

## Special Issue

# Advances in Field-Programmable Gate Arrays (FPGAs)

### Message from the Guest Editors

Field-programmable gate arrays (FPGAs) have successfully transitioned from mostly prototyping platforms to heterogeneous compute-acceleration platforms. Currently, FPGAs have been widely used in artificial intelligence (AI) acceleration, sensor signal acquisition and processing, as well as quantum information processing. With the rapid advances in AI, quantum computing, and micro-nano sensor systems, FPGAs continue to be an attractive computing platform for domain-specific accelerations. In this Special Issue, we call for high-quality and insightful manuscripts on advanced FPGA circuits and systems designs, modern FPGA architectures, high-level synthesis tools and FPGA-based applications, such as AI or LLM acceleration, quantum computing and quantum information, scientific computing, integration of sensor arrays, etc. The objective of this Special Issue is to solicit and present the latest research findings in the field of hardware and algorithm codesign with a particular interest in FPGA circuits and systems. We look forward to receiving your submissions!

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### Guest Editors

Prof. Dr. He Li  
Dr. Tarek Ould-Bachir  
Dr. Philippos Papaphilippou

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### Deadline for manuscript submissions

30 November 2026



## Micromachines

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### Editor-in-Chief

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