Preface to the Proceedings of the 12th International Workshop on the Reliability of Intelligent Environments (WoRIE'23)

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The 12th International Workshop on the Reliability of Intelligent Environments (WoRIE 2023) will be held within the 19th International Conference on Intelligent Environments (IE 2023) in Uniciti, Flic-en-Flac, Mauritius, from 27th to 30th June 2023. A central theme of this workshop is to foster dialogue among researchers and practitioners to develop higher quality Intelligent Environments (IEs). The workshop aims to bring together experts from different domains to share knowledge, insights and experiences to promote the development of IEs which are more reliable, secure and safer while also enhancing user confidence in them.

We are honoured to have Prof. Mohammed M. Alani as our esteemed keynote speaker for this edition. In his presentation, Prof. Alani will conduct a comparative analysis of five prominent smart grid intrusion detection datasets, providing valuable insights and perspectives to researchers seeking to develop machine-learning based solutions for intrusion detection in this domain. The featured contributions in this collection highlight recent advancements in the development of reliable IEs. These include a cost-effective application that utilizes WebAssembly and fast Continuous Wavelet Transform for signal analysis, enabling cross-platform compatibility and hardware-independent operation. Another notable contribution is a real-time Signal Quality Indicator for ElectroCardioGram (ECG) that allows empirical calibration and usage of biosensors in real-world IEs. Additionally, a continuous air quality monitoring system that employs the LoRa standard and low-cost electronic components is presented. We hope that these innovative ideas will inspire readers to contribute to future editions of this collection.

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