

In this issue

Rachel Harrison

Published online: 28 September 2014
© Springer Science+Business Media New York 2014

This issue contains a special section on regression testing and four regular papers. Regression testing is a topic of great interest to industry because of the huge impact that it has on software reliability. I am very grateful to the guest editors of the special section, Shin Yoo and Per Runeson, for the effort they have spent in managing the selection and reviews of these papers. The guest editors provide an interesting and enlightening introduction to the special section.

The four regular papers in this issue are concerned with the disparate topics of process conformance and software estimation.

In “On the Applicability of Capability Models for Small Software Organizations: Does the Use of Standard Processes Lead to a Better Achievement of Business Goals?” Mika Suominen and Timo Mäkinen discuss the use of software process development standards. The authors argue that relying on a standard process for development can present a greater business risk to organizations than relying on human expertise. They suggest that unexpected events should be considered to be a natural part of the world in which software products are developed and used.

Continuing with the theme of the software development process and conformance to standards, the paper “An empirically validated simulation for understanding the relationship between process conformance and technology skills” by Santiago Matalonga, Martín Solari and Tomás San Feliu considers the trade-offs between technological training and training in process conformance. The authors simulated a software factory product line to determine the impact on product defects and process stability when the amounts of process training and skills training were varied. They conclude that skills training has the greatest impact, resulting in a process with fewer defects and less variation.

The estimation of costs and schedules for software projects is a considerable challenge for software development companies. Many techniques have been suggested to help

R. Harrison (✉)
Department of Computing and Communication Technologies, Oxford Brookes University,
Oxford OX33 1HX, UK
e-mail: rachel.harrison@brookes.ac.uk

managers do this accurately, often based on estimates of the size of the software to be developed. The paper “Function point analysis using NESMA: simplifying the sizing without simplifying the size” by Philip Morrow, AHP George Wilkie and Ian McChesney discusses the use of different methods for estimating size and considers how the functional sizing process can be simplified without loss of estimation accuracy. The authors conclude that the full functional sizing approach is the most beneficial approach, but that a simplified sizing process can reduce the estimation effort whilst still providing sufficient detail in some application domains.

The estimation of system reliability is also a topic of interest to industry. In the paper “Model-driven estimation approach for system reliability using integrated tasks and resources,” Mohd Adham Isa, Dayang Norhayati Abang Jawawi and Mohd Z. M. Zaki discuss reliability estimation at the early stages of software development. The authors propose a model-driven system reliability estimation approach and validate it using a case study, showing that their approach can help to build systems that satisfy users as well as reducing the risk of system failure.

As always, I am interested to hear if you have any suggestions or comments; please send them to me at rachel.harrison@brookes.ac.uk.