Tutorial: Survey Research Methods in Software Engineering

Resumen

Surveys are an important and often used research method in software engineering. However, survey research has been less often discussed within this area on a methodological level than other types of research. Therefore, surveys conducted in software engineering commonly present methodological issues that may compromise the overall research validity. This talk presents the fundamentals of survey research methodology and its best practices. Moreover, lessons learned from facing important and challenging issues – gathered from experiences with several large-scale international surveys – will be discussed. Particular emphasis will be given to survey design and the interplay between survey research and theory building. The topics covered also include best practices and lessons learned regarding sampling, data collection, statistical analysis, qualitative analysis, and considerations on assessing psychological constructs. In addition, the tutorial includes exercises so that participants can apply the content of the tutorial.

Sobre el autor

Marcos Kalinowski is a professor of software engineering and head of PUC-Rio's graduate program (M. Sc. and Ph.D. levels) in Informatics. He leads the Software Science Lab, which focuses on research concerning experimental software engineering, software quality, and the intersection between software engineering and data science. He also co-coordinates PUC-Rio's ExACTa R&D initiative for promoting digital transformation of industrial partners. He is a member of the International Software Engineering Research Network (ISERN) and has been active in international research collaborations. Before becoming a professor, he spent more than 10 years working in the software industry (as developer, manager, consultant, and director). His research has in-depth focus on problems and needs of the software industry, received several international honors and awards, and is available in publications in some of the main scientific journals and conferences in the area of software engineering. He serves the community as editor of the In-Practice track and editorial board member of the Journal of Systems and Software and as program committee member of several international conferences.

Tutorial: Survey Research Methods in Software Engineering. In: Goñi, A. (ed.) Actas de las XXVI Jornadas de Ingeniería del Software y Bases de Datos (JISBD 2022). Sistedes (2022). https://hdl.handle.net/11705/JISBD/2022/PRELIMINARES/T