



## **32<sup>nd</sup> IEEE International Conference on Software Maintenance and Evolution**

**ICSME 2016**

**Oct 5 – Oct 7**

## **16<sup>th</sup> IEEE International Working Conference on Source Code Analysis and Manipulation**

**SCAM 2016**

**Oct 2 – Oct 3**

## **4<sup>th</sup> IEEE Working Conference on Software Visualization**

**VISSOFT 2016**

**Oct 3 – Oct 4**

**MESOCA 2016**

**Oct 3**

**MTD 2016**

**Oct 4**

**SSBSE 2016**

**Oct 8 – Oct 10**

**Raleigh, North Carolina, USA**



# Table of Contents

<b>Welcome.....</b>	<b>5</b>
<b>Venue.....</b>	<b>6</b>
<b>Schedule.....</b>	<b>9</b>
<b>Social Events .....</b>	<b>33</b>
<b>General Information.....</b>	<b>36</b>



# Welcome

Welcome to ICSME 2016 in Raleigh! It is an honor and a pleasure to host the *32nd IEEE International Conference on Software Maintenance and Evolution (ICSME)* in the Research Triangle region of North Carolina, which is a major center for high-tech and biotech research. ICSME is the premier international forum for researchers and practitioners from academia, industry, and government to present, discuss, and debate the most recent ideas, experiences, and challenges in software maintenance and evolution.

The week of ICSME 2016 features five co-located events: the *16th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM)*, the *4th IEEE Working Conference on Software Visualization (VISSOFT)*, the *10th IEEE Symposium on the Maintenance and Evolution of Service-Oriented Systems and Cloud-Based Environments (MESOCA)*, the *8th IEEE International Workshop on Managing Technical Debt (MTD)*, and the *8th International Symposium on Search Based Software Engineering (SSBSE)*. We are grateful to all of the organizers of these meetings for joining ICSME and for making the week of ICSME a large and successful event.

We have assembled an exciting technical program and a relaxing social program, both designed to foster interaction with fellow attendees. This booklet provides the information you will need to navigate these programs. If you have any questions, please do not hesitate to contact us.

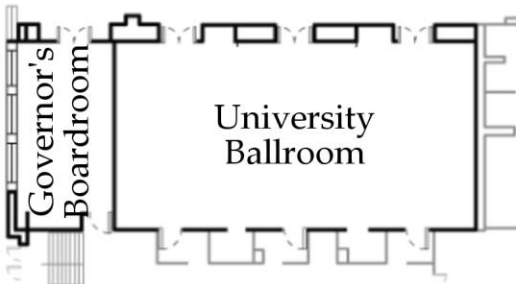
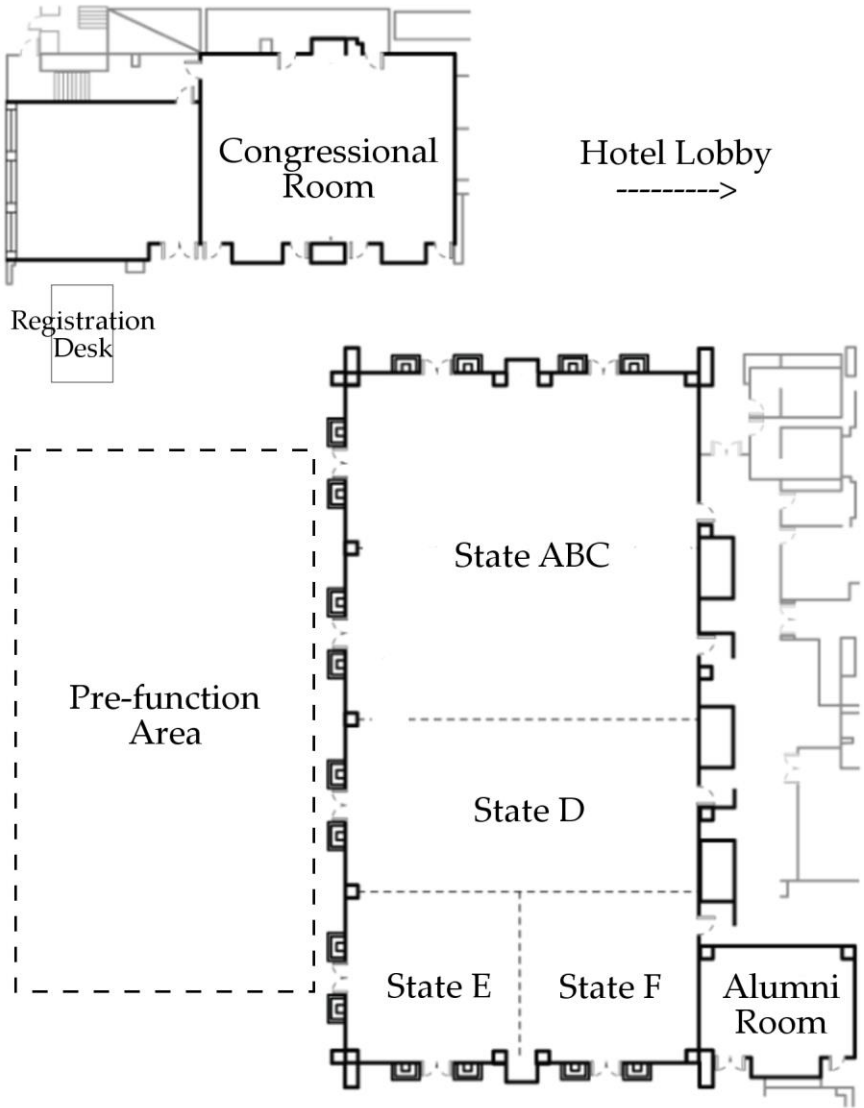
We hope that you have a fabulous time at ICSME 2016 and its co-located events, and if you have time, we hope that you can explore Raleigh's historic landmarks & cosmopolitan offerings.

