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BOOK OF ABSTRACTS

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# Towards a Simulation as a Service Platform for the Cloud-to-Things Continuum

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## Abstract

In the past years, we have seen an unprecedented pace of technological development in smart applications. Smart Systems incorporate securely connected sensors, actuators, and data processing resources to provide digital services. They provide a wide range of smart applications using emerging technologies that address governmental or industrial processes or citizen life in smart cities, and many of them have been affected by the COVID-19 pandemic which involved a general lack of trust. Integrating Blockchain-based data management into smart systems can enhance the performance, trust, and privacy of their applications, which are getting more and more crucial. In this paper, we propose a vision for a unified Simulation as a Service platform, which will be able to model and investigate Blockchain-based smart systems exploiting IoT, Fog, and Cloud Computing infrastructures.

**Keywords:** Simulation, Blockchain, Internet of Things, Fog Computing, Cloud Computing.

# Cormas: The Software for Participatory Modelling and its Application for Managing Natural Resources in Senegal

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## Abstract

Cormas is an agent-based simulation platform developed in the late 90s by the Green research at CIRAD unit to support the management of natural resources and understand the interactions between natural and social dynamics. This platform is well-suited for a participatory simulation approach that empowers local stakeholders by including them in all modelling and knowledge-sharing steps. In this short paper, we present the Cormas platform and discuss its unique features and their importance for the participatory simulation approach. We then present the early results of our ongoing study on managing pastoral resources in the Sahel region, identify the problems faced by local stakeholders, and discuss the potential use of Cormas at the next stage of our study to collectively model and understand the effective ways of managing the shared agro-sylvo-pastoral resources.

**Keywords:** Resource management, Agent-based modelling, Participatory simulation, Software