

Jörn Alexander Quent, PhD

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Education & Academic Positions

<i>Fudan University</i> (China) Postdoctoral research associate Institute of Science and Technology for Brain-inspired Intelligence (ISTBI) PI: Prof. Deniz Vatansever	2021 - now
<i>University of Cambridge</i> (UK), PhD MRC Cognition and Brain Sciences Unit (MRC CBU) PI: Prof. Richard Henson College: Clare Hall	2017 - 2021
<i>Ruhr-University Bochum</i> (GER), M.Sc. Psychology and Cognitive Neuroscience	2015 - 2017
<i>University of Nebraska - Omaha</i> (US), Term abroad in Psychology	2014
<i>Ruhr-University Bochum</i> (GER), B.Sc. Psychology	2012 - 2015

Grants, Fellowships, Scholarships & Honours

<i>Research Fund For International Young Scientists (RFIS-I)</i> 外国青年学者研究基金项目 Role: awardee National Natural Science Foundation of China Amount: 400,000 RMB (\$56,000/57,000€)	2023 - 2024
<i>The National Foreign Experts Program</i> 外国学者研究基金项目配套外专经费 Role: awardee State Administration of Foreign Experts Affairs	2023 - 2024
<i>China Brain Project - Young Scientist A</i> 科技创新 2030-“脑科学与类脑研究” 重大项目 (青年项目) Role: collaborator (awarded to Prof. Deniz Vatansever) National Natural Science Foundation of China Amount: 5,000,000 RMB (\$720,000/610,000€)	2022 - 2026
<i>Fellowship of China Postdoctoral Science Foundation</i> 中国博士后科学基金面上资助项目 Role: awardee China Postdoctoral Science foundation	2022

Amount: 80,000 RMB (\$11,080/10,200€)	
<i>Postdoctoral international exchange program</i>	2021
博士后国际交流计划引进项目	
Role: awardee	
China Postdoctoral Management Committee	
<i>Zhufeng Young Scholar</i>	2021
Role: awardee	
Fudan University	
Ministry of Education Frontiers Center for Brain Science	
<i>Grindley Grant to travel to Beijing (China)</i>	2019
Role: awardee	
Experimental Psychology Society (cancelled due to the COVID-19 pandemic)	
<i>Gates Cambridge Scholarship</i>	2017 - 2021
Role: awardee	
Melinda and Bill Gates Foundation, USA	
<i>University of Nebraska – Omaha’s Chancellor’s list</i>	2014
<i>Scholarship for a term abroad</i>	2014
Role: awardee	
Mid-American Universities International (MAUI), USA	
<i>Full student scholarship</i>	2014 - 2017
Role: awardee	
Hans-Böckler Foundation, Germany	

Publications

Journal Articles & Preprints

- Janjua, A., Qin, Z., **Quent, J. A.**, Lancia, G. L., Montaldi, D., & Frank, D. (2026). Probing Behavioural Tagging in Humans: Spatial Memory Reveals Novelty-driven Retroactive Enhancement. *Journal of Cognitive Enhancement*. <https://doi.org/10.1007/s41465-026-00358-4>
- Tibon, R., Greve, A., Humphreys, G., **Quent, J. A.**, & Henson, R. (2026). Neural activations and representations during episodic versus semantic memory retrieval. *Nature Human Behaviour*. <https://doi.org/10.1038/s41562-025-02390-4>
- Quent, J. A.**, Song, L., Liang, X., Su, Y., Yu, W., Wang, H., & Vatansever, D. (2026). Graded encoding of spatial novelty scales in the human brain. *Nature Communications*, 17(1), 303. <https://doi.org/10.1038/s41467-025-67012-z>
- Raza, S., Schomaker, S. **Quent, J. A.**, Anderson M. C. & Henson, R. N. (2025). Proactive and

retroactive effects of novelty and rest on memory. *Quarterly Journal of Experimental Psychology*, 17470218251346156. <https://doi.org/10.1177/17470218251346156>

