## Schedule (TO BE UPDATED)

For reading materials linked below that belong to certain digital libraries such as ACM/IEEE, don’t buy the articles but access the links from the campus network.

Lecture videos should be available [here](#).

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Presenter</th>
<th>Reading</th>
<th>Slides</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>08/26W</td>
<td>Tao Xie</td>
<td>Introduction</td>
<td>1</td>
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<tr>
<td>1</td>
<td>08/28F</td>
<td>Tao</td>
<td>Introduction (Continued)  &lt;br&gt; <strong>HW0 DUE</strong> (11:59:59pm, Champaign time)</td>
<td>2</td>
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<tr>
<td>2</td>
<td>09/02W</td>
<td>Tao</td>
<td>Testing Introduction Book Chapter  &lt;br&gt; Paul Ammann and Jeff Offutt (Testing Textbook)  &lt;br&gt; <strong>HW1 DUE</strong> (6:59:59am, Champaign time)</td>
<td>book  &lt;br&gt; Tao's</td>
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<td>2</td>
<td>09/04F</td>
<td></td>
<td>• work on HW2  &lt;br&gt; • read sections 1, 2, and only one of sections 3, 4, or 5 from this paper:  &lt;br&gt; <em>Regression Testing Minimization, Selection and Prioritization: A Survey</em>  &lt;br&gt; Shin Yoo and Mark Harman (STVR 2010)</td>
<td>3</td>
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<tr>
<td>3</td>
<td>09/10W</td>
<td>Tao</td>
<td><em>How to Read an Engineering Research Paper</em>  &lt;br&gt; William G. Griswold  &lt;br&gt; <em>Writing Good Software Engineering Research Papers</em>  &lt;br&gt; Mary Shaw (ICSE 2003)  &lt;br&gt; <strong>HW2</strong> (login to access) <strong>DUE</strong> (6:59:59am, Champaign time)</td>
<td>4  &lt;br&gt; Alex's  &lt;br&gt; Owolabi's</td>
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<td>3</td>
<td>09/12F</td>
<td>TBD</td>
<td>• <strong>HW3 DUE</strong> (6:59:59am, Champaign time)  &lt;br&gt; • write a four-item report as described in <em>Syllabus</em> for one of these two papers:  &lt;br&gt; (hw3-1.txt) <em>Scaling Regression Testing to Large Software Systems</em>  &lt;br&gt; Alessandro Orso, Nanjuan Shi, and Mary Jean Harrold (FSE 2004)  &lt;br&gt; (hw3-2.txt) <em>An Empirical Evaluation and Comparison of Manual and Automated Test Selection</em>  &lt;br&gt; Milos Gligoric, Stas Negara, Owolabi Legunsen, and Darko Marinov (ASE 2014)</td>
<td>4  &lt;br&gt; Sai's  &lt;br&gt; Farah's</td>
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<td>4</td>
<td>09/17W</td>
<td>TBD</td>
<td>• <strong>HW4 DUE</strong> (6:59:59am, Champaign time), write a four-item report for one of these two papers:  &lt;br&gt; (hw4-1.txt) <em>Empirically Revisiting the Test Independence Assumption</em>  &lt;br&gt; Sai Zhang, Darioush Jalali, Jochen Wuttke, Kvanç Mulu, Wing Lam, Michael D. Ernst, David Notkin (ISSTA 2014)  &lt;br&gt; (hw4-2.txt) <em>An Empirical Analysis of Flaky Tests</em>  &lt;br&gt; Qingzhou Luo, Farah Hariri, Lamyaa Eloussi, Darko Marinov (FSE 2014)</td>
<td>4  &lt;br&gt; Sai's  &lt;br&gt; Farah's</td>
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<td>4</td>
<td>09/19F</td>
<td>TBD</td>
<td>• <strong>HW5 DUE</strong> (6:59:59am, Champaign time), write a four-item report for one of these two papers:  &lt;br&gt; (hw5-1.txt) <em>On-Demand Test Suite Reduction</em>  &lt;br&gt; Dan Hao, Lu Zhang, Xingxia Wu, Hong Mei, and Gregg Rothermel (ICSE 2012)  &lt;br&gt; (hw5-2.txt) <em>Balancing Trade-Offs in Test-Suite Reduction</em>  &lt;br&gt; August Shi, Alex Gyori, Milos Gligoric, Andrey Zaytsev, Darko Marinov (FSE 2014)</td>
<td>4  &lt;br&gt; Sai's  &lt;br&gt; Farah's</td>
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<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>09/24</td>
<td>6:59:59am</td>
<td>Draft project proposals DUE (Champaign time)</td>
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<tr>
<td>09/26</td>
<td>6:59:59am</td>
<td>HW6 DUE (Champaign time)</td>
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<td>10/1</td>
<td>HW7 DUE (Champaign time)</td>
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<td>10/3</td>
<td>TBD</td>
<td>Final project proposals DUE (Champaign time)</td>
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<td>10/8</td>
<td>If you are presenting in some week, you do not write a report for any paper that week!</td>
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<td>10/10</td>
<td>HW10-10 DUE (Champaign time)</td>
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<td>10/15</td>
<td>HW10-15 DUE (Champaign time)</td>
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**Draft project proposals DUE**
- Commit file draft-proposal.txt with these items:
  - Preferred partner (can leave this empty): FirstName LastName - NetID
  - Problem: <up to 80 words describing the problem you want to work on>
  - Proposed solution: <up to 80 words describing how you want to solve it>
  - Related paper: <list one conference paper related to your work, not among those we already covered>
  - Notes (can leave this empty): <can provide more info/background if needed>
- NO paper report due

