The 30th CREST Open Workshop

Search Based Software Testing (SBST) and Dynamic Symbolic Execution (DSE)

+++++++++27 January 2014 – DAY 1+++++++++

10:00 *Arrival, Coffee and Pastries*

10:30 **Welcome and Introductions**

  Mark Harman, CREST Centre, SSE Group, Department of Computer Science, UCL

11:15 **Field Failure Reproduction Using Symbolic Execution and Genetic Programming**

  Alex Orso, College of Computing - School of Computer Science, Georgia Institute of Technology, USA

11:35 **Discussion**

11:50 **Improving Search-based Unit Test Suite Generation with Dynamic Symbolic Execution**

  Gordon Fraser, University of Sheffield, UK & Juan Pablo Galeotti, Saarland University, Germany

12:10 **Discussion**

12:25 **SEMFIX: Automated program repair via semantic analysis**

  Abhik Roychoudhury, National University of Singapore, Republic of Singapore

12:45 **Discussion**

13:00 *Sandwich lunch at the venue*

14:00 **Evolutionary Testing of ECUs**

  Joachim Wegener, Berner & Mattner, Germany

14:20 **Discussion**

14:35 **A Testing Service for Software Binaries**

  Cristian Zamfir, École polytechnique fédérale de Lausanne, Switzerland

14:55 **Discussion**

15:10 *Refreshments*

15:40 **DSE+SBST: Marriage or Divorce**

  Paolo Tonella, Software Engineering (SE) Research Unit, Fondazione Bruno Kessler (FBK), Italy

16:00 **Discussion**

16:15 **Some Theoretical Results in (Search-Based) Software Testing**

  Andrea Arcuri, Simula Research Laboratory, Norway

16:35 **Discussion**

16:50 **Combine SBST and DSE for mutation based test data generation**

  Yue Jia, CREST Centre, SSE Group, Department of Computer Science, UCL, UK

17:10 **Discussion**

18:00 **Wrap-up**

18:30 **Close**

Search Based Software Testing (SBST) and Dynamic Symbolic Execution (DSE)

+++++++++28 January 2014 – DAY 2+++++++++

9:30   *Arrival, Coffee and Pastries*

10:00   **500 Machine-Years of Software Model Checking (and DSE) at Microsoft + What Next**

Patrice Godefroid, Microsoft Research, Redmond, USA

10:20   **Discussion**

10:35   **KATCH: High-Coverage Testing of Software Patches**

Paul Marinescu, Software Reliability Group, Imperial College London, UK

10:55   **Discussion**

11:10   *Refreshments*

11:40   **Breakout groups**

12:40   *Lunch at the venue*

13:40   **Plenary and feedback for groups**

14:40   **Searching for Readable, Realistic Test Cases**

Phil McMinn, University of Sheffield, UK

15:00   **Discussion**

15:15   *Refreshments*

15:45   **Search based test data generation for server-side web application testing**

Nadia Alshahwan, CREST Centre, SSE Group, Department of Computer Science, UCL

16:05   **Discussion**

16:20   **Wrap-up**

16:45   **Close**