2016 IEEE 24th International Conference on Program Comprehension (ICPC 2016)

Austin, Texas, USA
16-17 May 2016

IEEE

IEEE Catalog Number: CFP16009-POD
ISBN: 978-1-5090-1429-3

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

IEEE Catalog Number:	CFP16009-POD
ISBN (Print-On-Demand):	978-1-5090-1429-3
ISBN (Online):	978-1-5090-1428-6
ISSN:	1092-8138

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

PROCEEDINGS

24TH IEEE International Conference on Program Comprehension

ICPC'16 AUSTIN

TABLE OF CONTENTS

TECHNICAL RESEARCH 3: SUPPORTING SOFTWARE DEVELOPERS

Monday, May 16 4:00 - 5:30 pm

Identifying Modularization Patterns by Visual Comparison of Multiple Hierarchies
Fabian Beck, Jan Melcher, and Daniel Weiskopf

Glyph-Based Software Component Identification
Ignacio Fernandez, *Alexandre Bergel,* Juan Pablo Sandoval Alcocer, Alejandro José Infante Rica, and Tudor Girba

Taming the IDE with Fine-grained Interaction Data
Roberto Minelli, Andrea Mocci, Romain Robbes, and Michele Lanza

Learning to Rank for Bug Report Assignee Recommendation
Yuan Tian, Dinusha Wijedasa, *David Lo,* and Claire Le Goues

TECHNICAL RESEARCH 4: LANGUAGE USAGE

Tuesday, May 17 2:00 - 3:30 pm

Can We Find Stable Alternatives for Unstable Eclipse Interfaces?
Simon Kawuma, *John Businge,* and Engineer Bainomugisha

A Cooperative Approach for Combining Client-based and Library-based API Usage Pattern Mining
Mohamed Aymen Saied and Houari Sahraoui

A Novel Approach for Estimating Truck Factors
Guilherme Avelino, Leonardo Passos, Andre Hora, and Marco Tulio Valente

Can We Enforce a Benefit for Dynamically Typed Languages in Comparison to Statically Typed Ones? A Controlled Experiment
Sebastian Okon and *Stefan Hanenberg*

TECHNICAL RESEARCH 5: ASSESSING CODE

Tuesday, May 17 4:00 - 5:30 pm

Identifying Functionally Similar Code in Complex Codebases
Fang-Hsiang Su, Jonathan Bell, Gail Kaiser, and Simha Sethumadhavan

On Automatically Detecting Similar Android Apps
Mario Linares-Vasquez, Andrew Holtzhauer, and *Denys Poshyvanyk*

Rule-Directed Code Clone Synchronization
Xiao Cheng, Hao Zhong, Yuting Chen, Zhenjiang Hu, and Jianjun Zhao

Are Unreachable Methods Harmful? Results from a Controlled Experiment
Simone Romano, Christopher Vendome, *Giuseppe Scanniello,* and Denys Poshyvanyk

SHORT PAPERS 1: GETTING DEEP INSIGHT INTO YOUR SOFTWARE

Tuessday, May 17 11:00 - 12:30 pm

Investigating the Android Apps' Success: An Empirical Study
Latifa Guerrouj and Olga Baysal

Retrofitting Automatic Testing through Library Tests Reusing
Lei Ma, Cheng Zhang, Bing Yu, and Jianjun Zhao

Measuring Energy Footprint of Software Features
Syed Islam, Adel Noureddine and Rabih Bashroush

Human-Machine Resolution of Invisible Control Flow
Suraj Kothari, Ahmed Tamrawi, and Jon Mathews

Extracting Configuration Parameter Interactions using Static Analysis
Chelsea Metcalf, Farhaan Fowze, Tuba Yavuz, and Jose Fortes

Android Build Dependency Analysis
Bo Zhang, Vasil Tenev, and Martin Becker

SHORT PAPERS 2: COMPREHENSION YOU CAN USE

Tuesday, May 17 2:00 - 3:30 pm

Software Development and Tool Usability
Brian Dillon and Richard Thompson

Detecting Exploratory Programming Behaviors for Introductory Programming Exercises
Erina Makihara, Hiroshi Igaki, Norihiro Yoshida, Kenji Fujiwara, and Hajimu Iida

Embedding Programming Context into Source Code
Alexander Breckel and Matthias Tichy

Synchronized Static and Dynamic Visualization in a Web-Based Programming Environment
Jeong Yang, Young Lee, and David Hicks

Case Studies of Optimized Sequence Diagram for Program Comprehension
Madhusudan Srinivasan, Jeong Yang, and Young Lee

Comprehending Source Code of Large Software System for Reuse
Aniket Kulkarni

SHORT PAPERS 3: ATTACK OF THE DEVELOPMENT TEAM

Tuesday, May 17 4:00 - 5:30 pm

Defending Against the Attack of the Micro-clones
Rijnard van Tonder and Claire Le Goues

Towards Quality Gates in Continuous Delivery and Deployment
Gerald Schermann, Jürgen Cito, Philipp Leitner, and Harald Gall

Revisiting the Relationship Between Code Smells and Refactoring
Norihiro Yoshida, Tsubasa Saika, Eunjong Choi, Ali Ouni, and Katsuro Inoue

Generating Clone References with Less Human Subjectivity
Yusuke Yuki, Yoshiki Higo, Keisuke Hotta, and Shinji Kusumoto

Understanding Interactive Debugging with Swarm Debug Infrastructure
Fabio Petrillo, Zéphyrin Soh, Foutse Khomh, Marcelo Pimenta, Carla Freitas, and Yann-Gaël Guéhéneuc

TOOL DEMONSTRATIONS

Tuesday, May 17 11:00 - 12:30 pm

FeedBaG: An Interaction Tracker for Visual Studio
Sven Amann, *Sebastian Proksch* and Sarah Nadi

InfectoMeter: A Tool that Helps to Place Bug Fixes
Mohammad Azadmanesh and Matthias Hauswirth

Inline: Now You're Coding with Portals
Alexander Breckel and Matthias Tichy

WAVI: A Reverse Engineering Tool for Web Applications
Jonathan Cloutier, Sègla Kpodjedo and Ghizlane El Boussaidi

PORBS: A Parallel Observation-based Slicer
Syed Islam and Dave Binkley

STAC: A Tool for Static Textual Analysis of Code
Saket Khatiwada, Michael Kelly and *Anas Mahmoud*

Hey! Are You Injecting Side Effect?: A Tool for Detecting Purity Changes in Java Methods
Naoto Ogura, Jiachen Yang, Keisuke Hotta, Yoshiki Higo and Shinji Kusumoto

WB4SP: A Tool to Build the Word Base for Specific Programs
Weisong Sun, *Xiaobing Sun,* Hui Yang and Bin Li