

Guest editorial: special issue on empirical software engineering and measurement

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Published online: 20 November 2023

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This special section features selected, extended papers regarding Empirical Software Engineering and Measurement. The research featured in this special issue focuses on methodological aspects of the research and discussion on the validity of results.

Five papers were selected and invited as candidates for this special issue. The papers cover a broad spectrum of topics in empirical software engineering and measurement including the advancement of empirical software engineering methodologies and their application. Manuscripts have undergone rigorous peer-review according to the high-quality standards of the EMSE Journal.

The following three papers were finally included:

In the first paper, authored by Elizabeth Bjarnason, Franz Lang, and Alexander Mjöberg, the authors' main objective is to support practitioners in improving on their prototyping practices. As so, they present a Prototyping Aspects Model (PAM) based on five aspects of prototyping, namely purpose, prototype scope, prototype media, prototype use, and exploration strategy. The model is a result of a systematic mapping study, consisting of 33 primary studies and empirical data collected from 12 case companies. The applicability of the model was empirically validated through a focus group and semi-structured interviews conducted in startup companies. Results point out that the model can be used to categorise prototyping instances and can thereby support practitioners in reflecting and improving on their prototyping practices.

In the second paper, authored by Danilo Caivano, Pietro Cassieri, Simone Romano and Giuseppe Scanniello, authors conduct an exploratory study to collect empirical evidence on the spread and evolution of dead methods in open-source Java desktop applications. They have quantitatively analyzed 1.587 commit histories of 23 open-source applications hosted on GitHub. The most significant results of the study can be summarized as follows: (i) dead methods affect ect open-source Java desktop applications; (ii) dead methods generally survive for a long time before being "buried" or "revived;" (iii) dead methods that are

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then revived tend to survive less, as compared to dead methods that are then buried; (iv) dead methods are rarely revived; (v) most dead methods are stillborn, rather than becoming dead later.

In the third paper, authored by Arif Nurwidyantoroa, Mojtaba Shahinb, Michel Chaudronc, Waqar Hussaina, Harsha Pererad, Rifat Ara Shamsa and Jon Whittled, authors develop dashboard to address the gap of there being limited available tools to support the integration of human values during software development. With this in mind, authors conducted a multi-stage study to design, implement and evaluate a human values dashboard. Moreover, they conduct an exploratory study with 15 software practitioners, followed by an empirical study with four machine learning approaches to detect the presence of human values in issue discussions. Finally, they interviewed 10 practitioners to assess the usefulness of the dashboard in practice. Results show that the dashboard proposed helps to raise awareness, focus attention, and prioritize issues based on the presence of values.

We would like to thank the authors for having accepted to extend their papers; the reviewers for their commitment and guidance during the entire review process; and Robert Feldt, Tom Zimmerman and the editorial board of the Empirical Software Engineering journal for engaging in this special issue and supporting us guest editors.

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