Nick Kraft and Tim Menzies  
ICSME 2016 General Co-Chairs

# Venue

ICSME 2016 and the co-located events are held in the meeting rooms of the Raleigh Marriott City Center.

- **Badges/information** are available at the *Registration Desk*
- **Coffee breaks** take place in the *Pre-function Area*
- **Lunches** take place in *State ABC*
- **Posters and demonstrations** are in the *Congressional Room*
- **Quiet space** is available (except Tuesday) in the *Alumni Room*
- **SCAM** is in the *University Ballroom*
- **VISOFT** is in *State E*
- **MESOCA** and **MTD** are in *State F*
- The **Doctoral Symposium** is in the *Governor's Boardroom*
- **ICSME Plenary** and **Research Track** sessions are in *State DEF*
- **ICSME Industry/ERA/Tool Demos/Artifacts Track** and **Technical Briefings** sessions are in the *University Ballroom*
- **ICSME J1C2** sessions are in the *Congressional Room*
- The **ICSME reception** is in *State ABC*







# Schedule

Sun 2	Mon 3	Tue 4	Wed 5	Thu 6	Fri 7
SCAM (University)		MTD (State F)	ICSME		
	VISSOFT (State E)				
	MESOCA (State F)	Doctoral Symposium (Governor's)			

	AM Break	Lunch	PM Break
Sun 2	10:30 – 11:00	12:30 – 13:30	15:00 – 15:30
Mon 3	10:30 – 11:00	12:30 – 13:30	15:00 – 15:30
Tue 4	10:30 – 11:00	12:30 – 13:30	15:00 – 15:30
Wed 5	10:30 – 11:00	12:30 – 13:30	15:00 – 15:30
Thu 6	10:00 – 10:30	12:00 – 13:00	14:30 – 15:00
Fri 7	10:15 – 10:45	12:15 – 13:15	14:45 – 15:15

Sunday, October 2  
SCAM 2016  
University Ballroom

09:00 – 09:15	Opening
09:15 – 10:30	Keynote: Michele Lanza
10:30 – 11:00	Coffee Break
11:00 – 12:30	Session 1: Software Security and Code Obfuscation
12:30 – 13:30	Lunch
13:30 – 15:00	Session 2: Supporting Software Developers
15:00 – 15:30	Coffee Break
15:30 – 17:30	Session 3: Engineering Track Papers

Monday, October 3  
SCAM 2016  
University Ballroom

09:00 – 10:30	Session 4: Code Similarity and Fault Localization
10:30 – 11:00	Coffee Break
11:00 – 12:30	Session 5: Software Testing
12:30 – 13:30	Lunch
13:30 – 15:00	Session 6: Code Transformation and Static Analysis
15:00 – 15:30	Coffee Break
15:30 – 17:00	Session 7: Empirical Studies
17:00 – 17:15	Closing
17:15 – 18:00	Open Steering Committee Meeting

Monday, October 3  
MESOCA 2016  
State F

09:00 – 09:30	Welcome and Introduction
09:30 – 10:30	Keynote: Scott Tilley
10:30 – 11:00	Coffee Break
11:00 – 12:00	Session 1: Migration and Evolution in Cloud Environments
12:00 – 12:30	Discussion Session: The Next 10 Years of MESOCA
12:30 – 13:30	Lunch
13:30 – 14:30	Session 2: Models and Architectures Supporting Migration and Evolution
14:30 – 15:00	Symposium Summary and Next Steps
15:00 – 15:30	Coffee & Networking

Monday, October 3  
VISSOFT 2016  
State E

09:00 – 09:15	Opening
09:15 – 10:30	Keynote: Joel Brandt
10:30 – 11:00	Coffee Break
11:00 – 12:30	Session: Ch-ch-changes
12:30 – 13:30	Lunch
13:30 – 15:00	Session: Teaching is not a product line
15:00 – 15:30	Coffee Break
15:30 – 16:50	Session: Numbers, numbers, numbers
16:50 – 17:00	Award Ceremony
19:00 – 21:30	Banquet: Rye Bar and Southern Kitchen

