Editorial

Following the mission of e-Informatica Software Engineering Journal, we present the 10th volume containing papers referring to testing, domain modelling, and startup software companies.

The first one by Bansal et al. [1] concentrates on generating test cases to uncover faults caused by the interaction of input parameters. An artificial intelligence algorithm based on bee colony was elaborated. It reduces the exponential growth of the number of test cases. Conducted experiments have shown that the proposed approach gives better or similar results in comparison to the existing state-of-the-art algorithms.

Similar problem to overcome the exponential explosion in the number of higher-order mutants is considered in the second paper by Ghiduk [3]. The basic idea is to utilize a data-flow analysis to select points to seed mutation through the program under test. A set of experiments showed that the proposed technique is more effective than the earlier techniques in generating higher-order mutants without affecting the efficiency of mutation testing.

In the third paper by Hnatkowska [4], a programming tool extracting some knowledge from SUMO-like ontologies and transforming it into the UML class diagram is presented. The usage of the tool in the context of software modelling, especially in domain model construction is considered.

The problem of testing is considered again in the fourth paper. A highly automated agile testing process is presented by Berłowski et al. [2]. The authors base on their industrial experience in medium size software project developed using Scrum. The main result of the paper is a set of recommendations related to the testing process taking into account the employed principles of agility, specifically: continuous integration, responding to change, test automation and test-driven development. Additionally, an efficient testing environment that combines some testing frameworks with custom-developed simulators is presented.

Extremely specific is the fifth last paper elaborated by the group of 28 authors from 7 countries [5]. Software engineering as scientific discipline suggests or recommends set of rules, good practices, and methodologies for rational and efficient software development. How to apply these suggestions and recommendations in practice, especially in forming software companies? How to establish software startups? These are examples of the main questions stated in the paper. There are no final answers to these questions, but there is a systematic and rational review of more specific problems that should be considered and solved on the way to software startup. Software startups are quite distinct from tra-

ditional mature software companies, but also from micro-, small-, and medium-sized enterprises, introducing new challenges relevant for software engineering research. The considerations take into account human aspects and constraints imposed by the modern economy and are of importance in the societies of today.

As Editors of the volume, we want to thank all of the authors, as well as reviewers, for their efforts. e-Infomatica Software Engineering Journal is now indexed by the Web of Science™ Core Collection (Emerging Sources Citation Index), Scopus, DBLP, DOAJ, and Google Scholar among others. We look forward to receiving further quality contributions from researchers and practitioners in software engineering for the next volumes of the journal.

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