Special Issue: Emerging Applications of FPGAs and Reconfigurable Computing System

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Special Issue Website:

https://www.mdpi.com/journal/electronics/special_issues/5923EM72V7

Deadline for manuscript submissions: 15 November 2024

Dear Colleagues,

The continuous modernizing of the characteristics and features of FPGA devices has led to this becoming the natural choice of many final designs. Over the last three decades, these devices have evolved from a few thousand logic blocks to systems-on-chip, integrating billions of transistors. And the current result of this evolution is a set of flexibility and reconfigurability capabilities without precedents, capabilities that enable rapid prototyping, massive parallel designs, and high energy efficiency. Moreover, current FPGAs enable the integration of microprocessor architectures, thus becoming a powerful alternative to create highly efficient computer systems.

Thus, FPGA devices can be reconfigured to implement tailored designs and architectures based on the characteristics of target applications. This is the reason why the use of FPGAs and reconfigurable computing systems are rapidly increasing, bringing new opportunities for engineering across a wide range of applications.

Potential topics include, but are not limited to, the following:

1. Control
2. Image processing
3. Signal processing
4. Cybersecurity
5. Embedded systems
6. Power systems
7. Intelligent systems
8. Machine learning
9. Biomedical applications
10. Robotics
11. IoT applications
12. Telecommunications
13. Networking
14. High-performance computing
15. Reconfigurable computing
16. Particle physics
17. Manufacturing
18. Deep neural networks