Dear Readers,

The end of the year is a time of accounting. Thanks to all of You, as a Community of Authors and Reviewers, Acta IMEKO is increasing its reputation. Indeed, according to SJR ranking [1], in the last year the Journal passed from the fourth to the third quartile both in the field of Electrical and Electronic Engineering and of Mechanical Engineering.

The goal of speeding up the editorial process without reducing the quality of the publications has been achieved too. Indeed, the publication time has been reduced by a factor of ten, and the rejection rate is at about 50%. This was done keeping the blind peer-review process based on at least two reviewers.

Since February 2022 Acta IMEKO is indexed by the Directory of Open Access Journals (DOAJ) [2] and the procedure to be indexed in Web of Science was started.

The Editorial Board (EB) was enlarged including most of the IMEKO Technical Committees Chairs. Please let me thank all the new EB Members for accepting this important role in supporting the Journal with their voluntary service.

Further efforts were done to upgrade the management system of the Journal and the website. It was a huge work, especially in transferring the data and the history of the old system to the new one.

Finally, we have developed a procedure to recognize the voluntary efforts of the Reviewers. In agreement with the IMEKO Presidential Board we have established an Award for the Best Reviewer of the year and a recognition for the Top 10 Reviewers.

As usual, also this issue includes a General Track aimed to collect contributions that do not relate to a specific event. As Editor in Chief, it is my pleasure to give you an overview of these papers, with the aim of encouraging potential authors to consider sharing their research through Acta IMEKO.

Natural lighting in building environments is an important aspect for the occupants’ mental and physical health. Furthermore, the proper exploitation of this resource can bring energy benefits related to the reduced use of artificial lighting. Indeed, the publication time has been reduced by a factor of ten, and the rejection rate is at about 50%. This was done keeping the blind peer-review process based on at least two reviewers.

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syringe pump as a programmable volume regulator which can provide fall rate compensation as well as controlled motion of the piston. In [4] it is shown that the damped harmonic oscillator response of the pressure balance must be considered when moving the coil. From this initial investigation, Authors discuss the implications for use in the MSL Kibble balance.

Reliability analysis can be committed to companies by customers willing to verify whether their products comply with the major international standards or simply to verify the design prior of market deployment. Nevertheless, these analyses may be required at the very preliminary stages of design or when the design is already in progress due to low organizational capabilities or simple delay in the project implementation process. The results sometime may be far from the market or customer target with a subsequent need to redesign the whole asset. Of course, not all the cases fall in the worst scenario and maybe with some additional considerations on mission definition it is possible to comply with the proposed reliability targets. Marco Mugnaini and Ada Fort, in the paper entitled “How to stretch system reliability exploiting mission constraints: A practical roadmap for industries” [5] provide an overview on the approach which could be adopted to achieve the reliability target even when the project is still on-going, providing a practical case study.

The recent increase in the Internet of Things and Industry 4.0 fields has led many researchers to focus on the innovative technologies that could support these emerging topics in different area of applications. In particular, the current trends are to close the gap between the physical and digital worlds, thus originating the so-called Cyber-Physical System (CPS). A relevant feature of the CPS is the digital twin, i.e., a digital replica of a physical system, that the damped harmonic oscillator has been realized as an IoT platform that collects and controls the real instrumentation and makes it available in Augmented Reality. An application example involving a digital storage oscilloscope is finally presented to highlight the efficacy of the proposed approach.

I hope you will enjoy your reading.

Francesco Lamonaca
Editor in Chief

REFERENCES