
NEWSLETTER

Memory Index Project

July 2026

Issue 1



Welcome to the first MemoryIndex Newsletter!

It is a great pleasure to introduce the inaugural newsletter of the MemoryIndex project. We plan to publish these updates every three months to keep all project partners informed about our progress, achievements, and upcoming activities.

Although MemoryIndex officially started on **1 January 2026**, that already feels like a long time ago. The past six months have been exceptionally busy, productive, and exciting. Most importantly, we successfully recruited what I like to call the project's "**A-Team.**" Anna, Bārbala, and Dennis all joined the project on **1 May** after an extremely competitive recruitment process. Each of them was the outstanding candidate in their respective field, and their decision to join MemoryIndex is a testament to the scientific ambition and excitement surrounding this project. I feel very privileged to be working with such a talented team.



Prof Simon Hanslmayr

At the same time, we have been working hard with all project partners to finalize a collaboration agreement. While a few details still need to be resolved, we are making excellent progress and hope to have everything in place soon.

This newsletter also includes updates from each of the three work packages. As you will see, Anna, Bārbala, and Dennis have truly hit the ground running. They have been hard at work designing their first experiments, getting trained and approved on the equipment and procedures required for their research, and setting up the analysis and modelling pipelines that will form the backbone of much of our future work. Their progress so far has been impressive and bodes very well for the years ahead.

Overall, I could not be happier with how MemoryIndex has started. This first newsletter paints a very positive picture of the project, and I hope we can maintain this momentum as we move forward together.

Simon Hanslmayr
Principal Investigator, MemoryIndex



Meet the NoT_CoOL Team

From left Dr Anna Karlsson, Bārbala Ostrovska, Dennis Grigoryev, Prof Simon Hanslmayr back Eleonora Marcantoni, Yuxin Li, Jacqueline McDiarmid, front Ying Yao, Xiangshu Wu

WP1 - Bārbala Ostrovska has an integrated Masters (MSci) degree in Neuroscience with Psychology from the University of Aberdeen. Her thesis focused on electrophysiological dorsoventral gradients in the mouse entorhinal cortex, using whole-cell patch-clamp recordings. She completed a placement year at Pfizer in clinical trial management and gained research experience in a range of settings, including a perception lab and a health services research unit.

WP2 - Anna Karlsson did her PhD at Max-Planck Institute for human development, investigating age-related declines in episodic memory. She examined neural oscillations and activity patterns in hippocampal subfields to assess the decline in associative binding seen in older age. She continued this line of research as a post-doc at the Cabezalab at Humboldt University, focusing on the contribution of hippocampal subfield activity to age differences in the formation of conceptually oriented and episodically detailed memories respectively.

WP3 – Dennis Grigoryev studied for his BSc Computer Science at Queen Mary University of London and MSc Biomedical Engineering (Neurotech stream) at Imperial College London where he won a highly competitive scholarship from the Department of Bioengineering. He went on to work as a full-stack developer at a Danish med-tech company developing an online implant database for radiographers and later at a global digital communications company. His unique technical skills will help develop a simulation of an electrical micro stimulation delivered to human hippocampal neurons.

Project Updates

Work Package 1

Bārbala : “Since joining the lab in May, I have been working with Anna to develop an experimental paradigm to investigate episode specific neuron and concept cell activity in memories with overlapping elements using single-neuron recordings. So far, we have defined the structure of the experiment and are in the process of collecting video stimulus materials. I've also met with Dr Matthew Self to discuss plans to analyse the relationship between a person's age and the relative populations of concept versus episode specific neurons.”

Work Package 2

Anna: “I have been working on a new paradigm to uncover both episode and concept specific codes in the hippocampal subfields. The behavioural task has been programmed, and we will soon be ready to start piloting. Under additional support from Alessio Fracasso, I am also working on the 7T pilot data, performing quality control of the subfield segmentations and applying a simulation-validated correction method to account for autocorrelation in the data.”

Work Package 3

Dennis: “I have been focusing on understanding properties of the hippocampal formation, investigating its role in memory, selecting an optimal modelling strategy, and defining scope of work. I've met Prof. Marcus Kaiser, project co-supervisor from the University of Nottingham, and established base literature for model development. Next, I need to consolidate my learnings into a straightforward evolving source of knowledge to inform the model creation.”