33rd IEEE International Conference on Software Maintenance and Evolution (ICSME 2017)

17th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2017)

5th IEEE Working Conference on Software Visualization (VISSOFT2017)

Shanghai, China

17-22 September, 2017

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Overview

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<tr><td colspan="2">SCAM</td><td>ICSME
Doctoral
Symposium</td><td colspan="3" rowspan="2">ICSME</td></tr>
<tr><td></td><td colspan="2">VISSOFT</td></tr>
</table>

Venue

SCAM:

- **Main Conference**: Terrace 1+2 (3/F)

VISSOFT:

- **Main Conference**: Chancellor's club (19/F)
- **Tool Demos**: Meeting 1+2 (2/F)

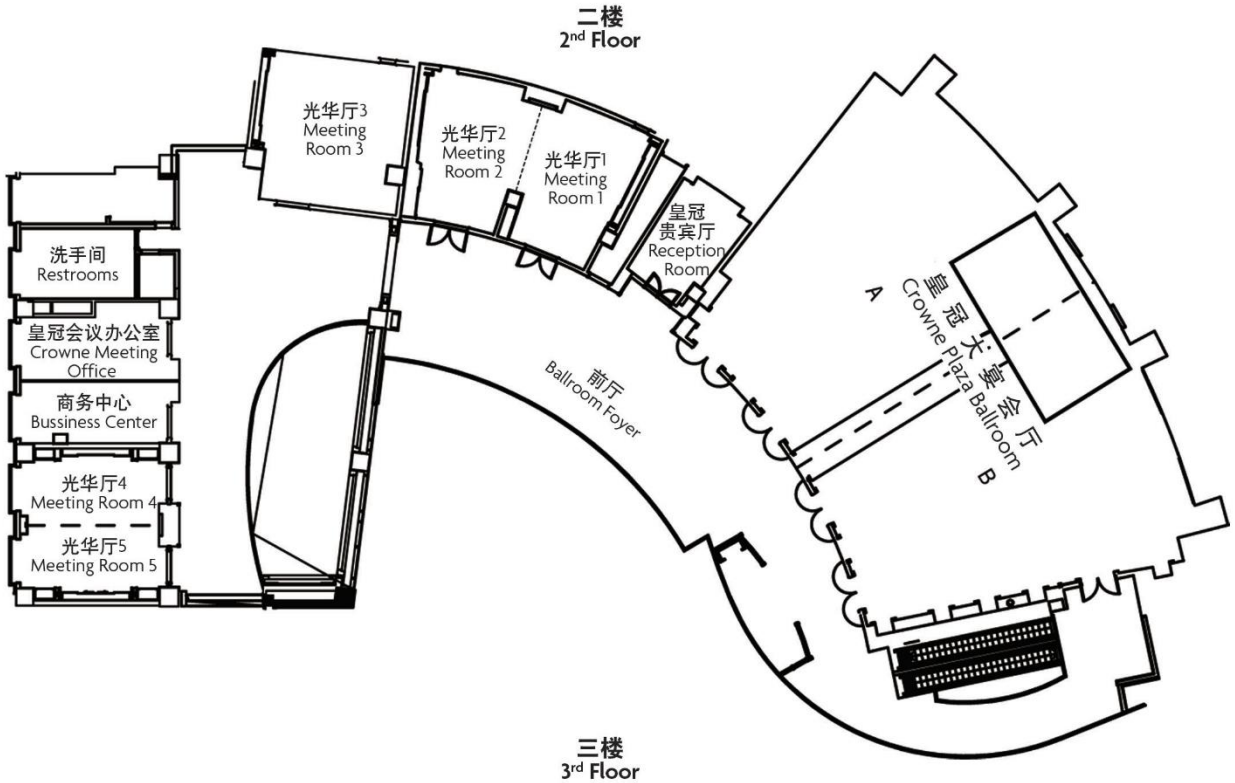
ICSME Doctoral Symposium:

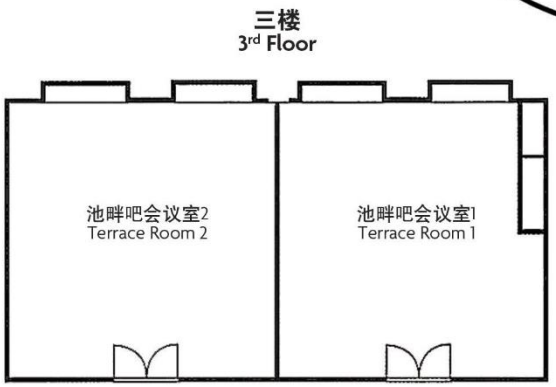
- **Main Sessions**: Meeing 3 (2/F)
- **Poster Session**: Meeting 1+2 (2/F)

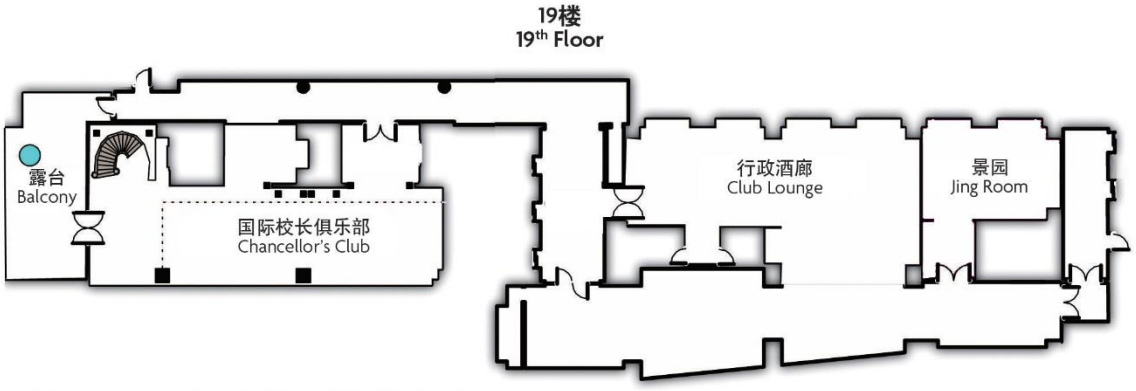
ICSME:

- **Main Conference**: Grand Ballroom A+B (2/F)

Floor Map


二楼
2nd Floor
光华厅3
Meeting
Room 3
光华厅2
Meeting
Room 2
光华厅1
Meeting
Room 1
皇冠
贵宾厅
Reception
Room
洗手间
Restrooms
皇冠会议办公室
Crowne Meeting
Office
商务中心
Bussiness Center
光华厅4
Meeting Room 4
光华厅5
Meeting Room 5
前厅
Ballroom Foyer
皇冠大宴会厅
Crowne Plaza Ballroom
A
B


三楼
3rd Floor
池畔吧会议室2
Terrace Room 2
池畔吧会议室1
Terrace Room 1


19楼
19th Floor
露台
Balcony
国际校长俱乐部
Chancellor's Club
行政酒廊
Club Lounge
景园
Jing Room

Sunday, 17th September 2017
Terrace 1+2 (3/F)

