

To the Editorial Board of the Journal of Mathematical Neurosciences and Applications,

We are excited to submit our research entitled “Development of Topographic Maps in Neural Field Theory with Short Time Scale Dependent Plasticity” in which we detail how topographic maps can be formed in the contexts of Neural Field Theory (NFT) and Spike-Timing-Dependent-Plasticity (STDP). This is useful because current models for experimental systems with complex development stimulus patterns (e.g. mouse) cannot account for temporal variations in underlying activity dynamics. This research thus establishes a framework in which general systems with these properties can be analysed. We also present an application of the model via numerical simulation to explain variations in the retinotopic development of wild-type mice and a mutant which disturbs developmental activity dynamics.

We would like to nominate Alexei Koulakov (koulakov@cshl.edu) and Nicolas Rougier (nicolas.rougier@inria.fr) for their expertise in NFT and topographic map development. In addition, we would consider Georgios Detorakis (gdetorak@uci.edu), Dmitry Tsigankov (dmitry@cshl.edu), Geoffrey Goodhill (g.goodhill@uq.edu.au), Stephen Coombes (stephen.coombes@nottingham.ac.uk), and Nicholas Swindale (swindale@mail.ubc.ca) to be appropriate reviewers.

We look forward to communicating with you.

Warm regards,

Nicholas Gale, Michael Small, Jennifer Rodger, and Stephen Eglén