Simulation-based inference for neuroscience (and beyond)

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Abstract
Neuroscience research makes extensive use of mechanistic models of neural dynamics — these models are often implemented through numerical simulators, requiring the use of simulation-based approaches to statistical inference. I will talk about our recent work on developing simulation based inference-methods using flexible density estimators parameterised with neural networks, our efforts on benchmarking these approaches, and applications to modelling problems in neuroscience.

References

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