Tuesday, October 4  
VISSOFT 2016  
State E

09:00 – 10:15	Keynote: Christopher Healey
10:15 – 10:30	Demo madness!
10:30 – 11:00	Coffee Break
11:00 – 12:30	Session: Playtime
12:30 – 13:30	Lunch
13:30 – 15:10	Session: Into the Third Dimension
15:10 – 15:30	Coffee Break
15:30 – 16:30	Session: Last but not Least
16:30 – 17:00	Open Steering Committee Election

Tuesday, October 4  
MTD 2016  
State F

09:00 – 09:10	Welcome and Introduction
09:10 – 10:30	Keynote: Terri Potts
10:30 – 11:00	Coffee Break
11:00 – 12:30	Session 1: Technical Debt in Different Domains
12:30 – 13:30	Lunch
13:30 – 15:00	Session 2: Analyzing Technical Debt
15:00 – 15:30	Coffee Break
15:30 – 16:30	Roadmap Discussion: From Research to Practice
16:30 – 17:00	Moving Forward and Adjourn
18:30 – 21:00	Banquet: Second Empire Restaurant

Tuesday, October 4  
 Doctoral Symposium  
 Governor's Boardroom

09:00 – 10:30	Introductions, advisor management, and post-doc presentations
10:30 – 11:00	Coffee Break
11:00 – 12:30	Early pre-doctoral presentations and proposal writing
12:30 – 13:30	Lunch
13:30 – 15:00	Late pre-doctoral presentations and open discussion
15:00 – 15:30	Coffee Break
15:30 – 17:00	Late pre-doctoral presentations and poster presentation practicum
19:00 – 21:00	Dinner: Bida Manda Laotian Restaurant and Bar



Wednesday, October 5  
ICSME 2016

09:00 – 09:30	Opening	
09:30 – 10:30	Keynote: Tom Mens	
10:30 – 11:00	Coffee Break	
11:00 – 12:30	Research Track: Empirical Studies & Literature Reviews	Technology Briefings
12:30 – 13:30	Lunch	BoF: LBGT@SoftEng Lunch
13:30 – 15:00	Research Track: Maintaining Web- based Applications	Industry Track: Welcome and Keynote
15:00 – 15:30	Coffee Break	
15:30 – 17:15	Research Track: Reverse Engineering	Industry Track: Best Practices
17:15 – 18:15	Open Steering Committee Meeting	
18:30 – 22:00	Reception: State ABC	

**Research Track: Empirical Studies and Literature Reviews**

**Chair: Tim Menzies**

**Wed, Oct 5, 11:00 – 12:30, State DEF**

**An Empirical Evaluation of Models of Programmer Navigation**

Alka Singh, Austin Henley, Scott Fleming and Maria Luong

**A Comprehensive Study on the Energy Efficiency of Java Thread-Safe Collections**

Gustavo Pinto, Kenan Liu, Fernando Castor and Yu David Liu

**Maintenance Effort Estimation for Open Source Software: A Systematic Literature Review**

Hong Wu, Lin Shi, Celia Chen, Qing Wang and Barry Boehm

**A Taxonomy for Program Metamodels in Program Reverse Engineering**

Hironori Washizaki, Yann-Gael Gueheneuc and Foutse Khomh

**Technology Briefings**

**Chair: David Lo**

**Wed, Oct 5, 11:00 – 12:30, University Ballroom**

**iTrace: Overcoming the Limitations of Short Code Examples in Eye Tracking Experiments**

Bonita Sharif and Jonathan I. Maletic

**Automated GUI Testing of Android Apps: From Research to Practice**

Kevin Moran, Mario Linares-Vásquez and Denys Poshyvanyk

**srcML 1.0: Explore, Analyze, and Manipulate Source Code**

Michael L. Collard and Jonathan I. Maletic

**Research Track: Maintaining Web-based Applications**

**Chair: Tom Mens**

**Wed, Oct 5, 13:30 – 15:00, State DEF**

**Automated Extraction of Mixins in Cascading Style Sheets**

Alan Charpentier, Jean-Rémy Falleri and Laurent Réveillère

**The A?B\*A Pattern: Undoing Style in CSS and Refactoring Opportunities it Presents**

Leonard Punt, Sjoerd Visscher and Vadim Zaytsev

**Detect Cross-browser Issues for JavaScript-based Web Applications based on Record/Replay**

Guoquan Wu, Meimei He, Hongyin Tang and Jun Wei

**An Empirical Study of Internationalization Failures in the Web**

Abdulmajeed Alameer and William G.J. Halfond

**Industry Track: Welcome and Keynote**

**Chair: Jens Knodel**

**Wed, Oct 5, 13:30 – 15:00, University Ballroom**

**Two Sides of Grammarware Engineering**

Vadim Zaytsev

**Research Track: Reverse Engineering**

**Chair: Emily Hill**

**Wed, Oct 5, 15:30 – 17:15, State DEF**

**Evolving Trace Links between Requirements and Code across Multiple Versions of a Software System**

Mona Rahimi, William Goss and Jane Cleland-Huang

## **Inferring Links between Concerns and Methods with Multi-Abstraction Vector Space Model**

Yun Zhang, David Lo, Xin Xia, Tien-Duy B. Le, Giuseppe Scanniello and Jianling Sun

