

TAIC PART Program

Tuesday

- 09:00 - 09:30 Welcome (Mark Harman & Phil McMinn)
- 09:30 - 10:30 Keynote: Bill Woodworth (*IBM*)
- 10:30 - 11:00 *Questions and discussion* ~ Chair: Mark Harman
- 11:00 - 11:30 Coffee
- 11:30 - 13:00 Paper Session 1 ~ Chair: Rob Hierons (*Brunel University*)

Motivation for Testing

- 11:30 **Justifying Testing in the 21st Century**
Ian Gilchrist (*IPL Ltd.*)
- 11:50 *Questions and discussion*

Fault Prediction

- 12:00 **Generating a Test Strategy with Bayesian Networks, and Common Sense**
Jean-Jacques Gras, Elena Pérez-Miñana and Rishabh Gupta (*Motorola*)
- 12:20 **On the Automation of Software Fault Prediction**
Thomas Ostrand and Elaine Weyuker (*AT&T*)
- 12:40 *Questions and discussion*
- 13:00 - 14:00 Lunch
- 14:00 - 15:30 Walk
- 15:30 - 16:00 Tea
- 16:00 - 18:00 Paper Session 2 ~ Chair: Mary Jean Harrold (*Georgia Institute of Technology*)

Automated Inference and Abstraction

- 16:00 **Identifying State Transitions and their Functions in Source Code**
Neil Walkinshaw, Kirill Bogdanov, Mike Holcombe (*University of Sheffield*)
- 16:20 **Integration Testing of Components Guided by Incremental State Machine Learning**
Keqin Li, Roland Groz (*LSR-IMAG*), Muzammil Shahbaz (*France Télécom*)
- 16:40 *Questions and discussion*

PhD papers

- 17:00 **Incremental Inference of Black-Box Components to support Integration Testing**
Muzammil Shahbaz (*France Télécom*)
- 17:15 *Feedback and questions*
- 17:30 **AutoAbstract: Problem Statement and Hypothetical Solutions**
Shaukat Ali (*University of Sheffield*)
- 17:45 *Feedback and questions*
- 19:00 Dinner

Wednesday

09:00 - 10:30 Paper Session 3 ~ Chair: Ian Gilchrist (*IPL Ltd.*)

Testing in Context

9:00 **Towards Deploying Model-Based Testing with a Domain-Specific Modeling Approach**
Mika Katara, Antti Kervinen, Mika Maunumaa, (*Tampere University of Technology*) Tuula Pääkkönen (*Nokia Technology Platforms*) and Mikko Satama (*Tampere University of Technology*)

9:20 **TRex - The Refactoring and Metrics Tool for TTCN-3 Test Specifications**
Paul Baker, Dominic Evans (*Motorola*), Jens Grabowski, Helmut Neukirchen, Benjamin Zeiss (*University of Göttingen*)

9:40 **A test-oriented life-cycle production strategy for building embedded biomedical applications**
James Miller (*University of Alberta*), Mike Smith, Jingwen Chen, Juan Qiao, Fang Huang (*University of Calgary*) and Marc Roper (*University of Strathclyde*).

10:00 *Questions and discussion*

10:30 – 11:00 Coffee

11:00 – 13:00 Paper Session 4 ~ Chair: Marc Roper (*University of Strathclyde*)

Techniques

11:00 **Using program data-state diversity in test data search**
Mohammad Alshraideh and Leonardo Bottaci (*University of Hull*)

11:20 **Testing the Implementation of Business Rules using Intensional Database Tests**
David Willmor and Suzanne Embury (*University of Manchester*)

11:40 *Questions and discussion*

PhD papers

12:00 **Generation of Conformance Test Suites for Compositions of Web Services Using Model Checking**
José García-Fanjul, Claudio De la Riva and Javier Tuya (*University of Oviedo*)

12:15 *Feedback and questions*

12:30 **Enabling Run-Time System Verification through Built-In Testing**
Daniel Brenner

12:45 *Feedback and questions*

13:00 - 14:00 Lunch

14:00 - 15:30 Paper Session 5 ~ Chair: Joachim Wegener (*DaimlerChrysler*)

Techniques

14:00 **MaTRIX: Maintenance-Oriented Test Requirements Identifier and Examiner**
Taweessup Apiwattanapong, Raul Santelices, Pavan Kumar Chittimalli, Alessandro Orso, Mary Jean Harrold (*Georgia Institute of Technology*)

14:20 **Extending Software Integration Testing Using Aspects in Symbian OS**
Jani Pesonen (*Nokia*)

14:40 **Improving Testing Efficiency using Cumulative Test Analysis**
Ian Holden and Dave Dalton (*IBM*)

15:00 *Questions and discussion*

15:30 - 16:00 Tea

16:00 - 18:00 ‘Speed Dating’ ~ Chair: Mark Harman

19:00 Dinner

Thursday

- 09:00 – 10:00 Keynote: John Hatcliff (*Kansas State University*)
- 10:00 – 10:30 *Questions and discussion* ~ Chair: Mark Harman
- 10:30 - 11:00 Coffee
- 11:00 - 13:30 Paper Session 6 ~ Chair: Mike Holcombe (*University of Sheffield*)

Empirical Studies

- 11:00 **A Framework for Comparing Efficiency, Effectiveness and Applicability of Software Testing Techniques**
Sigrid Eldh (*Ericsson*), Hans Hansson, Sasikumar Punnekkat, Anders Pettersson and Daniel Sundmark (*Mälardalen University*)
- 11:20 **On the Testing Maturity of Software Producing Organizations**
Mats Grindal (*University of Skövde*), Jeff Offutt (*George Mason University*) and Jonas Mellin (*University of Skövde*)
- 11:40 **The effectiveness of refactoring based on a compatibility testing taxonomy and a dependency graph**
Steve Counsell, Robert Hierons (*Brunel University*), Rajaa Najjar, George Loizou, and Youssef Hassoun (*Birkbeck College, London*)
- 12:00 *Questions and discussion*

PhD Papers

- 12:30 **Delayed Failures in Software Using High Volume Automated Testing**
Jeremy Gardiner (*Cranfield University*)
- 12:45 *Feedback and questions*
- 13:00 **Empirical Assessment of Test-First Approach**
Liang Huang and Mike Holcombe (*University of Sheffield*)
- 13:15 *Feedback and questions*
- 13:30 - 14:30 Lunch
- 14:30 - 15:30 Paper Session 7 ~ Chair: Phil McMinn

Case Studies

- 14:30 **Testing a Datawarehouse - An Industrial Challenge**
Harry Sneed (*ANECON*)
- 14:50 **Use Case-Based Acceptance Testing of a Large Industrial System: Approach and Experience Report**
Serguei Roubtsov and Petra Heck (*Eindhoven University of Technology*)
- 15:10 *Questions and discussion*
- 15:30 Voting for Best Presentation
- 16:00 Awards and Closing Comments (Mark Harman & Phil McMinn)
- 17:00 Close