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Arbor: when you really need compartments

Friday 16 June 2023 10:30 (1h 30m)

Sometimes you might phrase research questions such that cell morphologies are needed to answer them. For instance: you are interested in a biological question: how are new connections formed? Which chemicals play a role, at which concentrations? Or you have a wetlab experiment you wish to model: you have measured local field potentials of a tissue with a new and microscopic sensor because you suspect the dendritic morphology plays a role. Although NEST offers options to model few-compartment cells, you may want or need more. Enter Arbor. Née Nest-MultiCompartment, it is a fresh start in the world of morphologically detailed simulators that shares with NEST a focus on ease-of-use and scaling up to large networks well. In this tutorial, we will show you how we create an Arbor simulation based on a NEST experiment, and observe how morphologies change measurements.

Acknowledgements

References

Topic area

simulator technology and performance

Keywords

simulation, performance, morphology, biological detail

Speaker time zone

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Preferred form of presentation

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