9:00 - 9:15	Conference Opening
9:15 - 10:30	Keynote: Bidirectional Transformation in Practice, Zhenjiang Hu
10:30 - 11:00	Coffee Break (Foyer (3/F))
11:00 - 12:30	Session 1: Program Analysis and Slicing
12:30 - 13:30	Lunch (Café Mix (1/F))
13:30 - 15:00	Session 2: Empirical Studies
15:00 - 15:30	Coffee Break (Foyer (3/F))
15:30 - 17:30	Session 3: Engineering Track Papers
18:30	Banquet at Kathleen's Waitan (Bus leaves at 17:40 from Crowne Plaza)

Monday, 18th September 2017
Terrace 1+2 (3/F)

9:15 - 10:30	Keynote: Stop the bleeding from the heart Charles Zhang
10:30 - 11:00	Coffee Break (Foyer (3/F))
11:00 - 12:30	Session 4: Supporting Software Developers
12:30 - 13:30	Lunch (Ballroom (2/F))
13:30 - 15:00	Session 5: Fact Extraction
15:00 - 15:30	Coffee Break (Foyer (3/F))
15:30 - 16:30	Session 6: Code Smells and Clones
16:30 - 16:45	Conference Closing
16:45 - 17:30	Open Steering Committee Meeting

Bidirectional Transformation in Practice

Sunday, 17th September
9:15am - 10:30am, Terrace 1+2 (3/F)

Zhenjiang Hu

National Institute of Informatics

Abstract

Bidirectional transformations, originated from the view updating mechanism in the database community, have been attracting a lot of attention lately, both in the programming languages community and in the software engineering community. As bidirectional programming languages are growing more mature, they are getting easier to use for software engineers, more efficient, and more reliable. The strongest argument in favor of bidirectional transformation is its ability to provide a synchronization mechanisms between a source and a view, that is guaranteed to be correct by construction.

This talk will focus on practical aspects of bidirectional transformation. We will briefly review the principles of bidirectional transformation, introduce BiGUL, a simple but powerful language that allow users to specify their bidirectional behavior completely, and demonstrate its practical usefulness in developing various kinds of synchronizers including a tool that can automatically synchronize human-friendly source codes with machine-oriented abstract syntax trees.

Bio

Zhenjiang Hu is a full professor of National Institute of Informatics (NII) in Japan. He received his BS and MS degrees from Shanghai Jiao Tong University in 1988 and 1991, respectively, and PhD degree from University of Tokyo in 1996. He was a lecturer (1997–1999) and an associate professor (2000–2007) in University of Tokyo, before joining NII as a full professor in 2008. His main interest is in programming languages and software engineering in general, and functional programming, program transformation, and bidirectional programming in particular. He is the academic committee chair of the NII Shonan Meetings, IFIP WG 2.1 member, and has been the steering committee members of ICFP, Haskell, APLAS, ICMT, and BX. He is also serving on the editorial boards of IEEE Transactions of Software Engineering, Science of Computer Programming, and Software and Systems Modeling.

Stop the bleeding from the heart

Monday, 18th September
9:15am - 10:30am, Terrace 1+2 (3/F)

Charles Zhang

Hong Kong University of Science and Technology

Abstract

Despite years of research and practice, modern static analysis techniques still cannot detect oldest and extremely well understood software bugs such as the Heartbleed, one of the most "spectacular" security flaws of the recent decade. The talk will first highlight research challenges that lead to this difficulty, followed by our latest effort, Pinpoint, in changing the conventional static analysis paradigm to address characteristics of "modern" software development. Our fused symbolic static analysis takes a holistic approach to deliver precise results scalable to millions of lines of C/C++ code. Furthermore, I will share some lessons learned in the commercialization process of Pinpoint in meeting the market requirements of Chinese software vendors.

Bio

Charles Zhang is an Associate Professor, the director of the Cybersecurity Lab in the Department of Computer Science and Engineering, HKUST, and a co-founder of Sourcebrella Inc. His major research interest is the use of program analysis techniques to improve software reliability. He has published extensively at premium conferences and journals of programming languages and software engineering. He has served on many organizational and technical committees of international conferences. He is currently an associate editor of IEEE TSE. His research received many awards including PLDI distinguished paper award, ACM SIGSOFT Doctoral Dissertation Award, and IBM PhD fellowships. His research is supported by Research Grant Council, Innovation and Technology Fund, and grants from Microsoft and IBM. Charles obtained his Ph.D, M.Sc, and B.Sc. with honours, all from University of Toronto.

Sunday, 17th September

Session 1: Program Analysis and Slicing (11:00 – 12:30, Terrace 1+2, 3/F)

Session Chair: Arpad Beszedes

Working around loops for infeasible path detection in binary programs
Jordy Ruiz, Hugues Cassé and Marianne De Michiel

Revisiting Exception Handling Practices with Exception Flow Analysis
Guilherme B. de Pádua and Weiyi Shang

Tree-Oriented vs. Line-Oriented Observation-Based Slicing
Dave Binkley, Nicolas Gold, Mark Harman, Syed Islam, Jens Krinke and Shin Yoo

Session 2: Empirical Studies (13:30 – 15:00, Terrace 1+2, 3/F)

Session Chair: Sandro Schulze

An Exploratory Study of Functional Redundancy in Code Repositories
Marcelo Suzuki, Adriano de Paula, Eduardo Guerra, Cristina Lopes and Otavio Lemos

Does the Choice of Configuration Framework Matter for Developers?
Mohammed Sayagh, Zhen Dong, Artur Andrzejak and Bram Adams

How do Scratch Programmers Name Variables and Procedures?
Alaaeddin Swidan, Alexander Serebrenik and Felienne Hermans

Session 3: Engineering Track Papers (15:30 – 17:30, Terrace 1+2, 3/F)

Session Chair: Pascal Cuoq

Automatically Adding Missing Libraries to Java Projects to Foster Better Results from Static Analysis
Thomas Atzenhofer and Reinhold Plösch

A Static Code Smell Detector for SQL Queries Embedded in Java Code
Csaba Nagy and Anthony Cleve

Supporting Analysis of SQL Queries in PHP AiR
David Anderson and Mark Hills

Detecting Security Vulnerabilities in Object-Oriented PHP Programs
Mona Nashaat, Karim Ali and James Miller

Monday, 18th September

Session 4: Supporting Software Developers (11:00 – 12:30, Terrace 1+2, 3/F)

Session Chair: Alexander Serebrenik

Contextual Recommendation of Relevant Program Elements in an Interactive Feature Location Process
Jinshui Wang, Xin Peng, Zhenchang Xing, Kun Fu and Wenyun Zhao

Harvesting the Wisdom of the Crowd to Infer Method Nullness in Java
Manuel Leuenberger, Haidar Osman, Mohammad Ghafari and Oscar Nierstrasz

Investigating the Use of Code Analysis and NLP to Promote a Consistent Usage of Identifiers
Bin Lin, Simone Scalabrino, Andrea Mocci, Rocco Oliveto, Gabriele Bavota and Michele Lanza

Session 5: Fact Extraction (13:30 - 15:00, Terrace 1+2, 3/F)

