (MIND) Fellow
2016	Guarantors of Brain Travel Grant

# **PUBLICATIONS**

- 1. Ritchey, M.\* & Cooper, R. A.\* (2020). Deconstructing the posterior medial episodic network. *Trends in Cognitive Sciences*, 24(6), 451-465.
- 2. Cooper, R. A. & Ritchey, M. (2020). Progression from feature-specific brain activity to hippocampal binding during episodic encoding. The *Journal of Neuroscience*, 40(8), 1701-1709.
- 3. Samide, R., Cooper, R. A., & Ritchey, M. (2019). A database of news videos for investigating the dynamics of emotion and memory. *Behavior Research Methods*, doi: 10.3758/s13428-019-01327-w.
- 4. Cooper, R. A. & Ritchey, M. (2019). Cortico-hippocampal network connections support the multidimensional quality of episodic memory. *eLife*, 8:e45591.
- 5. Cooper, R. A., Kensinger, E. A., & Ritchey, M. (2019). Memories fade: The relationship between memory vividness and remembered visual salience. *Psychological Science*, 30(5), 657-668.
- 6. Lazzaro, S. C., Weidinger, L., Cooper, R. A., Baron-Cohen, S., Moutsiana, C., & Sharot, T. (2019). Social conformity in autism. *Journal of Autism and Developmental Disorders*, 49, 1304-1315.
- 7. Cooper, R.A. & Simons, J.S. (2019). Exploring the neurocognitive basis of episodic recollection in autism. *Psychonomic Bulletin & Review*, 26, 163-181.
- 8. Cooper, R. A., Richter, F. R., Bays, P. M., Plaisted-Grant, K. C., Baron-Cohen, S., & Simons, J. S. (2017). Reduced hippocampal functional connectivity during episodic memory retrieval in autism. *Cerebral Cortex*, 27, 888-902.
- 9. Cooper, R. A., Plaisted-Grant, K. C., Baron-Cohen, S., & Simons, J. S. (2017). Eye movements reveal a dissociation between memory encoding and retrieval in adults with autism. *Cognition*, 159, 127-138.
- 10. Richter, F. R.\*, Cooper, R. A.\*, Bays, P. M., & Simons, J. S. (2016). Distinct neural mechanisms underlie the success, precision, and vividness of episodic memory. *eLife*, 5:e18260.

- 11. Cooper, R. A., Plaisted-Grant, K. C., Baron-Cohen, S., & Simons, J. S. (2016). Reality monitoring and metamemory in adults with autism spectrum conditions. *Journal of Autism and Developmental Disorders*, 46, 2186-98.
- 12. Cooper, R. A., Plaisted-Grant, K. C., Hannula, D. E., Ranganath, C., Baron-Cohen, S., & Simons, J. S. (2015). Impaired recollection of visual scene details in adults with autism spectrum conditions. *Journal of Abnormal Psychology*, 124, 565-575.

\*equal contribution

### **ONGOING RESEARCH**

- > Functional interactions of the posterior medial (PM) system during event processing
  - Analyses of a movie-watching fMRI dataset to explore how information flows between PM regions and how connections shift at event transitions.
- > Multidimensional event attributes and their weighting in memory
  - Behavioral studies of memory attributes -- different kinds of content and their specificity -and how they contribute to subjective judgments of memory vividness.
- > Temporal dynamics of episodic reinstatement
  - Time-frequency analyses of memory retrieval using EEG data, including the reactivation of distinct event features.

### **INVITED TALKS**

- Cooper, R. A. (May, 2019). Cortico-hippocampal networks supporting the reactivation of past events. Schacter Memory Lab, Harvard University, USA.
- Cooper, R. A. (April, 2019). The neurocognitive basis of episodic memory in autism. Frith Prize lecture, Experimental Psychology Society Meeting, University of Manchester, UK. *Link to my talk:* <a href="mailto:youtu.be/pv-liiA18vY">youtu.be/pv-liiA18vY</a>
- Cooper, R. A. (March, 2019). Brain networks supporting the reconstruction of past events. Brown Cognition Seminar Series, Brown University, USA.
- Cooper, R. A. (October, 2018). Brain networks supporting the composition and precision of episodic memory. Memory Disorders Research Society annual meeting, Toronto, Canada.
- Cooper, R. A. (July, 2018). Episodic memory reconstruction in autism. Trends in Psychology Summit, Harvard University, Boston, USA.
- Cooper, R. A. (February, 2018). Neural mechanisms of episodic memory reconstruction. Boston University Memory Meeting, Boston, USA.

Cooper, R. A. (November, 2014). Investigating recollection in adults with autism spectrum conditions. Autism Research Centre talk series, Cambridge, UK.

#### TEACHING AND MENTORING

# **Seminar Teaching**

2014-16 University of Cambridge:

- Statistics
- > Psychological Enquiry and Methods
- Cognitive and Experimental Psychology
- Cognitive Psychology, Practical Classes

## **Undergraduate Research Assistants**

2017-19 Boston College: Cayley Bliss; Emily Iannazzi; Emily Janin; Elizabeth Judge; Samantha Murphy; Mary Nanna; Julia Napoli; Jenna Phelan; Rebecca Suthard

### **Senior Thesis Students**

2018-19 Maria Khoudary, Boston College (now Research Assistant at Duke)

2019-20 Natale Schmitz, Boston College

# **Training Courses**

2019-20 Teaching in the U.S. classroom (Boston College, Center for Teaching Excellence)

