Curriculum Vitae - Sebastian Michelmann

Academic positions

September 2023 onwards — **Assistant Professor (tenure track)**, *Department of Psychology, New York University*

2018–2023 — **Postdoctoral Researcher**, *Princeton Neuroscience Institute, Princeton University*, Computational Memory Lab

Education

2018 — **PhD Psychology**, *School of Psychology, University of Birmingham, UK*, Memory and Oscillations Lab, Thesis title: "Temporal Dynamics and Mechanisms of Oscillatory Pattern Reinstatement in Human Episodic Memory."
2020 winner of the Glushko dissertation prize

2014 — **Diploma Psychology (equivalent to Master)**, *Julius-Maximilians-Universität Würzburg*, Würzburg, Germany, *GPA: 1.1*, non-compulsory subject: Computer Science
(GPA 1.1 equivalent to US/Canada: 3.93 out of 4)

2016–2018 — **Studies of Computer Science**, *Fern-Universität Hagen (distance learning)*, Hagen, Germany

2011–2014 — **Studies of Computer Science**, *Julius-Maximilians-Universität Würzburg*, Würzburg, Germany

2008–2014 — **Studies of Psychology**, *Julius-Maximilians-Universität Würzburg*, Würzburg, Germany

2010–2011 — **Studies of Psychology and Philology**, *Universidad de Salamanca*, Salamanca, Spain
Partnership program, additionally funded by PROMOS scholarship program of German Academic Exchange Service (DAAD)

2007 — **High school diploma**, *Bodelschwingh-Gymnasium Herchen*, Herchen, Germany, GPA: 1.3
(GPA 1.3 equivalent to US/Canada: 3.8 out of 4, 1st percentile in cohort)

Teaching

2024 (Spring) — **PSYCH-UA 25, Cognitive Neuroscience (Lecture)**, *New York University*

2019–2020 — **NEU Fall Junior Tutorial 2019**, *Princeton Neuroscience Institute, Princeton University*

2012–2014 — **Introduction to Clinical Psychology (BSc), and Clinical Psychology, Psychological Intervention and Clinical Neuropsychology (MSc)**, *Julius-Maximilians-Universität Würzburg*, Student Teaching Assistant

Funding – Awards

2022 — **Post-Doctoral Fellow Award**, *Cognitive Neuroscience Society (CNS)*, CNS Annual Meeting, San Francisco, 100 $

2020–2022 — **Postdoctoral Research Fellowship**, *German Research Foundation (DFG)*, (project 437219953), funded for 24 months ($\sim$ 85,000€), extended for 6 months

2020	**Robert J. Glushko Prize for Outstanding Doctoral Dissertations in Cognitive Science**, *Cognitive Science Society*, 10,000$
2010	**PROMOS travel grant**, *German Academic Exchange Service (DAAD)*, 200€
2010–2011	**Scholarship of partnership with Universidad de Salamanca, Spain**, *Julius-Maximilians-Universität Würzburg, Germany*, the university annually selects one candidate per partner city and awards tuition, accommodation, and subsistence for the academic year

First author publications

Michelmann, **S.**, Hasson, U., & Norman, K. A. (2023). Evidence That Event Boundaries Are Access Points for Memory Retrieval. *Psychological Science*.

Michelmann, **S.**, Price, A. R., Aubrey, B., Strauss, C. K., Doyle, W. K., Friedman, D., Dugan, P. C., Devinsky, O., Devore, S., Flinker, A., Hasson, U., & Norman, K. A. (2021). Moment-by-moment tracking of naturalistic learning and its underlying hippocampo-cortical interactions. *Nature Communications*, *12*(1), 5394.

Michelmann, **S.**, Staresina, B. P., Bowman, H., & Hanslmayr, S. (2019). Speed of time-compressed forward replay flexibly changes in human episodic memory. *Nature Human Behaviour*, *3*(2), 143.

Michelmann, **S.**, Bowman, H., & Hanslmayr, S. (2018). Replay of stimulus-specific temporal patterns during associative memory formation. *Journal of Cognitive Neuroscience*, *30*(11), 1577–1589.

Michelmann, **S.**, Treder, M. S., Griffiths, B., Kerrén, C., Roux, F., Wimber, M., Rollings, D., Sawlani, V., Chelvarajah, R., Gollwitzer, S., Kreiselmeyer, G., Hamer, H., Bowman, H., Staresina, B., & Hanslmayr, S. (2018). Data-driven re-referencing of intracranial EEG based on independent component analysis (ICA). *Journal of Neuroscience Methods*, *307*, 125–137.

Michelmann, **S.**, Bowman, H., & Hanslmayr, S. (2016). The temporal signature of memories: Identification of a general mechanism for dynamic memory replay in humans. *PLoS Biology*, *14*(8).

Senior author publications

Schmidt, B., Böhmer, J., Schnuerch, M., Koch, T., & **Michelmann**, **S.** (2024). Post-hypnotic suggestion improves confidence and speed of memory access with long-lasting effects. *Acta Psychologica*, *245*, 104240.

