Abstract Submitted
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Large-scale simulation of the primary visual cortex[1] JIM WIELAARD, PAUL SAJDA, Columbia University, New York — We have developed a large-scale computational model of a 4x4 mm^2 patch of a primary visual cortex (V1) input layer. The model is constructed from basic established anatomical and physiological data. Based on numerical simulations with this model we are able to suggest neural mechanisms for a wide variety of classical response properties of V1, as well as for a number of extraclassical receptive field phenomena. The nature of our model is such that we are able to address stationary as well as dynamical behaviour of V1, both on the single cell level and on a population level of up to about 10^5 cells.

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