**HW6 DUE**
- Write a four-item report (hw6.txt) for “Related paper” from your project proposal (different from those we already covered)
- Ekstazi demo
- Signup for presentation date (for on-campus students only) DUE by 11:59:59pm Champaign time

**HW7 (login to access)**
- HW7 followup and proposal format

**Final project proposals DUE**
- All team members should commit the same file proposal.txt with these items:
  - Team: Name1 <NetID1@illinois.edu>, Name2 <NetID2@illinois.edu>
  - Problem: up to 80 words describing the problem you want to work on
  - Proposed solution: up to 80 words describing how you want to solve it
  - Initial steps: up to 80 words describing what you will do in the next two weeks
  - Notes (can leave this empty): can provide more info/background if needed

**HW10-8 DUE**
- Write a three-item report (good point, bad point, question for discussion, NO potential project) for one of these two papers:
  - Reducing wasted development time via continuous testing
    - David Saff and Michael D. Ernst (ISSRE 2003)
  - Automatic and Scalable Fault Detection for Mobile Applications
    - Lenin Ravindranath, Suman Nath, Jitendra Padhye, Hari Balakrishnan (MobiSys 2014)

**HW10-10 DUE**
- Write a three-item report for one of these two papers:
  - Regression Test Selection for Distributed Software Histories
    - Milos Gligoric, Rupak Majumdar, Rohan Sharma, Lamyaa Eloussi, and Darko Marinov (CAV 2014)
  - Automated Decomposition of Build Targets
    - Mohsen Vakilian, Raluca Sauciuc, J. David Morgenthaler, Vahab Mirrokni (UIUC TR 2014)

**HW10-15 DUE**
- Write a three-item report for one of these two papers:
  - Understanding and Detecting Real-World Performance Bugs
    - Guoliang Jin, Linhai Song, Xiaoming Shi, Joel Scherpelz, Shan Lu (PLDI 2012)
  - Feedback Generation for Performance Problems in Introductory Programming Assignments
    - Sumit Gulwani, Ivan Radicek, Florian Zuleger (FSE 2014)
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<th>Due Time</th>
<th>Description</th>
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<td>11/5W</td>
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**Project Progress Report 1 Due (6:59:59am, Champaign time — please ask by Monday if you need extension or have questions)**
- Commit file `_projects/netid1_netid2/progress1.txt` to describe what you have done in the last two weeks and what you plan to do in the next two weeks.
- If you have big changes in the project (changed problem or solution or evaluation), please describe those; otherwise state "no changes".

**HW10-17 Due (6:59:59am, Champaign time), write a three-item report for one of these two papers:**
- (hw10-17-1.txt) Comparing Non-adequate Test Suites using Coverage Criteria
  Milos Gligoric, Alex Groce, Chaoqiang Zhang, Rohan Sharma, Mohammad Amin Alipour, and Darko Marinov (ISSTA 2013)
- (hw10-17-2.txt) Creating a Shared Understanding of Testing Culture on a Social Coding Site
  Raphael Pham, Leif Singer, Olga Liskin, Fernando Figueredo Filho, and Kurt Schneider (ICSE 2013)

**HW10-22 Due (6:59:59am, Champaign time), write a three-item report for one of these two papers:**
- (hw10-22-1.txt) A Case Study of The Class Firewall Regression Test Selection Technique on a Large Scale Distributed Software System
  Mats Skoglund and Per Runeson (ISESE 2005)
- (hw10-22-2.txt) Generalized Symbolic Execution for Model Checking and Testing
  Sarfraz Khurshid, Corina S. Pasareanu, and Willem Visser (TACAS 2003)