## **Inferring Computational State Machine Models from Program Executions**

Neil Walkinshaw and Mathew Hall

## **An optimization based approach for matching applications with textual models**

Tejas Patil, Raghavan Komondoor, Deepak D'Souza and Indrajit Bhattacharya

## **Configuring and Assembling Information Retrieval based Solutions for Software Engineering Tasks** (*Post-doctoral Track*)

Bogdan Dit

Industry Track: Best Practices

Chair: Jochen Quante

Wed, Oct 5, 15:30 – 17:15, University Ballroom

## **Improving Code Maintainability: A Case Study on the Impact of Refactoring**

Michael Wahler, Uwe Drofenik and Will Snipes

## **What is the cause for a defect to be re-assigned?**

Tamer Abdou, Behjat Soltanifar, Ayse Bener and Adam Neal

## **How Can We Help Software Rearchitecting Efforts? Study of an Industrial Case**

Brice Govin, Nicolas Anquetil, Anne Etien, Arnaud Monegier and Stéphane Ducasse

## **Continuous Delivery Practices in a Large Financial Organization**

Carmine Vassallo, Fiorella Zampetti, Daniele Romano, Moritz Beller, Annibale Panichella, Massimiliano Di Penta and Andy Zaidman

Thursday, October 6  
ICSME 2016

09:00 – 10:00	Keynote: Flavio Villanustre	
10:00 – 10:30	Coffee Break	
10:30 – 12:00	Research Track: Software Evolution	Tool Demonstrations
12:00 – 13:00	Lunch	
13:00 – 14:30	Research Track: Changes and Fixes	Industry Track: Comprehension
14:30 – 15:00	Coffee Break	
15:00 – 16:45	Research Track: Code Smells and Software Quality	Industry Track: Testing and Migration
18:30 – 21:30	Banquet: North Carolina Museum of History	

Research Track: Software Evolution  
Chair: Oscar Nierstrasz  
Thu, Oct 6, 10:30 – 12:00, State DEF

**Complete Evolution Specification for MDSE**

Josh Mengerink, Alexander Serebrenik, Ramon Schiffelers and Mark Van Den Brand

**Do Contexts Help in Phrase-based, Statistical Source Code Migration?**

Anh Nguyen, Zhaopeng Tu and Tien Nguyen

**Evolving NoSQL Databases Without Downtime**

Karla Saur, Tudor Dumitras, and Michael Hicks

**Hug the Elephant: Migrating a Legacy Data Analytics Application to Hadoop Ecosystem**

Feng Zhu, Jie Liu, Sa Wang, Lijie Xu, Dan Ye, Jun Wei, Tao Huang and Jixin Ren

Tool Demonstrations

Chairs: Alberto Bacchelli and Emily Hill

Thu, Oct 6, 10:30 – 12:00, University Ballroom

**SchemaAnalyst: Search-based Test Data Generation for Relational Database Schemas**

Phil McMinn, Chris Wright, Cody Kinneer, Colton McCurdy, Michael Camara and Gregory Kapfhammer

