EDITORIAL

Special issue on software solutions for contemporary applications

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Software systems had been an important and significant topic within Software Engineering since its inception in the mid-1990s. Initially, the discipline had a subjective model, in which the methodology was perceived as a reusable abstract model of any system. This approach helped to understand and act upon as a whole towards developing more accurate models by enhancing the capability level of software design through various complex procedures. Recently, the discipline evolved into prescriptive systems, which standardize the importance of architectural design, decisions and their effect on system qualities, as well as the role of architectural information as the foundation of real-level understanding within software. The success and potential improvement of the software solutions has authorized itself to attain an unmatched complexity level and which is purely established based on these challenges. Therefore, even though its success in the past, the innovative need of the society establishes that much research yet to be done to achieve the vision of software solutions towards a complete engineering discipline.

This special issue contains high-quality research contributions with original and noteworthy results in the field of software anchored solutions. The original and previously unpublished research contributions as well as extended versions of papers presented at the 2nd International Conference on Computational Intelligence, Communications, and Business Analytics (CICBA 2018) on software-based solutions are accumulated here. The objective of this publication is to enlighten the researcher, scholars, students and engineers about the state-of-the-art scenario regarding software-based solutions for contemporary applications, which is applicable to almost all leading fields of current research. The themes are illustrated in various papers to encourage researchers to adopt it in multidisciplinary research and engineering design. We hope that promising ideas and outstanding research results of this issue will in still further development of research and will enhance technologies in terms of methodologies and applications of software-based solutions.

The contributions of this issue consist of generating the ranking of uncorrelated investment opportunities to an optimized order of preference to overcome financial issues of business houses through beta analysis and TOPSIS. The content of another chapter is a new approach for finding efficient incremental loading in ETL processing for real-time data integration. Access the dynamic vulnerability in software-defined networks where a novel idea to resist higher-order DPA attacks using modular exponentiation for analysing the performance of an object-based schema-oriented data storage system on health data is the content of another chapter. In another contribution of this special issue, an image registration model is given which works on retinal vascular-based graph structure.

The spectrum of software-based solutions for contemporary applications is summarized here which will be an effectively useful stuff, which in our opinion would help the researchers, especially the new entrants in research programme to appreciate the strength of the ingredients of software-based solutions for real-time applications of various types.

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