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Dear Editors,

Thank you for the invitation to submit this article in the Journal of Selected Topics in Quantum Electronics issue on Photonics for Deep Learning and Neural Computing. The paper I submit here summarizes the operation of a single-photon synapse based on a superconducting detector and Josephson junction and explores synaptic and dendritic processing in the superconducting electronic domain through circuit simulations. This work is related to several topics listed in the call for papers, including neuromorphic hardware, spiking neural networks, photonic synaptic devices, attojoule photonic nonlinear devices, and cryogenic photonic neural networks. I hope you find this work merits publication in your journal and contributes something of value to the special issue.

Best regards,  
Jeff Shainline