Session Chair: Sibylle Schupp

Extracting Timed Automata from Java Methods
Giovanni Liva, Muhammad Taimoor Khan and Martin Pinzger

Towards Better Symbol Resolution for C/C++ Programs: A Cluster-based Solution
Richárd Szalay, Zoltán Porkoláb and Dániel Krupp

A Methodology for Relating Software Structure with Energy Consumption
Abdul Ali Bangash, Hareem Sahar and Mirza Beg

Session 6: Code Smells and Clones (15:30 - 16:30, Terrace 1+2, 3/F)

Session Chair: Lei Ma

Security Smells in Android
Mohammad Ghafari, Pascal Gadient and Oscar Nierstrasz

On the Relationships between Stability and Bug-proneness of Code Clones: An Empirical Study
Md Saidur Rahman and Chanchal K. Roy

Monday, 18th September 2017
Chancellor's club (19/F)

09:00 - 09:15	Conference Opening
09:15 - 10:30	Keynote: Visualization in Code Bubbles: A Perspective and Look Ahead Steven Reiss
10:30 - 11:00	Coffee Break (Foyer (19/F))
11:00 - 12:30	Session 1: Comprehension
12:30 - 13:30	Lunch (Ballroom (2/F))
13:30 - 15:00	Session 2: Software Behavior and Process
15:00 - 15:30	Coffee Break (Foyer (19/F))
15:30 - 17:30	Session 3: 3D Visualization
18:30	Banquet at Shanghai WH Ming Hotel (Bus leaves at 17:45 from Crowne Plaza)

Tuesday, 19th September 2017
Chancellor's club (19/F)

09:15 - 10:30	Keynote: Interactive Model Analysis Shixia Liu
10:30 - 11:00	Coffee Break (Foyer (19/F))
11:00 - 12:30	Session 4: Performance and Data Analysis
12:30 - 13:30	Lunch (Café Mix (1/F))
13:30 - 15:00	Tool Demos (Meeting 1+2 (2/F))
15:00 - 15:30	Coffee Break (Foyer (19/F))
15:30 - 16:30	Session 5: Software Process
16:30 - 16:40	Awards
16:40 - 17:30	Most Influential Paper: A task oriented view of software visualization
17:30 -	Open Steering Committee Election

Visualization in Code Bubbles: A Perspective and Look Ahead

Monday, 18th September
9:15am - 10:30am, Chancellor's club (19/F)

Steven Reiss
Brown University

Abstract

While on-line program visualization has been a research topic for over 30 years, today's environments seem to do very little program visualization. Over the past 8 years, we have been developing the Code Bubbles programming environment. In doing so, we have attempted to emphasize visualization while providing a real, large-scale, practical and useful programming environment. Some of the visualizations are obvious, what everyone would call a visualization. Others are more subtle, passing as simple highlighting or window layout. Others are text displays which are actually visualizations.

A recent addition to Code Bubbles is continuous execution. This facility lets the user choose a test case or stop at a breakpoint. It then computes the whole execution for the current method and updates the execution as the user edits. This facility requires the ability to display the complete execution of a method as well as means for navigating within the execution. Both of these are accomplished through visualizations.

This talk will look at the various visualizations, provide a (biased) historic perspective on where they came from, and provide a (hopefully) realistic assessment of their value. In doing this we will concentrate on specific problems that visualization can address, particularly in understanding the execution dynamics of a complex system.

Bio

Steven Reiss is Professor of Computer Science in the Computer Science Department at Brown University. He has been a member of the Brown faculty since 1977. He is the author of numerous papers in journals and proceedings, as well as two books. He has served on a variety of conference program committees for SIGPLAN, SIGSOFT, and IEEE. He has written several software systems that have been widely distributed outside of Brown.

Dr. Reiss's research interests and expertise center around programming, in particular making programming simpler and more understandable. He has done extensive research in the areas of programming tools and environments as well as program visualization. He has also done work on message-based integration, program design, databases, and the debugging, testing and checking of complex systems.

Current research by Dr. Reiss includes Code Bubbles, a working-set based programming environment that includes the use of intelligent features and visualizations to assist the programmer; semiautomatic automatic bug repair; and semantic-based code search for methods, classes, user interfaces and system frameworks. For more information look at http://www.cs.brown.edu/people/spr/.

Interactive Model Analysis

Tuesday, 19th September
9:15am - 10:30am, Chancellor's club (19/F)

Shixia Liu
Tsinghua University

Abstract

In most AI applications, machine learning models are often treated as a black box. Users usually refine and improve the models according to performance metrics such as accuracy. Because of lacking of a comprehensive understanding of the working mechanism of these models, it is hard to build an effective two-communication between a human and a computer, which limits the further adoption of the models. To solve this problem, we have developed a set of visual analytics approaches to help users understand, diagnose, and refine a machine learning model. This talk presents the major challenges of interactive machine learning and exemplifies the solutions with several visual analytics techniques and examples. In particular, we mainly focus on introducing the following three aspects: 1) create a suite of machine learning techniques that produce more explainable models, while maintaining a high level of learning performance (prediction accuracy); 2) develop a set of visual analytics techniques that enable human users to understand and diagnose machine learning models; 3) a semi-supervised model refinement mechanism. Based on these, we develop an interactive model analysis framework, which is exemplified by deep learning, ensemble learning, and the topic model.

Bio

Shixia Liu is an associate professor at Tsinghua University. Her research interests include visual text analytics, visual social analytics, visual behavior analytics, graph visualization, and tree visualization. Before joining Tsinghua University, she worked as a lead researcher at Microsoft Research Asia and a research staff member at IBM China Research Lab. Shixia is one of the Papers Co-Chairs of IEEE VAST 2016 and 2017. She is an associate of IEEE Transactions on Visualization and Computer Graphics and is on the editorial board of Information Visualization. She was the guest editor of ACM Transactions on Intelligent Systems and Technology and Tsinghua Science and Technology. She was the program co-chair of PacifcVis 2014 and VINCI 2012. Shixia was in the Steering Committee of VINCI 2013. She is on the organizing committee of IEEE VIS 2015 and 2014. She is/was in the Program Committee for CHI 2018, InfoVis 2015, 2014, VAST 2015, 2014, KDD 2015, 2014, 2013, ACM Multimedia 2009, SDM 2008, ACM IUI 2011, 2009, PacificVis 2008, 2009, 2010, 2011, PAKDD 2013, VISAPP 2012, 2011, VINCI 2011.