Tibon, R., Greve, A., Humphreys, G., **Quent, J. A.**, & Henson, R. (2023). Do activations and representations differ during successful retrieval from episodic vs. Semantic memory? *Brain and Cognition*, 170, 106033. <https://doi.org/10.1016/j.bandc.2023.106033> (**Note:** this is a conference abstract)

Quent, J. A., Greve, A. & Henson, R. N. (2022). Shape of U: The Nonmonotonic Relationship Between Object–Location Memory and Expectedness. *Psychological Science*. <https://doi.org/10.1177/09567976221109134>, Pre-print version can be found <https://doi.org/10.31234/osf.io/xq37j>

Quent, J. A. & Henson, R. N. (2022). Novel immersive virtual reality experiences do not produce retroactive memory benefits for unrelated material. *Quarterly Journal of Experimental Psychology*, 1 – 14. <https://doi.org/10.1177/17470218221082491>

Quent, J. A., Henson, R. N., Greve, A. (2021). A predictive account of how novelty influences declarative memory. *Neurobiology of Learning and Memory*. <https://doi.org/10.1016/j.nlm.2021.107382>

Goodrich, R. I., Baer, T. L., **Quent, J. A.**, & Yonelinas, A. P. (2019). Visual working memory impairments for single items following medial temporal lobe damage. *Neuropsychologia*, 134. <http://doi.org/10.1016/j.neuropsychologia.2019.107227>

Quent, J. A., McCullough, A. M., Sazma, M., Wolf, O. T., & Yonelinas, A. P. (2018). Reward anticipation modulates the effect of stress-related increases in cortisol on episodic memory. *Neurobiology of Learning and Memory*, 147, 65–73. <https://doi.org/10.1016/J.NLM.2017.11.007>

Software

Quent, J. A., & Vatansever, D. (2025). Object Location Memory Task build with Unity3D (Version v4.0.4) [Computer software]. Zenodo. <https://doi.org/10.5281/ZENODO.17482414>

Quent, J. A. (2022). Questionnaire Presenter - A standalone program to collect questionnaire data made with Unity3D (Version 1.0.0) [Computer software]. <https://doi.org/10.5281/zenodo.7180407>

Quent, J. A. (2021). Mental rotation task for MATLAB (Version 1.11) [Computer software]. <https://doi.org/10.5281/zenodo.5502450>

Quent, J. A. (2021). N-back task for MATLAB (Version 1.8) [Computer software]. <https://doi.org/10.5281/zenodo.5502474>

Invited Talks

18th March 2026

Graded encoding of spatial novelty scales in the human brain

Max Planck Institute for Human Cognitive and Brain Sciences at Doeller Lab

Leipzig, Germany

30th January 2026

Graded encoding of spatial novelty scales in the human brain

Edge Hill University at Tse Memory Lab

Ormskirk, England

26th June 2025

Precise mapping of the neural landscape underlying recognition memory

OHBM

Brisbane, Australia

20th May 2025

Graded encoding of spatial novelty scales in the human hippocampus

Spring Hippocampal Research Conference

Verona, Italy

15th December 2023

Spatial novelty-familiarity gradient in the hippocampus using VR and ultra-high-field fMRI

BISA Meeting

Fudan University, Shanghai

29th May 2023

Influence of conceptual knowledge on spatial memory in a virtual reality environment

Spring Hippocampal Research Conference

Verona, Italy

14th December 2022

Neural signatures of spatial navigation & memory using ultra-high-resolution 7T fMRI

Fudan Cambridge Symposium

Fudan University, Shanghai

26th January 2022

Where PIMMS fails: limitations with our framework for memory

Wednesday Lunch Time Seminar

University of Cambridge

MRC Cognition and Brain Sciences Unit

15th December 2021

Neuroimaging of mental navigation using virtual reality environments

Post-doc introduction talk
Fudan University
ISTBI

30th November 2020

Power Between the People: Bayesian Sequential Designs
Methods day
University of Cambridge
MRC Cognition and Brain Sciences Unit
https://www.youtube.com/watch?v=mF-MPO__jWo

