We invite applications for a postdoctoral research position at the Computation in Neural Circuits group at the Max Planck Institute for Brain Research in Frankfurt, Germany. We use mathematical and computational approaches to study how neural networks self-organize into functional units from a combination of mechanisms including synaptic, homeostatic and intrinsic plasticity. We investigate different levels from individual synaptic inputs on dendrites to large-scale networks of higher order cortex. We are especially interested in these aspects during cortical development before and shortly after birth when the brain is highly plastic, but general aspects of learning and memory, especially under naturalistic stimuli and behaviors are also of great interest. For our recent work, you can see our latest papers and preprints: [http://cns.wzw.tum.de/index.php?id=pubs](http://cns.wzw.tum.de/index.php?id=pubs)

We collaborate with different experimental research groups in the US, UK, Netherlands and Germany and benefit from interactions with the strong neuroscience community in Frankfurt. Our applications range across animals from rodents to Drosophila and reptiles.

Successful applicants can choose from a range of projects including data analysis, theoretical model development and analytical calculations, numerical simulations, and applications to rich datasets from collaborating labs. Applicants should have a strong quantitative background (in mathematics, physics, engineering, computer science, or related fields) and good programming skills (Matlab, C/C++ or Python).

The position can start as early as spring 2020. For more information or informal questions, email me at gjorgjieva@brain.mpg.de. I will also be at Cosyne.

To apply for this position, please email the following to gjorgjieva@brain.mpg.de:
1. A curriculum vitae
2. A description of research interests, including motivation for why you chose to apply to our group
3. A writing sample, either a manuscript, thesis or code
4. Contact details for 2-3 referees

Looking forward to your applications!

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