Monday, 18th September

Session 1: Comprehension (11:00 – 12:30, Chancellor's club (19/F))

Session chair: Andrea Mocci

iTraceVis: Visualizing Eye Movement Data Within Eclipse
Benjamin Clark, and Bonita Sharif

An Empirical Study on the Readability of Regular Expressions: Textual versus Graphical
Niklas Hollmann, and Stefan Hanenberg

Syntactic Zoom-Out / Zoom-In Code with the Athenizer Plugin
Yossi Gil, Dor Ma'ayan, Niv Shalmon, Raviv Rachmiel, and Ori Roth

A Conversational User Interface for Software Visualization
Stefan Bieliauskas, and Andreas Schreiber

Session 2: Software Behavior and Process (13:30 - 15:00, Chancellor's club (19/F))

Session chair: Leonel Merino

Concept-Driven Generation of Intuitive Explanations of Program Execution for a Visual Tutor
Mohammad Reza Azadmanesh, and Matthias Hauswirth

Method Execution Reports: Generating Text and Visualization to Describe Program Behavior
Fabian Beck, Hafiz Ammar Siddiqui, Alexandre Bergel, and Daniel Weiskopf

A Dashboard for Visualizing Software Engineering Processes based on ESSENCE
Sebastian Brandt, Michael Striewe, Fabian Beck, and Michael Goedicke

SoL Mantra: Visualizing Update Opportunities Based on Library Coexistence
Boris Todorov, Raula Gaikovina Kula, Takashi Ishio, and Katsuro Inoue

Session 3: 3D Visualization (15:30 - 17:30, Chancellor's club (19/F))

Session chair: Fabian Beck

Using High-Rising Cities to Visualize Performance in Real-Time
Katsuya Ogami, Raula Gaikovina Kula, Hideaki Hata, Takashi Ishio, and Kenichi Matsumoto

Code Park: A New 3D Code Visualization Tool
Pooya Khaloo, Mehran Maghoumi, Eugene Taranta Ii, David Bettner, and Joseph Laviola Jr

On the Impact of the Medium in the Effectiveness of 3D Software Visualizations
Leonel Merino, Johannes Fuchs, Michael Hund, Craig Anslow, Mohammad Ghafari, Oscar Nierstrasz, Michael Behrisch, and Daniel Keim

Interactive Visualization of Software Components with Virtual Reality Headsets
Andreas Schreiber, and Marlene Brüggemann

Getaviz: Generating Structural, Behavioral, and Evolutionary Views of Software Systems for Empirical Evaluation
David Baum, Jan Schilbach, Pascal Kovacs, Ulrich Eisenecker, and Richard Müller

Tuesday, 19th September

Session 4: Performance and Data Analysis (11:00 – 12:30, Chancellor's club (19/F))

Session chair: Raula Kula

Visual Exploration of Memory Traces and Call Stacks
Patrick Gralka, Christoph Schulz, Guido Reina, Daniel Weiskopf, and Thomas Ertl

A Scalable Visualization for Dynamic Data in Software System Hierarchies
Michael Burch, and Michael Raschke

A Low-Effort Analytics Platform for Visualizing Evolving Flask-Based Python Web Services
Patrick Vogel, Thijs Klooster, Vasilios Andrikopoulos, and Mircea Lungu

Session 5: Software Process (15:30 - 16:30, Chancellor's club (19/F))

Session chair: Bonita Sharif

Collaborative Modeling and Visualisation of Software Systems Using Multidimensional UML
Matej Ferenc, Ivan Polasek, and Juraj Vincur

Towards the Visualization of Usage and Decision Knowledge in Continuous Software Engineering
Jan Ole Johanssen, Anja Kleebaum, Bernd Bruegge, and Barbara Paech

Round-Trip Sketches: Supporting the Lifecycle of Software Development Sketches from Analog to Digital and Back
Sebastian Baltes, Fabrice Hollerich, and Stephan Diehl.

Tuesday, 19th September 2017
Meeting 3 (2/F)

09:00 - 09:15	Track Opening
09:15 - 10:30	Keynote: Ladies and Gentlemen, Start your Engine: Being Successful with your PhD Without Crashing at the First Corner Massimiliano di Penta
10:30 - 11:00	Coffee Break (Foyer (19/F))
11:00 - 12:30	Session 1: Early Pre-Doctoral
12:30 - 13:30	Lunch (Café Mix (1/F))
13:30 - 15:00	Session 2: Late Pre-Doctoral
15:00 - 15:30	Coffee Break (Foyer (19/F))
15:30 - 16:30	Session 3: Post-Doctoral
16:30 - 16:45	Closing of Oral Presentation Sessions
16:45 - 17:30	Poster Session (Meeting 1+2 (2/F))
18:30	Dinner at Stars Restaurant (Gather in the lobby at 17:40)

Ladies and Gentlemen, Start your Engine: Being Successful with your PhD Without Crashing at the First Corner

Tuesday, 19^{th} September
9:15am - 10:30am, Meeting 3 (2/F)

Massimiliano di Penta

University of Sannio

Abstract

In this talk I will provide you with my very personal hints on how to deal with the nightmares and challenges everybody encounters during a PhD, and right after. Look at your PhD as a racing championship: you can loose one or more races for various reasons that may not even depend on you. However, only the perseverance, the continuous development of innovative solution will let you win the championship, or will let you be hired by a top team for the next year. On the one side, the talk will give you some advices from a technical point of view, including balancing theoretical research with tool development, and allocating enough resources and time to evaluate your research from different perspectives. On the other side, the talk will deal with the PhD and post-doc management issues, including adapting your work habit to a specific context, choosing publication venues, relating with your advisor, colleagues, and other researchers. In the end, as it happens for racing, the key point is having fun. If you are having fun with your research, then you will be very successful with it.

Bio

Massimiliano Di Penta is associate professor at the University of Sannio, Italy. His research interests include software maintenance and evolution, mining software repositories, empirical software engineering, search-based software engineering, and testing. He is author of over 250 papers appeared in international journals, conferences and workshops, and received various awards for his research and reviewing activity, including two most influential paper awards and three ACM SIGSOFT Distinguished Paper Awards . He serves and has served in the organizing and program committees of over 100 conferences such as ICSE, FSE, ASE, ICSME, ICST, MSR, SANER, ICPC, GECCO, WCRE, and others. He is currently member of the steering committee of ICSME, MSR, and PROMISE. Previously, he has been steering committee member of other conferences, including ICPC, SSBSE, CSMR, SCAM, and WCRE. He is in the editorial board of IEEE Transactions on Software Engineering, the Empirical Software Engineering Journal edited by Springer, and of the Journal of Software: Evolution and Processes edited by Wiley.

Tuesday, 19th September

Session 1: Early Pre-Doctoral (11:00 – 12:30, Meeting 3 (2/F))

Vulnerability Evolution of Cloud Computing System: Openstack Security Bugs Analysis
Xiaoxue Wu

Identifying Self-admitted Technical Debt in Open Source Projects Using Text Mining
Qiao Huang

Early Prediction of Merged Code Changes to Prioritize Reviewing Tasks
Yuanrui Fan

Session 2: Late Pre-Doctoral (13:30 - 15:00, Meeting 3 (2/F))

Behavior-Informed Algorithms for Automatic Documentation Generation
Paige Rodeghero

Combining Evolutionary Algorithms with Constraint Solving for Configuration Optimization
Kai Shi

Understanding Spreadsheet Evolution in Practice
Liang Xu

Session 3: Post-Doctoral (15:30 - 16:30, Meeting 3 (2/F))

Mining AndroZoo: A Retrospect
Li Li.

Improving Software Maintenance Using Process Mining and Predictive Analytics
Monika Gupta.

