

24th IMEKO TC-4 INTERNATIONAL SYMPOSIUM

22nd INTERNATIONAL WORKSHOP ON ADC AND DAC
MODELLING AND TESTING

PALERMO, ITALY - SEPTEMBER 14-16, 2020

CALL FOR PAPERS

for the Special Session on

QUANTUM METROLOGY AND MEASUREMENTS

ABSTRACT

A deep understanding of physical systems typically necessitates precise measurement techniques of a given quantity. In this context, quantum mechanics provides important contributions. Quantum metrology is the study of making high-resolution and highly sensitive measurements of physical parameters using quantum effects of the systems, allowing one to supersede purely classical approaches.


This Special Session is devoted to gather some of the most recent theoretical and experimental developments in this research field. New techniques and problems related to the presence of surrounding noise and experimental imperfections will be discussed. The Special Session will be an occasion to have a high-profile overview of the state-of-art concerning quantum metrology, measurement and sensing, stimulating discussions and possible prospects.

ORGANIZER



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ABOUT THE ORGANIZER

After his PhD in theoretical physics from the University of Palermo, Rosario held positions at the University of Catania, the National Interuniversity Consortium for the Physical Sciences of Matter (CNISM), the University of Nottingham and University of São Paulo. He is currently researcher, Physics professor and member of the doctorate board at the Department of Engineering of the University of Palermo, Italy. He leads a research team on various aspects related to quantum correlations and open quantum systems within a quantum information scenario.

Rosario is member of the Editorial Board of the journals: Scientific Reports (Nature Publishing Group), Entropy and Applied Sciences (MDPI). He co-organised a Discussion Meeting at the Royal Society and is often a speaker at popular events to disseminate academic research. His main research contributions concern the dynamics of quantum correlations and entanglement in open systems and most recently the characterisation of composite systems of indistinguishable particles.



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