**mrstudyr: Retrospectively Studying the Effectiveness of Mutant Reduction Techniques**

Colton J. McCurdy, Gregory M. Kapfhammer and Phil McMinn

**BigCloneEval: A Clone Detection Tool Evaluation Framework with BigCloneBench**

Jeffrey Svajlenko and Chanchal K. Roy

**NullTerminator: Pseudo-Automatic Refactoring to Null Object Design Pattern**

Stefan Medeleanu and Petru-Florin Mihancea

**srcType: A Tool for Efficient Static Type Resolution**

Christian Newman, Jonathan Maletic and Michael Collard

**A Tool for Efficiently Reverse Engineering Accurate UML Class Diagrams**

Michael Decker, Kyle Swartz, Michael Collard and Jonathan Maletic

Research Track: Changes and Fixes

Chair: Coen de Roover

Thu, Oct 6, 13:00 – 14:30, State DEF

**An Empirical Study on the Characteristics of Python Fine-Grained Source Code Change Types**

Wei Lin, Zhifei Chen, Wanwangying Ma, Lin Chen, Lei Xu and Baowen Xu

**Using Topic Model to Suggest Fine-grained Source Code Changes**

Hoan Nguyen, Anh Nguyen and Tien Nguyen

**From Quick Fixes to Slow Fixes: Reimagining Static Analysis Resolutions to Enable Design Space Exploration**

Titus Barik, Yoonki Song, Brittany Johnson and Emerson Murphy-Hill

**Recommending Code Changes for Automatic Backporting of Linux Device Drivers**

Ferdian Thung, Le Dinh Xuan Bach, David Lo and Julia Lawall

**Industry Track: Comprehension**

**Chair: Bonita Sharif**

**Thu, Oct 6, 13:00 – 14:30, University Ballroom**

**Introducing Traceability, Consistency Checking, and Change Impact Analysis between Artifacts in an Automation Solution Company: An Experience Report**

Andreas Demuth, Roland Kretschmer, Alexander Egyed and Davy Maes

**Use Cases of a Generic Model Interpreter in an Automotive Software Setting**

Jochen Quante

**Integration of Static and Dynamic Code Analysis for Understanding Legacy Source Code**

Michael Moser, Josef Pichler, Wilhelm Kirchmayr, Ludwig Nocke and Rudolf Tober

**A Case Study of Automated Feature Location Techniques for Industrial Cost Estimation**

Ameer Armaly, John Klaczyński and Collin McMillan

**Research Track: Code Smells and Software Quality**

**Chair: Árpád Beszédes**

**Thu, Oct 6, 15:00 – 16:45, State DEF**

**A Validated Set of Smells in Model-View-Controller Architectures**

Maurício Aniche, Gabriele Bavota, Christoph Treude, Arie van Deursen and Marco Gerosa

**Smells like Teen Spirit: Improving Bug Prediction Performance Using the Intensity of Code Smells**

Fabio Palomba, Marco Zanoni, Francesca Arcelli Fontana, Andrea De Lucia and Rocco Oliveto



**Comparing Quality Metrics for Cloned and Non-Cloned Java Methods: A Large Scale Empirical Study**

Vaibhav Saini, Hitesh Sajnani and Cristina Lopes

**"Automated Debugging Considered Harmful" Considered Harmful -- A User Study Revisiting the Usefulness of Spectra-Based Fault Localization Techniques with Professionals using Real Bugs from Large Systems**

Xin Xia, Lingfeng Bao, David Lo and Shanping Li

**An Automated Approach for Recommending When to Stop Performance Tests**

Hamam M. Alghamdi, Mark D. Syer, Weiyi Shang and Ahmed E. Hassan

Industry Track: Testing and Migration

Chair: David Shepherd

Thu, Oct 6, 15:00 – 16:45, University Ballroom

**A tiered approach towards an incremental BPEL to BPMN 2.0 migration**

Stefan Strobl, Markus Zoffi, Mario Bernhart and Thomas Grechenig

**Effect of Time Window on the Performance of Continuous Regression Testing**

Dusica Marijan and Marius Liaaen

**Customized Regression Testing Using Telemetry Usage Patterns**

Jeff Anderson, Hyunsook Do and Saeed Salem

**Industrial Application of Automated Regression Testing in Test-Driven ETL Development**

Miroslav Dzakovic

Friday, October 7  
ICSME 2016

09:00 – 09:30	ICSME 2017 & 2018 Announcements MIP Award		
09:30 – 10:15	Keynote: MIP Award Winners		
10:15 – 10:45	Coffee Break		
10:45 – 12:15	Research Track: Release Engineering	Artifacts	J1C2
12:15 – 13:15	Lunch		
13:15 – 14:45	Research Track: Mining Software Repositories	ERA Track: Defects and Repair	
14:45 – 15:15	Coffee Break		
15:15 – 16:45	Research Track: APIs	ERA Track: Maintenance and Analysis	
16:45 – 17:00	Closing		
17:30 – 18:30	Soccer Game		

Research Track: Release Engineering

Chair: Shane McIntosh

Fri, Oct 7, 10:45 – 12:15, State DEF

**Recovering Commit Branch of Origin from GitHub Repositories**

Heather Michaud, Drew Guarnera, Michael Collard and Jonathan Maletic

**Why are Commits being Reverted? A Comparative Study of Industrial and Open Source Projects**

Junji Shimagaki, Yasutaka Kamei, Shane McIntosh, David Pursehouse and Naoyasu Ubayashi

