

2018 IEEE Workshop on Machine Learning Techniques for Software Quality Evaluation (MaLTeSQuE 2018)

**Campobasso, Italy
20 March 2018**



**IEEE Catalog Number: CFP18L54-POD
ISBN: 978-1-5386-5921-2**

**Copyright © 2018 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP18L54-POD
ISBN (Print-On-Demand):	978-1-5386-5921-2
ISBN (Online):	978-1-5386-5920-5

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Contents

Frontmatter

Message from the Chairs	iii
-----------------------------------	-----

Defects and Anomalies

Varying Defect Prediction Approaches during Project Evolution: A Preliminary Investigation Salvatore Geremia and Damian A. Tamburri — <i>University of Molise, Italy; Eindhoven University of Technology, Netherlands</i> . . .	1
The Role of Meta-Learners in the Adaptive Selection of Classifiers Dario Di Nucci and Andrea De Lucia — <i>Vrije Universiteit Brussel, Belgium; University of Salerno, Italy</i>	7
Machine Learning-Based Run-Time Anomaly Detection in Software Systems: An Industrial Evaluation Fabian Huch, Mojdeh Golagha, Ana Petrovska, and Alexander Krauss — <i>TU Munich, Germany; QAware, Germany</i>	13

Change Analysis and Testing

How High Will It Be? Using Machine Learning Models to Predict Branch Coverage in Automated Testing Giovanni Grano, Timofey V. Titov, Sebastiano Panichella, and Harald C. Gall — <i>University of Zurich, Switzerland</i>	19
Ensemble Techniques for Software Change Prediction: A Preliminary Investigation Gemma Catolino and Filomena Ferrucci — <i>University of Salerno, Italy</i>	25
Co-evolution Analysis of Production and Test Code by Learning Association Rules of Changes László Vidács and Martin Pinzger — <i>University of Szeged, Hungary; University of Klagenfurt, Austria</i>	31

User-Oriented Machine Learning for Software Quality Assessment

ConfigFile++: Automatic Comment Enhancement for Misconfiguration Prevention Yuanliang Zhang, Shanshan Li, Xiangyang Xu, Xiangke Liao, Shazhou Yang, and Yun Xiong — <i>National University of Defense Technology, China; Fudan University, China</i>	37
Investigating Type Declaration Mismatches in Python Luca Pascarella, Achyudh Ram, Azqa Nadeem, Dinesh Bisesser, Norman Knyazev, and Alberto Bacchelli — <i>Delft University of Technology, Netherlands; University of Zurich, Switzerland</i>	43
User-Perceived Reusability Estimation Based on Analysis of Software Repositories Michail Papamichail, Themistoklis Diamantopoulos, Ilias Chrysovergis, Philippos Samlidis, and Andreas Symeonidis — <i>University of Thessaloniki, Greece</i>	49

Author Index	55
-------------------------------	----