

2017 Software Product Lines Most Influential Paper Award

David Benavides, Pablo Trinidad Martín-Arroyo, Antonio Ruiz Cortés

Automated Reasoning on Feature Models

In CAISE 2005 (pp. 491-503). LNCS 3520, Springer, 2005.

This is the first paper that brought together attribute grammars, constraint solvers, feature models, and optimizations of SPL configurations into a coherent and elegant framework. It opened the door to what has become a trending topic in recent years, namely the automated analysis of feature models.

This paper has influenced different areas of SPL engineering, specifically in variability modeling and analyzing feature models with attributes and logics. Among the specific examples this paper has contributed to the progress of SPL research in the last decade are: (i) it helped to explain feature model analysis for feature model quality assurance, error checking and repairing; (ii) in feature model analysis it contributed to selecting a set of products for testing coverage among all the potential combinations; (iii) it facilitated the reverse engineering of feature models to obtain a feature model from product descriptions; (iv) it promoted software product line evolution approaches to ensure consistency; (v) it impacted on work on product configuration, selection and optimization of products.

The paper also encouraged researchers to develop new SPL tools for improved checking of the validity of feature models, using the results of this paper. Several third party tools build on the results of this paper and are widely used by the SPL community both in academia and industry.

Nominators

Lidia Fuentes, Universidad de Málaga, Spain
Klaus Pohl, Universität Duisburg-Essen, Germany
Douglas C. Schmidt, Vanderbilt University, USA
Roberto E. López-Herrejón, Université du Québec à Montréal, Canada

SPL MIP Award Committee 2017

Don Batory (Chair), University of Texas at Austin, USA
Julia Rubin, University of British Columbia, Canada
Goetz Botterweck, University of Limerick, Ireland
Rick Rabiser, Johannes Kepler University Linz, Austria
Stefania Gnesi, ISTI-CNR, Italy