### PROFESSIONAL SERVICE

### **Ad Hoc Reviewer**

Ann. N. Y. Acad. Sci — Autism — Autism Research — Biological Psychiatry: CNNI — Cerebral Cortex — Cortex — Hippocampus — Human Brain Mapping — Journal of Abnormal Psychology — Journal of Autism and Developmental Disorders — Journal of Gerontology: Psychological Sciences — Learning and Memory — Molecular Autism — Network Neuroscience — Neurolmage — Neuropsychologia — Research in Autism Spectrum Disorders — Social Cognitive and Affective Neuroscience

See: https://publons.com/author/1531130/rose-cooper#profile

# Memberships

- Cognitive Neuroscience Society
- > Society for Neuroscience

### Other Duties

2017-2018 Co-organizer, BC Neuroscience Data Club, Boston College
2018-present Co-organizer, Memory Messabout Meeting, Boston University

#### **OPEN RESEARCH**

# **Preregistered Experiments**

Cooper, Kensinger, & Ritchey (2019), Psychological Science: osf.io/nsj65/

### Data, Stimuli, and Code

Cooper & Ritchey (2019), J Neurosci: thememolab.org/paper-bindingfmri/

Samide, Cooper, & Ritchey (2019), Beh Res Meth: thememolab.org/paper-videonorming/

Cooper & Ritchey (2019), eLife: thememolab.org/paper-orbitfmri/

Cooper, Kensinger, & Ritchey (2019), Psych Sci. osf.io/cuz8q/

### **MEDIA COVERAGE**

Article on Richter\*, Cooper\* et al. (2016; eLife): "Memory lane has a three-way fork" theatlantic.com/science/archive/2016/10/memory-lane-has-a-three-way-fork/505250/

Article on Cooper, Kensinger, & Ritchey (2019, Psychological Science): "Like old photographs, memories fade over time" <a href="sciencedaily.com/releases/2019/04/190405080919.htm">sciencedaily.com/releases/2019/04/190405080919.htm</a>

### **CONFERENCE PRESENTATIONS**

#### **Talks**

- Cooper, R. A. (May, 2020). Progression from feature-specific brain activity to hippocampal binding during episodic encoding. Cognitive Neuroscience Society, Virtual Meeting.
- Cooper, R. A. (May, 2019). Memories fade: Changes in reconstructed perceptual quality over time. Context and Episodic Memory Symposium. Philadelphia, USA.

#### **Posters**

- Schmidt, H., Cooper, R. A., & Ritchey, M. (May, 2020). Temporal dynamics supporting the multidimensional quality of episodic memory. Cognitive Neuroscience Society, Virtual Meeting.
- Cooper, R. A. & Ritchey M. (May, 2020). Progression from feature-specific brain activity to hippocampal binding during episodic encoding. Cognitive Neuroscience Society, Virtual Meeting.
- Cooper, R. A. & Ritchey M. (October, 2019). Probing intra-network dynamics of the posterior medial system during episodic memory retrieval. Society for Neuroscience Annual Meeting, Chicago, USA.

- Schmidt, H., Samide, R., Cooper, R. A., & Ritchey, M. (May, 2019). News flash! Investigating the dynamics of emotional memory using real-life event videos. Context and Episodic Memory Symposium. Philadelphia, USA.
- Samide, R., Cooper, R. A., & Ritchey, M. (March, 2019). From hurricanes to homecomings: A database of news broadcast videos for investigating the dynamics of emotional memory. Cognitive Neuroscience Society Annual Meeting, San Francisco, USA.
- Cooper, R. A. & Ritchey M. (November, 2018). Brain networks supporting the composition and precision of episodic memory reconstruction. Society for Neuroscience Annual Meeting, San Diego, USA.
- Cooper, R. A. & Ritchey M. (March, 2018). Effects of negative emotion on item-specific and spatial-context memory precision. Cognitive Neuroscience Society Annual Meeting, Boston, USA.
- Cooper, R. A., Richter, F. R., Bays, P. M., Plaisted-Grant, K. C., Baron-Cohen, S., & Simons, J. S. (April, 2017). Reduced hippocampal fronto-parietal control network connectivity during memory retrieval in adults with autism. Cambridge Memory Meeting, Cambridge, UK.
- Cooper, R. A., Richter, F. R., Bays, P. M., Plaisted-Grant, K. C., Baron-Cohen, S., & Simons, J. S. (July, 2016). Reduced functional connectivity during episodic memory retrieval in adults with autism. International Conference on Memory, Budapest, Hungary.
- Cooper, R. A., Plaisted-Grant, K. C., Baron-Cohen, S., & Simons, J. S. (June, 2016). Eye movements reveal a dissociation between memory encoding and retrieval in adults with autism. Cambridge Neuroscience External Review, Cambridge, UK.
- Richter, F. R., Cooper, R. A., Bays, P. M., & Simons, J. S. (April, 2016). Distinct neural mechanisms underlie the success, precision, and vividness of episodic memory. Cognitive Neuroscience Society Annual Meeting, New York, USA.
- Cooper, R. A., Plaisted-Grant, K. C., Baron-Cohen, S., & Simons, J. S. (April, 2016). Using eye-tracking to investigate long-term memory encoding and retrieval in adults with autism spectrum conditions. Cognitive Neuroscience Society Annual Meeting, New York, USA.
- Cooper, R. A., Plaisted-Grant, K. C., Hannula, D. E., Ranganath, C., Baron-Cohen, S., & Simons, J.S. (May, 2015). Impaired recollection of visual scene details in adults with autism spectrum conditions. Cambridge Memory Meeting, Cambridge, UK.