Wednesday, 20th September 2017
Grand Ballroom A+B (2/F)

<table>
<tr><td colspan="2">Welcome (30 min)
Keynote #1: Zhendong Su (60 min)
8:45 - 10:15 , Grand Ballroom A+B (2/F)</td></tr>
<tr><td colspan="2">Break (Posters: DocSym)
10:15 - 11:00
Foyer (2/F)</td></tr>
<tr><td>Session 1: Empirical 1
11:00 - 12:40
Grand Ballroom A (2/F)</td><td>Session 2: Testing
11:00 - 12:40
Grand Ballroom B (2/F)</td></tr>
<tr><td colspan="2">Lunch
12:40 - 14:00
Café mix (1/F)
LGBT@SoftEng Lunch (Room Kong Zi)</td></tr>
<tr><td>Session 3: Changes and Evolution
14:00 - 15:30
Grand Ballroom A (2/F)</td><td>Session 4: Technical Debt / Testing 2
14:00 - 15:30
Grand Ballroom B (2/F)</td></tr>
<tr><td colspan="2">Break
15:30 - 16:00
Foyer (2/F)</td></tr>
<tr><td>Session 5: Program Analysis 1
16:00 - 17:30
Grand Ballroom A (2/F)</td><td>Session 6: Documentation and Natural Language
16:00 - 17:30
Grand Ballroom B (2/F)</td></tr>
<tr><td colspan="2">Open Steering Committee Meeting
17:30 - 18:30
Grand Ballroom A+B (2/F)</td></tr>
<tr><td colspan="2">Reception at Café Mix (2/F)
18:30 – 21:00</td></tr>
</table>

Thursday, 21st September 2017
Grand Ballroom A+B (2/F)

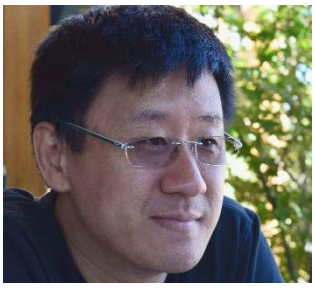
<table>
<tr><td colspan="2">Keynote #2: Margaret-Anne Storey (60 min)
Artifacts (30 min)
8:45 - 10:15 , Grand Ballroom A+B (2/F)</td></tr>
<tr><td colspan="2">Break (Posters: NIER)
10:15 - 11:00
Foyer (2/F)</td></tr>
<tr><td>Session 7: Empirical 2
11:00 - 12:40
Grand Ballroom A (2/F)</td><td>Session 8: Security
11:00 - 12:40
Grand Ballroom B (2/F)</td></tr>
<tr><td colspan="2">Lunch
12:40 - 14:00
Café mix (1/F)</td></tr>
<tr><td>Session 9: Recommendations and Code Review
14:00 - 15:30
Grand Ballroom A (2/F)</td><td>Session 10: Build and Release
14:00 - 15:30
Grand Ballroom B (2/F)</td></tr>
<tr><td colspan="2">Break
15:30 - 16:00
Foyer (2/F)</td></tr>
<tr><td>Session 11: Bugs and Tickets
16:00 - 17:40
Grand Ballroom A (2/F)</td><td>Session 12: Android
16:00 - 17:30
Grand Ballroom B (2/F)</td></tr>
<tr><td colspan="2">Banquet at Sun Chateau on the Bund (2/F)
19:00
(Buses leave at 17:45 from Crowne Plaza)</td></tr>
</table>

Friday, 22nd September 2017
Grand Ballroom A+B (2/F)

<table>
<tr><td>Session 13: Predicting Defects and more
8:45 – 10:15
Grand Ballroom A (2/F)</td><td>Session 14: Industrial Forum
8:45 – 10:15
Grand Ballroom B (2/F)</td></tr>
<tr><td colspan="2">Break (Posters: Demos)
10:15 - 11:00
Foyer (2/F)</td></tr>
<tr><td>Session 15: Measurement and Visualization
11:00 - 12:40
Grand Ballroom A (2/F)</td><td>Session 16: Program Analysis 2
11:00 - 12:40
Grand Ballroom B (2/F)</td></tr>
<tr><td colspan="2">Lunch
12:40 - 14:00
Café mix (1/F)</td></tr>
<tr><td colspan="2">MIP Talk (30 min)
Awards & Future ICSMEs (30 min)
14:00 - 15:00
Grand Ballroom A+B (2/F)</td></tr>
<tr><td colspan="2">Break
15:00 - 15:30
Foyer (2/F)</td></tr>
<tr><td colspan="2">Game Session
15:30-17:00
(Follow the volunteers to the playground)</td></tr>
</table>

Toward Impactful SE Research by Taking Roads Less Traveled

Wednesday, 20th September
9:15am - 10:15am, Grand Ballroom A+B (2/F)



Zhendong Su

The University of California, Davis

Abstract

The aim of this talk is to highlight that taking less traveled roads in research can lead to powerful insight and impactful results. The first part discusses select, recent instances where new perspectives have led to novel, practical attacks on difficult software engineering challenges: equivalence modulo inputs (EMI) for validating optimizing compilers and mathematical execution (ME) for analyzing floating-point code. The second part summarizes several under-explored directions to which the SE community can (and should) uniquely contribute.

Bio

Zhendong Su is a Professor in Computer Science and a Chancellor's Fellow at the University of California, Davis. He received his PhD in Computer Science from the University of California, Berkeley. His research focuses on developing methodologies, practical techniques and tools for improving software quality and programming productivity. His work has been recognized with an EAPLS Best Paper Award, multiple ACM SIGSOFT Distinguished Paper Awards, an OOPSLA Best Paper Award, a PLDI Distinguished Paper Award, an ACM CACM Research Highlight recognition, an NSF CAREER Award, a UC Davis College of Engineering Outstanding Faculty Award, an IBM Software Quality Innovation Award, a Microsoft SEIF Award, and a Google Faculty Award. He served as an Associate Editor for ACM TOSEM, co-chaired the 2009 Static Analysis Symposium, program chaired the 2012 International Symposium on Software Testing and Analysis, and program co-chaired the 2016 International Symposium on the Foundations of Software Engineering.

The Elusive Nature of Software Documentation and Why Understanding How Knowledge Flows Matters

Thursday , 21st September
8:45am – 9:45am, Grand Ballroom A+B (2/F)

Margaret-Anne Storey

The University of Victoria

Abstract

Many developers consider writing documentation to be a painful and under-appreciated activity, yet the same developers often complain that a lack of documentation significantly hampers their work. Other developers argue that documentation is passé as developers more readily curate and exchange knowledge through networked platforms such as Slack, Twitter, and Stack Overflow. And while the savvy modern developer will know who to follow, who to ask, and where to look when they need software knowledge, finding the right knowledge at the right time remains a serious development bottleneck for many. Recognizing that these platforms contain golden nuggets of useful information, we see tremendous effort being directed at designing methods for capturing, mining, extracting, and distributing software knowledge, but will they succeed if we lack a good understanding of how knowledge flows in software development projects and communities? Through this talk, I will discuss the elusive nature of documentation and why I believe documentation will always be hard to define, capture, distribute, keep up to date, and to find, and I will argue that we should focus more on understanding, supporting, and amplifying knowledge flow in distributed software development.

