# Editorial

This new issue introduces the seventh volume of JIDM. It brings one article that was regularly submitted to the journal, besides extended and revised versions of best papers from the Brazilian Symposium on GeoInformatics – GeoInfo 2015. GeoInfo was held in Campos do Jordão, from November $29^{th}$ to December $2^{nd}$ 2015. Renato Fileto served as the guest editor of GeoInfo. He was in charge of selecting the best papers from the symposium and conducting the evaluation process.

The first article of this issue was regularly submitted to JIDM. It is entitled "SitRS XT – Towards Near Real Time Situation Recognition", authored by A. C. Franco da Silva, P. Hirmer, M. Wieland and B. Mitschang. Their work focuses on the Internet of Things that gains more and more attention through cheap, highly interconnected hardware devices attached with sensors and actuators, resulting in an instrumented environment that provides sufficient context information to drive what is called situation recognition. The SitRS XT approach is presented in the article to enable situation recognition in near real time. The architecture and method of SitRS XT is described and evaluated through a prototypical implementation.

Section GeoInfo 2015 includes extended and revised versions of three best papers selected from the symposium. The first paper is entitled "The VagueGeometry Abstract Data Type", authored by A. C. Carniel, R. R. Ciferri and C. D. A. Ciferri. The work focuses on spatial vagueness that has been increasingly required by geoscientists to handle vague spatial objects, i.e., spatial objects found in real-world phenomena that do not have exact locations, strict boundaries, or sharp interiors. The authors propose VagueGeometry – a novel abstract data type that allows users to manipulate vague spatial objects in spatial applications and GIS – and show that the new approach improves the performance of spatial queries with vague topological predicates, compared with functionalities available in current spatial databases.

The second article is entitled "Handling Fuzzy Points and Fuzzy Lines using the FuzzyGeometry Abstract Data Type". It is also authored by A. C. Carniel, R. R. Ciferri and C. D. A. Ciferri. In this work, the authors use fuzzy models to deal with spatial objects characterized by uncertain or blurred boundaries and interiors from a distinct perspective. Specifically, they propose the abstract data type FuzzyGeometry in order to handle fuzzy spatial objects in the PostgreSQL DBMS. The proposal offers management for fuzzy point objects and fuzzy line objects as well as provides several operations to handle them, thus allowing users to execute spatial queries with fuzzy spatial objects in PostgreSQL.

The third article is authored by P. S. Tanaka, M. R. Vieira and D. S. Kaster, and it is entitled "An Improved Base Algorithm for Online Discovery of Flock Patterns in Trajectories". The flock spatiotemporal pattern is studied in this work aimed at discovering spatial relationships over time between moving objects. The authors propose a new online method for the flock pattern problem, named as the method PSI, which is an improved base method to efficiently discover flock patterns using computational geometry techniques, like plane sweeping, along with binary signatures and inverted indexes. Many real-world datasets were studied in an experimental evaluation, and the results indicate substantial gains in runtime when the new approach is compared with a previous state-of-the-art solution.

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Caetano Traina Junior
*Editor-in-Chief*

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