

Special Issue

Photonic Neural Networks

Message from the Guest Editor

Artificial neural networks (ANNs) are recognized for their enormous potential across many scientific disciplines and economic sectors. Over the years, photonic computing studies and products have demonstrated a clear advantage in communication and processing speed over their electronic rivals due to the inherent parallelism of the bosonic nature of light. Furthermore, many linear and non-linear transformations were demonstrated using passive optical components, meta devices, and active photonic components. To further advance the field of photonic neural networks (PNN), we encourage you to submit your work to this Special Issue. Original research papers or review articles providing insights into the state-of-the-art and future of the field are welcome. This Special Issue focuses on: (a) Photonic integrated circuit architectures for matrix multiplications, (b) Photonic neuromorphic computing, (c) Reservoir computing, (d) Device components for implementing nonlinear functions in photonic neural networks, and (e) Application opportunities for photonic neural networks.

Guest Editor

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Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

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