**Understanding variable code: Reducing the complexity by integrating variability information**

Dierk Lüdemann, Nazish Asad, Klaus Schmid and Christopher Voges

**Concepts, Operations, and Feasibility of a Projection-Based Variation Control System**

Stefan Stanciulescu, Thorsten Berger, Eric Walkingshaw and Andrzej Wasowski

Artifacts

Chair: Tim Menzies

Fri, Oct 7, 10:45 – 12:15, University Ballroom

**TraceLab Components for Reproducing Source Code Summarization Experiments**

Breno D. Cruz, Paul W. McBurney and Collin McMillan

**Data and Analysis code for GP EFSM Inference (Scorecard)**

Neil Walkinshaw and Mathew Hall

**Cassandra Source Code, Feature Descriptions across 27 versions,  
with Starting and Ending Version Trace Matrices**

Mona Rahimi and Jane Cleland-Huang

**A Tool for Detecting and Refactoring the A?B\*A Pattern in CSS**

Leonard Punt, Sjoerd Visscher and Vadim Zaytsev

**A Comprehensive Study on the Energy Efficiency of Java's  
Thread-Safe Collections**

Gustavo Pinto, Kenan Liu, Fernando Castor and Yu David Liu

**The A?B\*A Pattern: Undoing Style in CSS and Refactoring  
Opportunities it Presents**

Leonard Punt, Sjoerd Visscher and Vadim Zaytsev

J1C2

Chair: Hitesh Sajnani

Fri, Oct 7, 10:45 – 12:15, Congressional Room

**The Impact of Vocabulary Normalization**

Dave Binkley and Dawn Lawrie

**Robula+: an algorithm for generating robust XPath locators for  
web testing**

Maurizio Leotta, Andrea Stocco, Filippo Ricca and Paolo Tonella

**Automated feature discovery via sentence selection and source  
code summarization**

Paul W. McBurney, Cheng Liu and Collin McMillan

Research Track: Mining Software Repositories

Chair: Alexander Serebrenik

Fri, Oct 7, 13:15 – 14:45, State DEF

**Understanding the Factors that Impact the Popularity of GitHub Repositories**

Hudson Silva, Andre Hora and Marco Tulio Valente

**Who is who in the mailing list? Comparing six disambiguation heuristics to identify multiple addresses of a participant**

Igor Scaliante Wiese, Igor Steinmacher, Christoph Treude, Jose Teodoro Da Silva and Marco Gerosa

**TechLand: Assisting Technology LandscapeInquiries with Insights from Stack Overflow**

Chunyang Chen, Zhenchang Xing and Lei Han

**Search-Based Peer Reviewers Recommendation in Modern Code Review**

Ali Ouni, Raula Gaikovina Kula and Katsuro Inoue

ERA Track: Defects and Repair

Chair: Scott Fleming

Fri, Oct 7, 13:15 – 14:45, University Ballroom

**Empirical Study on Synthesis Engines for Semantics-based Program Repair**

Le Dinh Xuan Bach, David Lo and Claire Le Goues

**Enhancing Automated Program Repair with Deductive Verification**

Le Dinh Xuan Bach, Quang Loc Le, David Lo and Claire Le Goues

**Automatic detection of instability architectural smells**

Francesca Arcelli Fontana, Ilaria Pigazini, Riccardo Roveda and Marco Zanoni

## **Towards Accurate Binary Correspondence using Runtime-Observed Values**

Ulf Kargén and Nahid Shahmehri

## **A Quantitative and Qualitative Investigation of Performance-Related Commits in Android Apps**

Teerath Das, Massimiliano Di Penta and Ivano Malavolta

## **On the Vocabulary Agreement in Software Issue Descriptions**

Oscar Chaparro, Juan Manuel Florez and Andrian Marcus

## **Repairing intricate faults in code using machine learning and path exploration**

Divya Gopinath, Kaiyuan Wang, Jinru Hua and Sarfraz Khurshid

Research Track: APIs

Chair: Massimiliano Di Penta

Fri, Oct 7, 15:15 – 16:45, State DEF

## **ICON: Inferring Temporal Constraints from Natural Language API Descriptions**

Rahul Pandita, Kunal Taneja, Teresa Tung and Laurie Williams

## **Learning to Extract API Mentions from Informal Natural Language Discussions**

Deheng Ye, Zhenchang Xing, Chee Yong Foo, Jing Li and Nachiket Kapre

## **On the reaction to deprecation of 25,357 clients of 4+1 popular Java APIs**

Anand Ashok Sawant, Romain Robbes and Alberto Bacchelli

## **Accessing Inaccessible Android APIs: An Empirical Study**

Li Li, Tegawendé F. Bissyandé, Yves Le Traon and Jacques Klein

ERA Track: Maintenance and Analysis

Chair: David Lo

Fri, Oct 7, 15:15 – 16:45, University Ballroom

**Continuous Maintenance**

Candy Pang and Abram Hindle

**Using Temporal and Semantic Developer-Level Information to Predict Maintenance Activity Profiles**

Stanislav Levin and Amiram Yehudai

**Modular Change Impact Analysis for Configurable Software**

Florian Angerer, Herbert Prähofer and Paul Grünbacher

**How Does the Shift to GitHub Impact Project Collaboration?**

Luiz Felipe Dias, Igor Steinmacher, Gustavo Pinto, Daniel Alencar Da Costa and Marco Gerosa