Bio

Margaret-Anne Storey is a Professor of Computer Science and the Director of the Software Engineering program at the University of Victoria. She holds a Canada Research Chair in Human and Social Aspects of Software Engineering and currently holds the Lise Meitner Guest Professorship at Lund University in Sweden. Her main research goal is to understand how technology can help people explore, understand, and share complex information and knowledge. She evaluates and applies techniques from knowledge engineering, social software, and visual interface design to applications such as collaborative software development, program comprehension, biomedical ontology development, and learning in Web-based environments. Dr. Storey regularly collaborates with high tech companies to ensure real-world applicability to her solutions.

Wednesday, 20th September

Session 1: Empirical 1 (11:00 – 12:40, Grand Ballroom A)

Session Chair: Christoph Treude

Software Practitioner Perspectives on Merge Conflicts and Resolutions (Research, 20 min. incl. questions)
Shane McKee, Nicholas Nelson, Anita Sarma, and Danny Dig.

Evolutionary Trends of Developer Coordination: A Network Approach (Journal First, 20 min. incl. questions)
Mitchell Joblin, Sven Apel, and Wolfgang Mauerer.

Bug Propagation through Code Cloning: An Empirical Study (Research, 20 min. incl. questions)
Manishankar Mondal, Chanchal K. Roy, and Kevin Schneider.

Is Cloned Code Really Stable? (Journal First, 20 min. incl. questions)
Manishankar Mondal, Md Saidur Rahman, Chanchal K. Roy, and Kevin Schneider.

Eye movements in software traceability link recovery (Journal First, 20 min. incl. questions)
Bonita Sharif, John Meinken, Timothy Shaffer, and Huzefa Kagdi.

Session 2: Testing (11:00 – 12:40, Grand Ballroom B)

Session Chair: Arpad Beszedes

An Exploratory Study of Performance Regression Introducing Code Changes (Research, 20 min. incl. questions)
Jinfu Chen and Weiyi Shang.

SimEvo: Testing Evolving Multi-Process Software Systems (Research, 20 min. incl. questions)
Tingting Yu.

Does Refactoring of Test Smells Induce Fixing Flaky Tests? (Research, 20 min. incl. questions)
Fabio Palomba and Andy Zaidman.

Interaction-based Tracking of Program Entities for Test Case Evolution (Research, 20 min. incl. questions)
Hoan Nguyen, Tung Nguyen, Tien Nguyen, and Hung Nguyen.

Continuous, Evolutionary and Large-Scale: A New Perspective for Automated Mobile App Testing (Research, 20 min. incl. questions)
Mario Linares-Vásquez, Kevin Moran, and Denys Poshyvanyk.

Session 3: Changes and Evolution (14:00 – 15:30, Grand Ballroom A)

Session Chair: Gregorio Robles

Towards Activity-Aware Tool Support for Change Tasks (Research, 20 min. incl. questions)
Katja Kevic and Thomas Fritz.

The Co-Evolution of Test Maintenance and Code Maintenance through the lens of Fine-Grained Semantic Changes (Research, 20 min. incl. questions)
Stanislav Levin and Amiram Yehudai.

Do Programmers do Change Impact Analysis in Debugging? (Journal First, 20 min. incl. questions)
Siyuan Jiang, Collin McMillan, and Raul Santelices.

RCIA: Automated Change Impact Analysis to Facilitate a Practical Cancer Registry System (Industry, 10 min. incl. questions)
Shuai Wang, Thomas Schwitalla, Tao Yue, Shaukat Ali, and Jan F Nygård.

SimPact: Impact Analysis for Simulink Models (NIER, 10 min. incl. questions)
Eric J. Rapos and James R. Cordy.

Supporting Microservice Evolution (NIER, 10 min. incl. questions)
Adalberto R. Sampaio Junior, Harshavardhan Kadiyala, Bo Hu, John Steinbacher, Antony W. Erwin, Nelson Rosa, Ivan Beschastnikh, and Julia Rubin.

Session 4: Technical Debt / Testing 2 (14:00 – 15:30, Grand Ballroom B)

Session Chair: Leon Moonen

The Pricey Bill of Technical Debt - When and by whom will it be paid? (Research, 20 min. incl. questions)
Terese Besker, Antonio Martini, and Jan Bosch.

An Empirical Study On the Removal of Self-Admitted Technical Debt (Research, 20 min. incl. questions)
Everton Maldonado, Rabe Abdalkareem, Emad Shihab, and Alexander Serebrenik.

Recommending when Design Technical Debt Should be Self-Admitted (Research, 20 min. incl. questions)
Fiorella Zampetti, Cédric Noiseux, Giuliano Antoniol, Foutse Khomh, and Massimiliano Di Penta.

What are the Testing Habits of Developers? A Case Study in a Large IT Company (Research, 20 min. incl. questions)
Vincent Blondeau, Anne Etien, Nicolas Anquetil, Sylvain Cresson, Pascal Croisy, and Stéphane Ducasse.

How do Developers Test Android Applications? (Industry, 10 min. incl. questions)
Mario Linares-Vásquez, Carlos Bernal-Cárdenas, Kevin Moran, and Denys Poshyvanyk.

Session 5: Program Analysis 1 (16:00 – 17:30, Grand Ballroom A)

Session Chair: Coen De Roover

An Experiment Comparing Lifted and Delayed Variability-Aware Program Analysis (Research, 20 min. incl. questions)
Florian Angerer, Paul Grünbacher, Herbert Prähofer, and Lukas Linsbauer.

Semantics-Aware Machine Learning for Function Recognition in Binary Code (Research, 20 min. incl. questions)
Shuai Wang, Pei Wang, and Dinghao Wu.

GEAS: Generic Adaptive Scheduling for High-efficiency Context Inconsistency Detection (Research, 20 min. incl. questions)
Bingying Guo, Huiyan Wang, Chang Xu, and Jian Lu.

Graph Data Management of Evolving Dependency Graphs for Multi-versioned Codebases (Industry, 10 min. incl. questions)
Oshini Goonetilleke, David Meibusch, and Ben Barham.

KOWALSKI: Collecting API Clients in Easy Mode (Tool Demo, 10 min. incl. questions)
Manuel Leuenberger, Haidar Osman, Mohammad Ghafari, and Oscar Nierstrasz.

Session 6: Documentation and Natural Language (16:00 – 17:30, Grand Ballroom B)

Session Chair: Zhenchang Xing

The Evaluation of an Approach for Automatic Generated Documentation (Research, 20 min. incl. questions)
Nahla Abid, Natalia Dragan, Michael Collard, and Jonathan Maletic.

On Negative Results when using Sentiment Analysis Tools for Software Engineering Research (Journal First, 20 min. incl. questions)
Robbert Jongeling, Proshanta Sarkar, Subhajit Datta, and Alexander Serebrenik.

Using Observed Behavior to Reformulate Queries during Text Retrieval-based Bug Localization (Research, 20 min. incl. questions)
Oscar Chaparro, Juan Manuel Florez, and Andrian Marcus.

NLP2Code: Code Snippet Content Assist via Natural Language Tasks (Tool Demo, 10 min. incl. questions)
Brock Angus Campbell and Christoph Treude.

