



Bridging the Gap between Deep Learning and Probabilistic Inference for Advancements in Robotics

Guest Editors:

Dr. Tin Lai

School of Computer Science, The
University of Sydney, Sydney,
NSW 2006, Australia

Prof. Dr. Zhaojie Ju

School of Computing, University
of Portsmouth, Portsmouth PO1
3HE, UK

Deadline for manuscript
submissions:

closed (15 May 2024)

Message from the Guest Editors

Dear Colleagues,

In recent times, the field of robotics has witnessed remarkable advancements propelled by the integration of artificial intelligence (AI) and machine learning (ML), particularly deep learning, into robotic systems. These developments have propelled robots to accomplish tasks with unprecedented levels of performance. This has spurred a reconsideration of the traditional probabilistic inference algorithms that have long been relied upon for reliable operation in uncertain and unstructured environments.

Concurrently, the paradigm of robot learning has gained significant momentum. It holds the promise of enabling robots to generalize their capabilities across a spectrum of scenarios, mitigating the necessity for the meticulous engineering of task-specific models, which is a hallmark of classic probabilistic methods. Yet, a fundamental question persists: can we entrust robots with dependable and adaptive behaviors solely through data-driven learning approaches?

Addressing this question lies at the heart of this Special Issue: Bridging the Gap between Deep Learning and Probabilistic Inference in Robotics.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Flavio Canavero

Department of Electronics and
Telecommunications,
Politecnico di Torino, 10129
Torino, Italy

Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

Author Benefits

Open Access: free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

High Visibility: indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [CAPus / SciFinder](#), [Inspec](#), and [other databases](#).

Journal Rank: JCR - Q2 (*Electrical and Electronic Engineering*) CiteScore - Q2 (*Electrical and Electronic Engineering*)

Contact Us

Electronics Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/electronics
electronics@mdpi.com
[X@electronicsMDPI](https://twitter.com/electronicsMDPI)