**Key Elements Extraction and Traces Comprehension Using Gestalt Theory and the Helmholtz Principle**

Raphael Khoury, Lei Shi and Abdelwahab Hamou-Lhadj

**Part of Speech Tagging Java Method Names**

Wyatt Olney, Emily Hill, Chris Thurber and Bezalel Lemma

**Detecting Function Constructors in JavaScript**

Shahriar Rostami, Laleh Eshkevari, Davood Mazinanian and Nikolaos Tsantalis





## **Social Events**

### **SCAM Banquet**

The SCAM 2016 banquet will take place on Sunday, October 2 at 7:00 PM. The banquet venue is the Boxcar Bar + Arcade in Raleigh's Warehouse District at 330 West Davie Street (at the intersection with Harrington Street; in the middle-right of cell A5 on the map). Boxcar has over 70 original games, 24 craft drafts, and a liquor bar.

### **VISSOFT Banquet**

The VISSOFT 2016 banquet will take place on Monday, October 3 at 7:00 PM. The banquet venue is the Rye Bar & Southern Kitchen, which is in the conference hotel, offers a refined take on traditional Southern cuisine, and features produce and meats from local North Carolina farms.

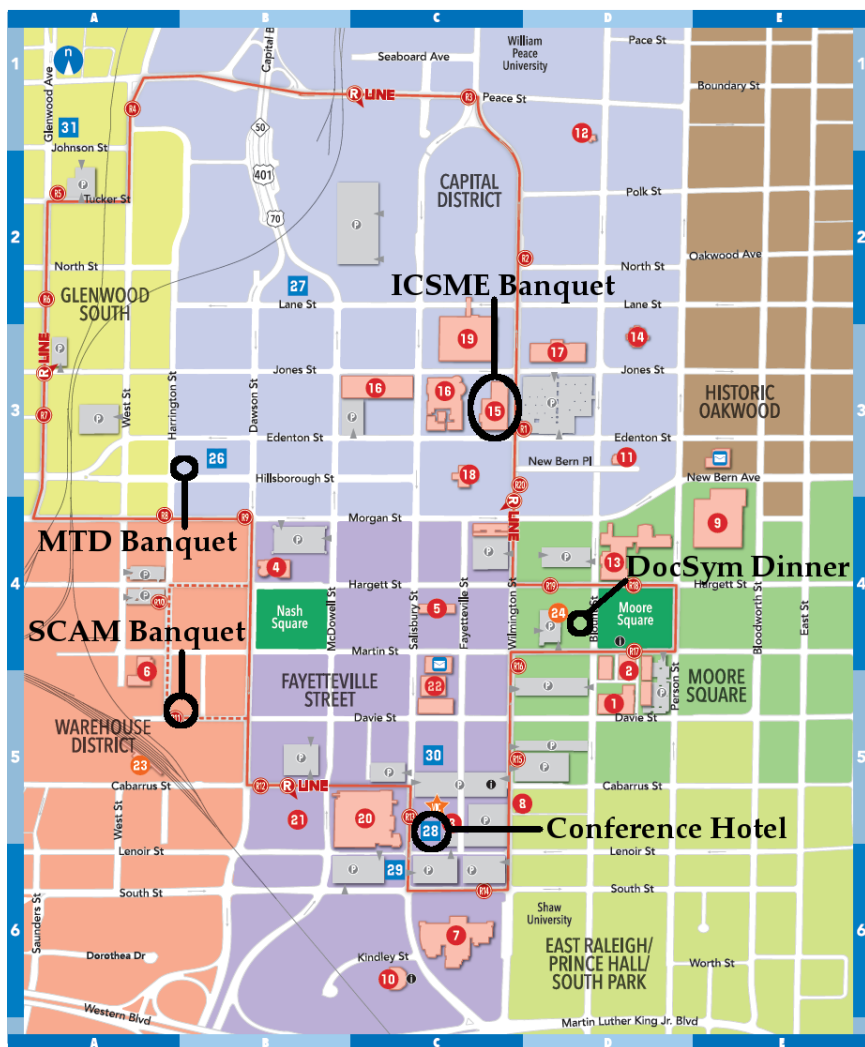
### **MTD Banquet**

The MTD 2016 banquet will take place on Tuesday, October 4 at 6:30 PM. The banquet venue is the Second Empire Restaurant and Tavern in the beautifully restored Historic Dodd-Hinsdale House at 330 Hillsborough Street (at the intersection with Harrington Street; in the lower-left of cell B3 on the map). Second Empire offers a dining experience that combines an atmosphere of classical history & elegance with an exquisitely unique selection of cuisine.

### **Doctoral Symposium Dinner**

#### **Sponsored by Microsoft Research**

The Doctoral Symposium dinner will be on Tuesday, October 4 at 6:30 PM. The dinner venue is Bida Manda Laotian Restaurant and Bar at 222 South Blount Street (west of Moore Square; in cell D4 on the map). Attendance at the dinner is limited to Doctoral Symposium organizers, panelists, and participants.