On-Demand Developer Documentation (NIER, 10 min. incl. questions)
Martin P. Robillard, Andrian Marcus, Christoph Treude, Gabriele Bavota, Oscar Chaparro, Neil Ernst, Marco Aurelio Gerosa, Michael Godfrey, Michele Lanza, Mario Linares-Vasquez, Gail Murphy, Laura Moreno, David Shepherd, and Edmund Wong.

Understanding Stack Overflow Code Fragments (NIER, 10 min. incl. questions)
Christoph Treude and Martin Robillard.

Thursday, 21st September

Artifacts Papers (8:45 - 10:15, Grand Ballroom A+B)

Session Chair: Igor Steinmacher

TraceLab Components for Generating Extractive Summaries of User Stories (5 minutes)
Rrezarta Krasniqi, Siyuan Jiang, and Collin McMillan.

Artifacts for Dynamic Analysis of Android Apps (5 minutes)
Haipeng Cai and Barbara Ryder.

Revisiting Turnover-Induced Knowledge Loss in Software Projects (5 minutes)
Mathieu Nassif and Martin P. Robillard.

An Empirical Study of Local Database Usage in Android Applications (5 minutes)
Yingjun Lyu , Jiaping Gui , Mian Wan, and William G.J. Halfond.

CCLearner: A Deep Learning-Based Clone Detection Approach (5 minutes)
Liuqing Li, He Feng, Wenjie Zhuang, Na Meng, and Barbara Ryder.

Session 7: Empirical 2 (11:00 – 12:40, Grand Ballroom A)

Session Chair: Mike Godfrey

How Long and How Much: What to Expect from Summer of Code Participants? (Research, 20 min. incl. questions)
Jefferson Silva, Igor Scaliante Wiese, Daniel German, Igor Steinmacher, and Marco Gerosa.

Personality and Project Success: Insights from a Large-Scale Study with Professionals (Research, 20 min. incl. questions)
Xin Xia, David Lo, Lingfeng Bao, Abhishek Sharma, and Shanping Li.

Revisiting Turnover-Induced Knowledge Loss in Software Projects (Research, 20 min. incl. questions)
Mathieu Nassif and Martin P. Robillard.

Curating GitHub for Engineered Software Projects (Journal First, 20 min. incl. questions)
Nuthan Munaiah, Steven Kroh, Craig Cabrey, and Meiyappan Nagappan.

Reviewing Career Paths of the OpenStack Developers (NIER, 10 min. incl. questions)
Perry van Wesel, Bin Lin, Gregorio Robles, and Alexander Serebrenik.

How Do Developers Select and Prioritize Code Smells? A Preliminary Study (NIER, 10 min. incl. questions)
Natthawute Sae-Lim, Shinpei Hayashi, and Motoshi Saeki.

Session 8: Security (11:00 – 12:40, Grand Ballroom B)

Session Chair: Ivan Beschastnikh

Detecting DOM-Sourced Cross-Site Scripting in Browser Extensions (Research, 20 min. incl. questions)
Jinkun Pan and Xiaoguang Mao.

Composite Software Diversification (Research, 20 min. incl. questions)
Shuai Wang, Pei Wang, and Dinghao Wu.

Learning to Predict Severity of Software Vulnerability Using Only Vulnerability Description (Research, 20 min. incl. questions)
Zhuobing Han, Xiaohong Li, Zhenchang Xing, Hongtao Liu, and Zhiyong Feng.

Understanding Android Application Programming and Security: A Dynamic Study (Research, 20 min. incl. questions)
Haipeng Cai and Barbara Ryder.

Embroidery: Patching Vulnerable Binary Code of Fragmentized Android Devices (Research, 20 min. incl. questions)
Xuewen Zhang, Yuanyuan Zhang, Juanru Li, Yikun Hu, Huayi Li, and Dawu Gu.

Session 9: Recommendations and Code Review (14:00 – 15:30, Grand Ballroom A)

Session Chair: Andrea Mocci

Recommending Framework Extension Examples (Research, 20 min. incl. questions)
Muhammad Asaduzzaman, Chanchal K. Roy, Kevin Schneider, and Daqing Hou.

On the Optimal Order of Reading Source Code Changes for Review (Research, 20 min. incl. questions)
Tobias Baum, Kurt Schneider, and Alberto Bacchelli.

Code Reviewing in the Trenches: Understanding Challenges and Best Practices (Journal First, 20 min. incl. questions)
Laura MacLeod, Michaela Greiler, Margaret-Anne Storey, Christian Bird, and Jacek Czerwonka.

Confusion Detection in Code Reviews (NIER, 10 min. incl. questions)
Felipe Ebert, Fernando Castor, Nicole Novielli, and Alexander Serebrenik.

Constraints Based Approach to Interactive Feature Location (NIER, 10 min. incl. questions)
Daiki Fujioka and Naoya Nitta.

REPERSP: Recommending Personalized Software Projects on GitHub (Tool Demo, 10 min. incl. questions)
Xu Wenyuan, Xiaobing Sun, Jiajun Hu, and Bin Li.

Session 10: Build and Release (14:00 – 15:30, Grand Ballroom B)

Session Chair: Hongyu Zhang

A Tale of CI Build Failures: an Open Source and a Financial Organization Perspective (Research, 20 min. incl. questions)
Carmine Vassallo, Gerald Schermann, Fiorella Zampetti, Daniele Romano, Philipp Leitner, Andy Zaidman, Massimiliano Di Penta, and Sebastiano Panichella.

There Back Again: Can you Compile that Snapshot? (Journal First, 20 min. incl. questions)
Michele Tufano, Fabio Palomba, Gabriele Bavota, Massimiliano Di Penta, Rocco Oliveto, Andrea De Lucia, and Denys Poshyvanyk.

Is It Safe to Uplift This Patch? An Empirical Study on Mozilla Firefox (Research, 20 min. incl. questions)
Marco Castelluccio, Le An, and Foutse Khomh.

Studying the urgent updates of popular games on the Steam platform (Journal First, 20 min. incl. questions)
Dayi Lin, Cor-Paul Bezemer, and Ahmed E. Hassan.

Forecasting the Duration of Incremental Build Jobs (NIER, 10 min. incl. questions)
Qi Cao, Ruiyin Wen, and Shane Mcintosh.

Session 11: Bugs and Tickets (16:00 – 17:40, Grand Ballroom A)

Session Chair: David Lo

A Characterization Study of Repeated Bug Fixes (Research, 20 min. incl. questions)
Ruru Yue, Na Meng, and Qianxiang Wang.

Towards Accurate Duplicate Bug Retrieval using Deep Learning Techniques (Research, 20 min. incl. questions)
Jayati Deshmukh, Annervaz K M, Sanjay Podder, Shubhashis Sengupta, and Neville Dubash.

Bug Reports for Desktop Software and Mobile Apps in GitHub: What is the Difference? (Journal First, 20 min. incl. questions)
Tao Zhang, Jiachi Chen, Xiapu Luo, and Tao Li.

