



Recent Advances in Quantum Microprocessor

Guest Editor:

Dr. Mattia Borgarino

Dipartimento di Ingegneria Enzo Ferrari, University of Modena and Reggio Emilia, 41125 Modena, Italy

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Message from the Guest Editor

Dear Colleagues,

Today, the quantum computing community suffers from the unavailability of such quantum microprocessors. The present Special Issue focuses on hardware for future quantum microprocessors. As it was for early electronic computers, research activity on this topic is strongly interdisciplinary. With the idea in mind of going beyond the dichotomy between applied and fundamental research, the scope of this Special Issue is to collect in one single issue technical contributions from microelectronics and integrated optics with more fundamental contributions from solid-state physics and quantum mechanics theory. The Special Issue covers but is not limited to the following topics:

- Architectures for quantum microprocessors;
- Cryogenic microelectronics for quantum computing;
- Integrated optics for quantum computing;
- Quantum mechanics for quantum algorithms;
- Physical implementations and characterization of qubits;
- Behavioral and/or physical modeling of qubits;
- Cryogenic modeling of microelectronic devices.





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Editor-in-Chief

Prof. Dr. Flavio Canavero

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

Message from the Editor-in-Chief

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Electronics Editorial Office
MDPI, Grosspeteranlage 5
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