8th September 2020

Plan to produce strong evidence: Bayesian Sequential Designs
Open Research Working Group (ORWG) virtual meeting hosted by British Neuroscience Association
Link: https://www.youtube.com/watch?v=FGaxLQ_o8D4

29th July 2020

Bayesian Sequential Designs
Open Science Day
University of Cambridge
MRC Cognition and Brain Sciences Unit

11th November 2019

Bayesian multilevel models
Imaging Interest Group
University of Cambridge
MRC Cognition and Brain Sciences Unit
Link: <https://osf.io/f56bw/>

15th May 2019

Using immersive virtual reality to examine the U-shaped relationship between schema and memory performance
Wednesday Lunch Time Seminar
University of Cambridge
MRC Cognition and Brain Sciences Unit

4th April 2019

Using immersive reality to examine the U-shaped relationship between schema and memory performance
Cambridge Memory Meeting
University of Cambridge

3rd Jan 2019

U-shaped relationship between object-location expectancy and memory performance in an immersive reality environment

Annual meeting of the Experimental Psychology Society
London

20th Nov 2018

Open notebooks in cognitive neuroscience

Open Science Day
University of Cambridge
MRC Cognition and Brain Sciences Unit

Link: <https://www.youtube.com/watch?v=jKmv3-Nk8iE>

5th Dec 2017

Using RMarkdown to create scientific manuscripts

Methods day
University of Cambridge
MRC Cognition and Brain Sciences Unit

1st Nov 2017

Interaction between reward anticipation and stress hormone during memory formation

Gates Cambridge internal symposium

1st Jan 2017

Reward anticipation modulates the effect of cortisol on memory

Research colloquium “Cognitive Psychology and Psychoneuroendocrinology”
Ruhr-University Bochum
Faculty of Psychology

Accepted Abstracts

Quent, J. A., Zhuang, K., Liang X., Wang, Y., Vatansever, D. (June 2025). Precise mapping of the neural landscape underlying recognition memory. *OHBM*, Brisbane (Australia).

Quent, J. A., Liang X., Song, L., Su, Y., Zhuang, K., Vatansever, D. (June 2024). A gradient of spatial novelty and familiarity along the hippocampal long axis. *OHBM*, Seoul (South Korea).

Quent, J. A., Liang X., Song, L., Su, Y., Vatansever, D. (June 2023). Spatial Memory Within Virtual Reality Environments: An Ultra-High Field 7T fMRI Investigation. *OHBM*, Montreal (Canada).

Quent, J. A., Henson, R. N. (April 4, 2019). Using hydrocortisone to modulate the U-shape between expectancy and memory. *BNA 2019 Festival of Neuroscience*, Dublin (Ireland).

Quent, J. A., Meyer, M. Ros, T., Kuchinke, L. (May 31, 2018). Reading prevails: automatic word

recognition in a single-letter Stroop task. *Psychologie und Gehirn 2018*, Gießen (Germany).

Meyer, M., Manrique Aristizabal, J. A., **Quent, J. A.**, Crawford, B., & Vuilleumier, P. (May 11, 2018). Regulating With The Mind's Eye: The Link Between Mental Imagery And Emotion Regulation. *36. Symposium der Fachgruppe Klinische Psychologie und Psychotherapie der DGPs*, Landau (Germany).

Quent, J. A., McCullough, A. M., Sazma M., Wolf O. T., Yonelinas A. P. (March 12, 2018). Tag-and-capture theory in light of reward anticipation and post-encoding stress. *Cambridge Neuroscience Seminar 2018*, Cambridge (United Kingdom).

