



## Editorial

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This last issue of our seventh volume of the Journal of Reliable Intelligent Environments brings six articles in a diversity of research communication formats as well as on the technical areas they cover.

Their difference reflects the complexity of modern systems, the number of possible devices, the variety of possible ways to connect them, of users to engage with these and the possible opportunities for them to fail in matching users expectations of service delivery. This is one of the main reasons for the creation of this journal where our community look at a scientific discussion on how to make modern systems more aligned with society expectations.

Bouarfa et al.'s *Formal modelling and verification of a multi-agent negotiation approach for airline operations control* presents a rule-based multi-agent system model of an Airline Operations Control system which is shown to outperform in some strategies involved in the negotiations from task experts when dealing with airline disruption scenarios management. Given the long-established and growing importance of flights as transportation and the danger to human life when there are faults anywhere in the industry systems, this article is of outstanding importance.

Onesimu et al.'s *Internet of things based intelligent accident avoidance system for adverse weather and road conditions* provides another great example on systems applied to help with human safety in transportation. This research looks at road safety to increase traffic whilst decreasing accidents. With the continuous growing of population and associated increase in transport contributions in this area continue to be of high priority.

Dutta et al.'s *Elephant-railway conflict minimisation using real-time video data and machine learning* communicates progress in the prevention of road accidents whilst allowing natural life transit and preservation. Although this work is focused in a specific region of the world, actually the problems brought by human co-existence with nature and the rapid widespread urbanization of our planet makes this work of wider importance.

J. Shreyas et al.'s *CAFOR: congestion avoidance using fuzzy logic to find an optimal routing path in 6LoWPAN networks* addresses an issue of performance which is also an important part of our perceived reliability of systems because when systems do not deliver their services in the expected manner our confidence on those also deteriorates. In this case, the research reported is of new algorithms based on Fuzzy Logic concepts which improve over well-known previous algorithms in aspects of 6LoWPAN networks performance such as throughput and goodput at the same time it decreases packet loss, energy used, and one-way delays.

Bej et al.'s *A cost-effective alertness-rating tool to enable situational awareness among on-duty static security guards in COVID-19 pandemic* provides a more efficient algorithm to optimize the availability of strategic but scarce human resources in a physical space. In this case the article focuses on guards distribution at a university campus and their role in COVID-19 checks. This human-computing collaborations to support health and safety are good examples of IT value which have been demonstrated during the recent pandemic.

Cáliz et al.'s ReviewPaper *Examining the usability of touchscreen gestures for adults with DS* provides a study on interfaces for people with Down's Syndrome so that their needs and preferences can be taken into account by system designers. This is of major significance as this is a sector of our population which is not well served by the technological giants. However, these citizens are as deserving of attention as anyone else and there are studies supporting that they are much more engaged and interested in technology than the average population believes.

We hope these articles stimulate the community to further improvements in this area and perhaps to collaborations

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between the participating teams so that complementary solutions can be used in a combined way to tackle more complex problems.

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