Reducing User Input Requests to Improve IT Support Ticket Resoluti on Process (Journal First, 20 min. incl. questions)

Monika Gupta, Allahbaksh Asadullah, Srinivas Padmanabhuni, and Alexander Serebrenik.

Mean Average Distance to Resolver: An Evaluation Metric for Ticket Routing in Expert Network (Industry, 10 min. incl. questions)

Jianglei Han, and Aixin Sun.

Bug or Not? Bug Report Classification using N-Gram IDF (NIER, 10 min. incl. questions)

Pannavat Terdchanakul, Hideaki Hata, Passakorn Phannachitta, and Kenichi Matsumoto.

Session 12: Android (16:00 – 17:30, Grand Ballroom B)

Session Chair: Massimiliano Di Penta

Evaluating State-of-the-Art Free and Open Source Static Analysis Tools against Buffer Errors in Android Apps (Research, 20 min. incl. questions)

Bushra Aloraini and Meiyappan Nagappan.

AimDroid: Activity-Insulated Multi-level Automated Testing for Android Applications (Research, 20 min. incl. questions)

Tianxiao Gu, Chun Cao, Tianchi Liu, Chengnian Sun, Jing Deng, Xiaoxing Ma, and Jian Lu¨.

An Empirical Study of Local Database Usage in Android Applications (Research, 20 min. incl. questions)

Yingjun Lyu, Jiaping Gui, Mian Wan, and William G.J. Halfond.

DroidFax: A Toolkit for Systematic Characterization of Android Applications (Tool Demo, 10 min. incl. questions)

Haipeng Cai and Barbara Ryder.

Dissecting Android Inter-Component Communications via Interactive Visual Explorations (NIER, 10 min. incl. questions)

John Jenkins and Haipeng Cai.

Mining AndroZoo: A Retrospect (Doctoral Symposium, 10 min. incl. question)

Li Li.

Friday, 22nd September, Grand Ballroom A+B (2/F)

Session 13: Predicting Defects and more (8:45 – 10:15, Grand Ballroom A)

Session Chair: Shane McIntosh

Supervised vs Unsupervised Models: A Holistic Look at Effort-Aware Just-in-Time Defect Prediction (Research, 20 min. incl. questions)

Qiao Huang, Xin Xia, and David Lo.

Heterogeneous Defect Prediction through Multiple Kernel Learning and Ensemble Learning (Research, 20 min. incl. questions)

Zhiqiang Li, Xiao-Yuan Jing, Xiaoke Zhu, and Hongyu Zhang.

The utility challenge of privacy-preserving data-sharing in cross-company defect prediction: An empirical study of the CLIFF&MORPH algorithm (Research, 20 min. incl. questions)

Yi Fan, Chenxi Lv, Xu Zhang, Guoqiang Zhou, and Yuming Zhou.

Global vs. local models for cross-project defect prediction: a replication study (Journal First, 20 min. incl. questions)

Steffen Herbold, Alexander Trautsch, and Jens Grabowski.

Improving Software Maintenance Using Process Mining and Predictive Analytics (Doctoral Symposium, 10 min. incl. question)

Monika Gupta.

Session 14: Industrial Forum —— Software Design Intelligence (8:45 – 10:15, Grand Ballroom B)

Session Chair: Xin Peng

The forum is supported by Huawei. It will be a goldfish bowl panel format and be focused on the following topics: microservice architecture measurement, recommendation and reuse of architectural/design pattern, architectural smells and refactoring, light-weighted design in iterative development.

Software Design Intelligence: Practice and Technical Requirements from Huawei

Zhoulong Chen (Huawei)

Talks from Seed Panelists

Michael W. Godfrey (University of Waterloo) and Ivan Beschastnikh (University of British Columbia)

Rotating Panel Discussion: open from all the participants

Session 15: Measurement and Visualization (11:00 – 12:40, Grand Ballroom A)

Session Chair: Fabian Beck

Deep Green: modelling time-series of software energy consumption (Research, 20 min. incl. questions)

Stephen Romansky, Neil C. Borle, Shaiful Chowdhury, Abram Hindle, and Russ Greiner.

Behavior Metrics for Prioritizing Investigations of Exceptions (Industry, 10 min. incl. questions)

Zack Coker, Kostadin Damevski, Claire Le Goues, Nicholas A. Kraft, David Shepherd, and Lori Pollock.

Flattening Code For Metrics Measurement and Analysis (NIER, 10 min. incl. questions)

Yoshiki Higo and Shinji Kusumoto.

Automating Aggregation for Software Quality Modeling (NIER, 10 min. incl. questions)

Meng Yan, Xin Xia, Xiaohong Zhang, Dan Yang, and Ling Xu.

Predicting and Evaluating Software Model Growth in the Automotive Industry (Industry, 10 min. incl. questions)

Jan Schroeder, Christian Berger, Alessia Knauss, Harri Preenja, Mohammad Ali, Miroslaw Staron, and Thomas Herpel.

An Experience Report on Applying Passive Learning in a Large-Scale Payment Company (Industry, 10 min. incl. questions)

Rick Wieman, Maur´icio Aniche, Willem Lobbezoo, Sicco Verwer, and Arie van Deursen.

flexfringe: a passive automaton learning package (Tool Demo, 10 min. incl. questions)

Sicco Verwer and Christian Hammerschmidt.

Atlantis: Improving the Analysis and Visualization of Large Assembly Execution Traces (Tool Demo, 10 min. incl. questions)

Huihui Huang, Eric Verbeek, Daniel German, Margaret-Anne Storey, and Martin Salois.

CityVR: Gameful Software Visualization (Tool Demo, 10 min. incl. questions)

Leonel Merino, Mohammad Ghafari, Craig Anslow, and Oscar Nierstrasz.

Session 16: Program Analysis 2 (11:00 – 12:40, Grand Ballroom B)

Session Chair: Chanchal Roy

Coarse Hierarchical Delta Debugging (Research, 20 min. incl. questions)

Renata Hodovan, Akos Kiss, and Tibor Gyimothy.

Refactoring Asynchrony in JavaScript (Research, 20 min. incl. questions)

Keheliya Gallaba, Quinn Hanam, Ali Mesbah, and Ivan Beschastnikh.

CCLearner: A Deep Learning-Based Clone Detection Approach (Research, 20 min. incl. questions)

Liuqing Li, He Feng, Wenjie Zhuang, Na Meng, and Barbara Ryder.

Simplifying the Construction of Source Code Transformations via Automatic Syntactic Restructurings (Journal First, 20 min. incl. questions)

Christian Newman, Brian Bartman, Michael Collard, and Jonathan Maletic.

Automated Repair of High Inaccuracies in Numerical Programs (NIER, 10 min. incl. questions)

Xin Yi, Liqian Chen, Xiaoguang Mao, and Tao Ji.

An Empirical Study on the Usage of Fault Localization in Automated Program Repair (NIER, 10 min. incl. questions)

Deheng Yang, Yuhua Qi, and Xiaoguang Mao.

MIP Talk (14:00 – 15:30, Grand Ballroom A+B)

An Activity-Based Quality Model for Maintainability.

Florian Deissenboeck, Stefan Wagner, Markus Pizka, Stefan Teuchert, and Jean-Francois Girard.