Contents

Documentation Reuse and Repositories

DevRec: A Developer Recommendation System for Open Source Repositories ........................................... 3
   Xunhui Zhang, Tao Wang, Gang Yin, Cheng Yang, Yue Yu, and Huaimin Wang

Documentation Reuse: Hot or Not? An Empirical Study ......................... 12
   Mohamed A. Oumaziz, Alan Charpentier, Jean-Rémy Falleri, and Xavier Blanc

Software Product Lines

A Preliminary Assessment of Variability Implementation Mechanisms in Service-Oriented Computing .................................................. 31
   Loreno Freitas Matos Alvim, Ivan do Carmo Machado, and Eduardo Santana de Almeida

No Code Anomaly is an Island: Anomaly Agglomeration as Sign of Product Line Instabilities ................ 48
   Eduardo Fernandes, Gustavo Vale, Leonardo Sousa, Eduardo Figueiredo, Alessandro Garcia, and Jaejoon Lee

ReMINDER: An Approach to Modeling Non-Functional Properties in Dynamic Software Product Lines ................. 65
   Anderson G. Uchoa, Carla I.M. Bezerra, Ivan C. Machado, Jose Maria Monteiro, and Rossana M.C. Andrade

Variability Management and Model Variants

Clustering Variation Points in MATLAB/Simulink Models Using Reverse Signal Propagation Analysis ......................... 77
   Alexander Schlie, David Wille, Loek Cleophas, and Ina Schaefer

Discovering Software Architectures with Search-Based Merge of UML Model Variants ..................... 95
   Wesley K.G. Assunção, Silvia R. Vergilio, and Roberto E. Lopez-Herrejon

Tracing Imperfectly Modular Variability in Software Product Line Implementation ........................ 112
   Xhevahire Tërnava and Philippe Collet
Verification and Refactoring for Reuse

Composition of Verification Assets for Software Product Lines of Cyber Physical Systems.................................................. 123
   Ethan T. McGee, Roselane S. Silva, and John D. McGregor

Engineering and Employing Reusable Software Components for Modular Verification .............................................. 139
   Daniel Welch and Murali Sitaraman

Refactoring Legacy JavaScript Code to Use Classes: The Good, The Bad and The Ugly ......................................................... 155
   Leonardo Humberto Silva, Marco Tulio Valente, and Alexandre Bergel

Tools Demonstrations

DyMMer-NFP: Modeling Non-functional Properties and Multiple Context Adaptation Scenarios in Software Product Lines ......................................................... 175
   Anderson G. Uchôa, Luan P. Lima, Carla I.M. Bezerra, José Maria Monteiro, and Rossana M.C. Andrade

Identification and Prioritization of Reuse Opportunities with JReuse .................. 184
   Johnatan Oliveira, Eduardo Fernandes, Gustavo Vale, and Eduardo Figueiredo

Doctoral Symposium

EcoData: Architecting Cross-Platform Software Ecosystem Applications .................. 195
   Marcelo França

Investigating the Recovery of Product Line Architectures: An Approach Proposal ......................................................... 201
   Crescencio Lima, Christina Chavez, and Eduardo Santana de Almeida

Towards a Guideline-Based Approach to Govern Developers in Mobile Software Ecosystems ......................................................... 208
   Awdren de Lima Fontâo, Arilo Dias-Neto, and Rodrigo Santos

Erratum to: Towards a Guideline-Based Approach to Govern Developers in Mobile Software Ecosystems ......................................................... E1
   Awdren de Lima Fontâo, Arilo Dias-Neto, and Rodrigo Santos

Tutorials

Building Safety-Critical Systems Through Architecture-Based Systematic Reuse ......................................................... 217
   John D. McGregor and Roselane S. Silva
Mastering Scale and Complexity in Software Reuse
16th International Conference on Software Reuse, ICSR 2017, Salvador, Brazil, May 29-31, 2017, Proceedings
Botterweck, G.; Werner, C. (Eds.)
2017, XV, 225 p. 67 illus., Softcover
ISBN: 978-3-319-56855-3