



Microelectronics Design and Precision Instrumentation

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Message from the Guest Editor

The application of microelectronics in scientific and industrial instrumentation is ubiquitous and continuously evolving. The aim of this Special Issue is to collect contributions to review the application of microelectronics in different domains of the instrumentation. Particularly, we focus on the application of microelectronics in precision instrumentation.

We invite the submission of contributions addressing, but not limited to, the following applications of microelectronics in instrumentation:

1. Scientific instrumentation
 - Particle and nuclear detectors (e.g., pixels, trackers, calorimeters, and others)
 - Astrophysics and astro-particle physics
 - Scientific imagers (e.g., CMOS, CCD)
 - Microwave and cryogenic detectors
 - Space instrumentation
2. Industrial applications
 - Molecular and medical imaging
 - Imaging in biology
 - Security and inspection
 - Transportation and autonomous driving
 - Others: mining, geology, agriculture, etc.





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Message from the Editor-in-Chief

The realization of dedicated instrumentation has always been a collateral aspect of experimental research. In addition, many groups dedicate efforts and resources solely to the development of new devices, sensors, equipment and large infrastructure, theoretical and numerical studies, and novel experimental methodologies. With Instruments we wish to address both established and emerging communities, also to favor the creation of innovative trans-disciplinary approaches. We see Instruments as an exciting high-impact journal that will soon hold a leading position in disseminating cutting edge scientific and technological research.

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