Theses

PhD	2021
<i>Novelty, Prediction Error and Memory Encoding: Limitations of the PIMMS Framework</i>	
Supervisor: Prof. Richard Henson	
Master of Science	2017
<i>Reward anticipation modulates the effect of cortisol on memory,</i>	
Supervisors: Prof. Oliver T. Wolf & Dr. Uta Wiemers	
Grade: 1.0	
Bachelor of Science	2015
<i>Reading prevails: the electrophysiological signature of semantic access in a Stroop task</i>	
Supervisors: Prof. Lars Kuchinke & Dr. Marcel Meyer	
Grade: 1.0	

Research Experience & Employment

<i>Research assistant</i>	Oct 2015 - Sep 2016
Ruhr-University Bochum	
Supervisors: Prof. Lars Kuchinke & Dr. Marcel Meyer	
<i>Visiting scholar</i>	Feb 2016 - May 2016
UC Davis	
Department of Psychology	
Human Memory Lab	
Supervisor: Prof. Andrew Yonelinas	
<i>Undergraduate research assistant</i>	Feb 2015 - Sep 2015
Ruhr-University Bochum	
Supervisor: Prof. Oliver T. Wolf	
<i>Undergraduate research assistant</i>	Feb 2015 - Sep 2015
Ruhr-University Bochum	

Supervisor: Prof. Lars Kuchinke

Internship

2014

St. Joseph Hospital Bochum

Neurological Clinic of the Ruhr-University Bochum

Supervisor: Christian Prehn

Teaching Experiences

Undergraduate supervisor

Apr 2020 - Jun 2020

PBS4: Psychology and Cognitive Neuroscience

University of Cambridge

Corpus Christi College

Undergraduate supervisor

Jan 2020 - Mar 2020

PBS4: Psychology and Cognitive Neuroscience

University of Cambridge

Corpus Christi College

Undergraduate supervisor

Oct 2019 - Dec 2019

PBS4: Psychology and Cognitive Neuroscience

University of Cambridge

Corpus Christi College

Tutor

Jul 2019

Neuroscience

Oxford Summer Courses

Undergraduate supervisor

Jan 2019 - Mar 2019

PBS4: Psychology and Cognitive Neuroscience

University of Cambridge

Corpus Christi College

Undergraduate supervisor

Oct 2018 - Dec 2019

PBS4: Psychology and Cognitive Neuroscience

University of Cambridge

Corpus Christi College

Tutor

Jul 2018

Neuroscience

Oxford Summer Courses

Undergraduate supervisor

Jan 2018 - Mar 2018

PBS4: Psychology and Cognitive Neuroscience

University of Cambridge

Wolfson College

Teaching staff

Oct 2015 - Feb 2016

Introductory course for R (seminar)

Ruhr-University Bochum

Faculty of Psychology

Teaching assistant

Apr 2014 - Sep 2014

Tutorial for 2nd year statistics

Ruhr-University Bochum

Faculty of Psychology

Media Appearances

Brain scans reveal 'dial' that helps keep us from getting lost, **Live science**, 17 December 2025

“让大楼装满人!” 芯片人才争夺激烈, 上海这家新型研发机构哪来的信心?, **Jiefang Daily (解放日报)**, 03 September 2022

Appeared on **上海新闻综合** discussing postdoctoral research in China (TV), 21 August 2022

Appeared on **上海电视台** discussing postdoctoral research in China (TV), 21 August 2022

Why I let other people read all of my research notes, **University World News**, 22 February 2019

Adhoc Reviews for Academic Journals

Neurobiology of Learning and Memory

Brain and Cognition

Behavior Research Methods

Memory

PlosOne

Learning and Memory

Philosophical Transactions B

Quarterly Journal of Experimental Psychology

Scientific Reports

Royal Society Open Science

Organisation of Events

BISA partnership

First virtual “Cambridge Fudan ECR Cognitive Neuroscience Symposium” (2020)

“Open Science Day 2018” at the MRC CBU, Cambridge

Current and Former Memberships in Professional Societies

British Neuroscience Association

OHBM