Co-author publications

Zada, Z., Goldstein, A., **Michelmann**, **S.**, Simony, E., Price, A., Hasenfratz, L., Barham, E., Zadbood, A., Doyle, W., Friedman, D., Dugan, P., Melloni, L., Devore, S., Flinker, A., Devinsky, O., Nastase, S. A., & Hasson, U. (2024). A shared model-based linguistic space for transmitting our thoughts from brain to brain in natural conversations. *Neuron*.

Kumar, M., Goldstein, A., **Michelmann**, **S.**, Zacks, J. M., Hasson, U., & Norman, K. A. (2023). Bayesian surprise predicts human event segmentation in story listening. *Cognitive Science*, *47*(10), e13343.

D'Andrea, A., Basti, A., Tosoni, A., Guidotti, R., Chella, F., **Michelmann**, **S.**, Romani, G. L., Pizzella, V., & Marzetti, L. (2022). Magnetoencephalographic spectral fingerprints differentiate evidence accumulation from saccadic motor preparation in perceptual decision-making. *iScience*, 105246.

Wallace, G., Polcyn, S., Brooks, P. P., Mennen, A. C., Zhao, K., Scotti, P. S., **Michelmann**, **S.**, Li, K., Turk-Browne, N. B., Cohen, J. D., & Norman, K. A. (2022). RT-cloud: A cloud-based software framework to simplify and standardize real-time fMRI. *NeuroImage*, *257*, 119295.

Meconi, F., Linde-Domingo, J., S. Ferreira, C., **Michelmann**, **S.**, Staresina, B., Apperly, I. A., & Hanslmayr, S. (2021). EEG and fMRI evidence for autobiographical memory reactivation in empathy. *Human Brain Mapping*, *42*(14), 4448–4464.

Ngo, C. T., **Michelmann**, **S.**, Olson, I. R., & Newcombe, N. S. (2021). Pattern separation and pattern completion: Behaviorally separable processes? *Memory & Cognition*, *49*(1), 193–205.

Parish, G., **Michelmann**, **S.**, Hanslmayr, S., & Bowman, H. (2021). The Sync-Fire/deSync model: Modelling the reactivation of dynamic memories from cortical alpha oscillations. *Neuropsychologia*, *158*, 107867.

Treder, M. S., Charest, I., **Michelmann**, **S.**, Martín-Buro, M. C., Roux, F., Carceller-Benito, F., Ugalde-Canitrot, A., Rollings, D. T., Sawlani, V., Chelvarajah, R., Wimber, M., Hanslmayr, S., & Staresina, B. P. (2021). The hippocampus as the switchboard between perception and memory. *Proceedings of the National Academy of Sciences*, *118*(50), e2114171118.

Krzemiński, D., **Michelmann**, **S.**, Treder, M., & Santamaria, L. (2020). Classification of P300 Component Using a Riemannian Ensemble Approach. In J. Henriques, N. Neves, & P. de Carvalho (Eds.), *XV Mediterranean Conference on Medical and Biological Engineering and Computing – MEDICON 2019* (pp. 1885–1889). Springer International Publishing.

Griffiths, B. J., Parish, G., Roux, F., **Michelmann**, **S.**, Plas, M. v. d., Kolibius, L. D., Chelvarajah, R., Rollings, D. T., Sawlani, V., Hamer, H., Gollwitzer, S., Kreiselmeyer, G., Staresina, B., Wimber, M., & Hanslmayr, S. (2019). Directional coupling of slow and fast hippocampal gamma with neocortical alpha/beta oscillations in human episodic memory. *Proceedings of the National Academy of Sciences*, *116*(43), 21834–21842.

Andreatta, M., **Michelmann**, **S.**, Pauli, P., & Hewig, J. (2017). Learning processes underlying avoidance of negative outcomes. *Psychophysiology*, *54*(4).

Staresina, B. P., **Michelmann**, **S.**, Bonnefond, M., Jensen, O., Axmacher, N., & Fell, J. (2016). Hippocampal pattern completion is linked to gamma power increases and alpha power decreases during recollection. *eLife*, *5*, e17397.

Book chapters

Parish, G. M., **Michelmann**, **S.**, & Hanslmayr, S. (2023). How should i re-reference my intracranial eeg data? In N. Axmacher (Ed.), *Intracranial eeg: A guide for cognitive neuroscientists* (pp. 451–473). Springer International Publishing.

Michelmann, **S.**, Griffiths, B. J., & Hanslmayr, S. (2022). The role of alpha and beta oscillations in the human EEG during perception and memory processes. In *The Oxford Handbook of EEG Frequency* (p. 202). Oxford University Press.

Preprints

Michelmann, **S.**, Kumar, M., Norman, K. A., & Toneva, M. (2023). Large language models can segment narrative events similarly to humans. https://doi.org/10.48550/ARXIV.2301.10297

Reviewing for peer reviewed journals

Nature Communications, Elife, PLOS Biology, Science Advances, Neuroscience & Biobehavioral Reviews, Imaging Neuroscience, Scientific Reports, Cerebral Cortex, Psychophysiology, Journal of Neuroscience Methods

Consulting

since 2020 **Cognition.run**, Pro-bono consulting for the development of cognition.run, an online platform that facilitates behavioral research (www.cognition.run)

Languages

German (native), English (fluent), Spanish (fluent), French (basic), Italian(basic)