See [www.visitraleigh.com](http://www.visitraleigh.com) for this map  
 (About → Maps → Downtown Raleigh Downloadable Map)  
 and other information about Downtown Raleigh

See Also:

[www.godowntownraleigh.com](http://www.godowntownraleigh.com)

[www.wikitravel.org/en/Raleigh](http://www.wikitravel.org/en/Raleigh)

## **ICSME Bike Ride**

Raleigh has over 100 miles of greenways to explore! Explore a (small) part of them during this 30 minute bike ride on Tuesday, October 4. The first leg of the low-intensity ride will commence at 5:00 PM from the conference hotel and end at Trophy Brewing at 656 Maywood Avenue (southwest of cell A6 on the map). Enjoy their famous 40 oz. tasting flight, hang out and play corn hole, and grab some grub from the food truck. The ride back to the conference hotel will commence at around 7:00 PM.

## **ICSME Reception**

The ICSME 2016 reception will be held on Wednesday, October 5 from 6:30 PM to 10:00 PM in *State ABC*. The reception will feature a relaxed atmosphere with food, drinks, and sport. Experience true Southern living as you play Cornhole and drinking local craft brew. Participate in the Cornhole Tournament for a chance to win fame, friends, and a “World Champions” medal. Or grab a bingo card and play nametag-ribbon bingo, a fun way to meet other attendees.

## **ICSME Banquet**

The ICSME 2016 banquet will take place on Thursday, October 6 from 6:30 PM to 9:30 PM. The banquet venue is the North Carolina Museum of History in Raleigh’s Capital District at 5 East Edenton Street (at the intersection with Wilmington Street; in the middle-right of cell C3 on the map). Enjoy appetizers and drinks then walk through 14,000 years of North Carolina history before dinner.

## **ICSME Soccer Game**

The ICSME 2016 soccer game will take place on Friday, October 7 on a natural grass field on the Centennial Campus of NC State University immediately after the conference ends. The game bus will leave from the conference hotel at 5:30 PM and return to the conference hotel at 7:00 PM. Please change into game attire before boarding the bus, as there are no changing rooms at the field.

## General Information

<b>Conference Venue</b>	Raleigh Marriott City Center 500 Fayetteville Street Raleigh North Carolina 27601 USA +1 919 833 1120
<b>Website</b>	<a href="http://icsme2016.github.io">http://icsme2016.github.io</a>
<b>Twitter</b>	<a href="https://twitter.com/ieeeicsme">https://twitter.com/ieeeicsme</a>
<b>Facebook</b>	<a href="https://www.facebook.com/icsmeconf">https://www.facebook.com/icsmeconf</a>
<b>Hashtag</b>	#icsme16

## Transportation

Raleigh-Durham International Airport (RDU) is approximately 25 minutes by car or 50 minutes by bus from the Raleigh Marriott City Center. Many ground transportation options are available, including taxis, shuttle services, Uber, Lyft, and the Go Triangle bus line. See the following resources for additional information:

<b>Directory</b>	<a href="http://www.rdu.com/ground-transportation">http://www.rdu.com/ground-transportation</a>
<b>Taxi</b>	RDU Taxi, Inc. <a href="http://www.rdutaxiinc.com/">http://www.rdutaxiinc.com/</a> +1 919 840 7277
<b>Bus</b>	Go Triangle <a href="http://www.gotriangle.org/maps-and-schedules#1556">http://www.gotriangle.org/maps-and-schedules#1556</a> +1 919 485 7433
<b>Shared Services</b>	<a href="http://www.rdu.com/wp-content/uploads/2014/11/shared20160721.pdf">http://www.rdu.com/wp-content/uploads/2014/11/shared20160721.pdf</a>

## Registration

The registration desk is open daily from 8:00 – 17:00.

## Name Badges

Attendees must wear their name badges at all times to gain entry to the conference events. Your registration packet contains tickets to all events based on your registration selections. Please keep these tickets in your name badge and present them to conference staff upon request. If you have a dietary restriction card, please show it to your server to obtain your special meal. Please keep this card with you for the duration of the conference, including the banquet(s).

## Internet Access

Wireless internet access is available in the meeting space.

<b>SSID</b>	Marriott_Conference
<b>Password</b>	IEEE2016

## Proceedings

Access the proceedings by downloading the online version.

<b>URL</b>	<a href="http://conferences.computer.org/icsme/2016">http://conferences.computer.org/icsme/2016</a>
<b>User</b>	icsme16
<b>Password</b>	conf16

## Emergency

<b>Nick Kraft</b>	+1 205 861 6586
<b>Emergencies / Crimes in Progress</b>	911
<b>Non-Emergency Crimes</b>	+1 919 996 3335

# Notes



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