Marcel van Gerven

Harnessing Noise for Neuromorphic Control

Traditional AI control methods predominantly depend on deep reinforcement learning, which necessitates extensive and energy-intensive compute clusters. This presentation introduces a novel approach capable of learning to control systems directly on edge devices. By leveraging stochastic differential equations and utilizing system noise to facilitate learning, our method circumvents several challenges associated with on-chip AI model training. I will delve into the theoretical foundations of this approach and showcase our efforts in adapting these solutions for edge device implementation.