

A novel dynamic field model supporting a continuum of bump amplitudes

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Neural field models, typically formalized as integro-differential equations, have been used since the 1950s to describe the activity of large-scale neuronal populations in the cortex. In this talk, I will present a novel dynamic neural field model whose solutions lie on a two-dimensional attractor, defined by a continuum of positions and amplitudes. Solutions of the model are rigorously studied using linear stability analysis and numerical continuation techniques. I will discuss the existence, stability, and bifurcation structure of model solutions and compare our findings with the known results for the classical neural field models.

References

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