In this issue

Rachel Harrison

Published online: 9 April 2010
© Springer Science+Business Media, LLC 2010

The first two research papers in this issue deal with the related topics of process maturity and process improvement. These topics are becoming very important to industry as developers and managers struggle to maintain the quality of products whilst delivering systems in internet time. The remaining three research papers deal with automated data collection, design pattern evolution and the cultural issues associated with global software development.

In “A comparative analysis of CMMI software project management by Brazilian, Indian and Chinese companies”, Saulo Barbará de Oliveira, Rogerio Valle and Claudio Mahler explore the use of Capability Maturity Model Integration in a number of companies. Among their findings the authors report that Indian companies found the use of CMMI for software process analysis and modeling particularly satisfying.

The theme of maturity models is continued with the paper “An organizational maturity model of software product line engineering” by Faheem Ahmed and Luiz Fernando Capretz. Software product line engineering is of great interest to industry because of its promise to deliver products in a short time at low cost without compromising quality. The authors have developed an organizational maturity model which includes assessment questionnaires and a rating methodology. The results of applying the model using two industrial case studies show that close alignment of interdisciplinary organizational strategies and software engineering activities facilitates software product line engineering.

The success of a metrics program is partly dependent upon the ease and unobtrusiveness of the data collection process. In “SPDW+: a seamless approach for capturing quality metrics in software development environments” Patricia Souza Silveira, Karin Becker and Duncan Ruiz describe a data warehousing environment for the extraction, transformation and loading of data. The authors provide a service-based solution that includes project and organizational metadata, as well as extraction, transformation and cleaning routines. This could be very valuable to companies that wish to introduce a metrics program without undue effort.

R. Harrison (✉)
School of Technology, Oxford Brookes University, Wheatley, Oxford OX33 1HX, UK
e-mail: rachel.harrison@brookes.ac.uk

During the past 15 years software engineers have adopted and utilized design patterns in earnest. In “Design pattern evolutions in QVT” Jing Dong, Yajing Zhao and Yongtao Sun describe how the evolution of design patterns can be facilitated by model transformation technology based on the query, view and transformation standard. The paper also describes the tool support they provide to automate the evolution process. The authors illustrate their approach using an open-source software system.

The final paper in this issue is concerned with cultural issues. I am very grateful to David Preston for managing the co-ordination of this paper. David has provided an introduction to the paper below.

As always please let me know if you have any suggestions or comments on this issue, or ideas for future issues.

1 Introduction to the paper on cultural issues by David Preston

In “Knowledge oriented software engineering process in a multi-cultural context”, Hannu Jaakkola, Anneli Heimbürger and Petri Linna consider the demands of constructing complex yet usable technological products which may be connected to global information infrastructures and are typically based on small screen devices such as smartphones. Given the global reach of such technological products and possibly a dispersed development team, cultural understanding is an important asset for the software engineers. This paper examines significant multi-cultural and cross-organizational issues within software engineering. In particular, it introduces a model which considers both explicit and tacit knowledge for use in multi-cultural software development.