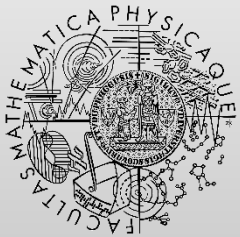


Homework 5: Research Papers

<http://d3s.mff.cuni.cz>



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Task

- Read one research paper
- Create slides (optional)
- Present during the labs
 - What: key ideas, summary (content), your opinion
 - How: slides (PowerPoint), drawing on whiteboard

Organization

- Two or three presentations at each slot
 - Length: easy paper 20 minutes, medium 30-35, hard 50
- Choose your group (size: 1-3)
- Pick one slot
 - First option: **12.5**
 - Second option: **19.5**
- Select one paper
 - You will get a PDF file by email later today

Easy papers

- 1) D. Engler and M. Musuvathi. Static Analysis versus Software Model Checking for Bug Finding. VMCAI 2004
- 2) N. Palix, G. Thomas, S. Saha, C. Calves, J. Lawall, and G. Muller. Faults in Linux: Ten Years Later. ASPLOS 2011
- 3) P. Marinescu and C. Cadar. KATCH: High-Coverage Testing of Software Patches. ESEC/FSE 2013
- 4) P. Deligiannis, A. Senthilnathan, F. Nayyar, C. Lovett, and A. Lal. Industrial-Strength Controlled Concurrency Testing for C# Programs with COYOTE. TACAS 2023

Medium papers

- 5) M. Naik, A. Aiken, and J. Whaley. Effective Static Race Detection for Java. PLDI 2006
- 6) T. Reps. Program Analysis via Graph Reachability. Information & Software Technology, 40(11-12), 1998
- 7) S. Chandra, E. Torlak, S. Barman, and R. Bodik. Angelic Debugging. ICSE 2011
- 8) G. Jin, L. Song, W. Zhang, S. Lu, and B. Liblit. Automated Atomicity-Violation Fixing. PLDI 2011
- 9) S. Park, R. Vuduc, and M.J. Harrold. Falcon: Fault Localization in Concurrent Programs. ICSE 2010
- 10) R. Leino and P. Muller. A Basis for Verifying Multi-threaded Programs. ESOP 2009
- 11) A. Gurfinkel, T. Kahsai, A. Komuravelli, and J.A. Navas. The SeaHorn Verification Framework. CAV 2015

Hard papers

- 12) A. Farzan, A. Holzer, N. Razavi, and H. Veith. Con2colic Testing. ESEC/SIGSOFT FSE 2013
- 13) W. Zhang, J. Lim, R. Olichandran, J. Scherpelz, G. Jin, S. Lu, and T. Reps. ConSeq: Detecting Concurrency Bugs through Sequential Errors. ASPLOS 2011
- 14) A. Cimatti and A. Griggio. Software Model Checking via IC3. CAV 2012