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Ancona, 26/07/2021

To the kind attention of:

Prof. Francesco Lamonaca
Editor-in-Chief
Acta Imeko

Subject: ***Submission of the paper:***
"Continuous monitoring of the health status of cement-based structures: electrical impedance measurements and remote monitoring solutions".

Dear Prof. Lamonaca,

my Co-authors and I would be very grateful if You could consider the attached manuscript: ***Continuous monitoring of the health status of cement-based structures: electrical impedance measurements and remote monitoring solutions***, for publication on Acta Imeko journal, in particular on the Special Issue related to the "V Forum Nazionale delle Misure". This paper deals with the development of a remote monitoring system for cement-based structures, based on the measurement of electrical impedance (Wenner's method, 4-electrode AC measurement to avoid the polarization of both electrode-material interface and material itself). Indeed, this type of measurements allows to promptly detect potentially dangerous events (e.g. penetration of aggressive substances, cracks formation, etc.) and to timely intervene, so as to optimise both maintenance costs and structures service life. In particular, the system is realized as a distributed sensor network; nodes are connected to a central gateway (RS232 protocol is used for serial communication) and data are made remotely available through a user-friendly application developed in Dart language exploiting the Google Flutter Network. Results from a demo site in Spain are reported.

The paper has been prepared following the instruction for authors available on journal website. It is composed by 7 pages (including title page, 14 figures with relative captions and references).

I look forward to hearing from you.
Best regards.

Dr Gloria Cosoli