



Editorial

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This third issue of the fourth volume of the Journal of Reliable Intelligent Environments consists of four papers. One of them is a Position Paper and three report on core technical advances in different areas, IoT security, home environments and road environments.

Is the Internet Spatial?, by Hedda R. Schmidtke, offers a thought-provoking insight on an important assumption of one current key resource for humanity: the internet. Dr. Schmidtke looks at the relationship between the real physical environment and the virtual one associated with internet connections. This analysis can lead to efficiency improvements which more realistically recognize the challenges of the associated physical environment and how it influences the computational processes it supports.

Fall Detection in Smart Home Environments Using UWB Sensors and Unsupervised Change Detection, by G. Mokhtari, S. Aminikhanghahi, Q. Zhang, and D. J. Cook, reports on their exploration of UWB technology as an alternative solution to the problem of detecting falls efficiently enough to be of practical use. This is a long-standing challenge in our area, one which probably will take several more iterations in years to come for it to be reliable and user-friendly enough to be massively adopted.

Multi-factor user Authentication Scheme for IoT based Healthcare Services, by Parwinder Kaur Dhillon and Sheetal Kalra, propose a method based on Elliptic curve cryptography, ECC, (a type of public key cryptography) which can be used to increase security in IoT. The methodology correctness is checked with Automated Validation of Internet Security Protocols and Applications (AVISPA) tool.

An Approach for Safer Navigation under Severe Hurricane Damage, by Mohammad Eshghi and Hedda R. Schmidtke, studies an algorithm for decentralized spatial computing of a safe navigation path (for example by a car in a city) during a flood. The algorithm is fed by data coming from environmental sensors and also have options to incorporate input from IoT devices.

We hope these articles stimulate the community to further improvements in this area and perhaps to collaborations between the participating teams so that complementary solutions can be used in a combined way to tackle more complex problems.

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