**HW10-24 Due (6:59:59am, Champaign time), write a three-item report for one of these two papers:**
- (hw10-24-1.txt) How We Get There: A Context-Guided Search Strategy in Concolic Testing
  Hyunmin Seo and Sung hun Kim (FSE 2014)
- (hw10-24-2.txt) Unit Test Virtualization with VMVM
  Jonathan Bell and Gail Kaiser (ICSE 2014)

**HW10-29 Due (6:59:59am, Champaign time), write a three-item report for one of these two papers:**
- (hw10-29-1.txt) WebDiff: Automated Identification of Cross-browser Issues in Web Applications
  Shauvik Roy Choudhary, Husayn Versee, Alessandro Orso (ICSM 2010)
- (hw10-29-2.txt) Automatic Identification of Bug-Introducing Changes
  Sunghun Kim, Thomas Zimmermann, Kai Pan, E. James Whitehead, Jr. (ASE 2006)

**HW10-31 Due (6:59:59am, Champaign time), write a three-item report for one of these two papers:**
- (hw10-31-1.txt) Mining Software Repositories to Study Co-Evolution of Production & Test Code
  Andy Zaidman, Bart Van Rompaey, Serge Demeyer, and Arie van Deursen (ICST 2008)
- (hw10-31-2.txt) Search-Based Inference of Polynomial Metamorphic Relations (or try HERE)
  Jie Zhang, Junjie Chen, Dan Hao, Yingfei Xiong, Bing Xie, Lu Zhang, Hong Mei (ASE 2014)

**Context-Sensitive Delta Inference for Identifying Workload-Dependent Performance Bottlenecks**
- Xusheng Xiao, Shi Han, Dongmei Zhang, Tao Xie (ISSTA 2013)

**DeadSpy: A Tool to Pinpoint Program Inefficiencies**
- Milind Chabbi, John Mellor-Crummey (CGO 2012)

**Updated Project Proposal (Especially for Students Who Split Teams) Due (5:59:59am, Champaign time)**
- Update/add file `_projects/netid1[netid2]/proposal.txt` to reflect your project ideas/plans (as asked in proposal.txt).
- If you plan to follow your existing proposal.txt, just write "NO CHANGE" at the beginning of the existing file.
- Optional: submit project progress report in `_projects/netid1[netid2]/progress2.txt` (and email Milos and Darko when you submit).
<table>
<thead>
<tr>
<th>Week</th>
<th>HW Due Date</th>
<th>HW Details</th>
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</table>
| 11/7F | TBD | HW 11-7 DUE (5:59:59am TIME CHANGE, Champaign time), write a three-item report for one of these two papers:  
(hw11-7-1.txt) Automated Cross-Browser Compatibility Testing  
Ali Mesbah and Mukul R. Prasad (ICSE 2011)  
(hw11-7-2.txt) Making Offline Analyses Continuous  
Kivanc Muslu, Yurli Brun, Michael D. Ernst, David Notkin (ESEC/FSE 2013) |
| 11/12W | TBD | HW 11-12 DUE (5:59:59am, Champaign time), write a three-item report for one of these two papers:  
(hw11-12-1.txt) Localizing Failure-Inducing Program Edits Based on Spectrum Information  
Lingming Zhang, Miryung Kim, Sarfraz Khurshid (ICSM 2011)  
(hw11-12-2.txt) Human Performance Regression Testing  
Amanda Swearngin, Myra B. Cohen, Bonnie E. John, Rachel K. E. Bellamy (ICSE 2013) |
| 11/14F | TBD | HW 11-14 DUE (5:59:59am, Champaign time), write a three-item report for one of these two papers:  
(hw11-14-1.txt) A preliminary evaluation of text-based and dependency-based techniques for determining the origins of bugs  
Steven Davies, Marc Roper & Murray Wood (WCRE 2011)  
(hw11-14-2.txt) A safe regression test selection technique for database–driven applications  
David Willmor and Suzanne M. Embury (ICSM 2005) |
| 11/19W | TBD | HW 11-19 DUE (5:59:59am, Champaign time), write a three-item report for one of these two papers:  
(hw11-19-1.txt) Regression Testing in the Presence of Non-code Changes  
Agastya Nanda, Senthil Mani, Saurabh Sinha, Mary Jean Harrold, and Alessandro Orso (ICST 2011)  
Xiao Qu, Mithun Acharya, Brian Robinson (ICSM 2012) |
| 11/21F | TBD | HW 11-21 DUE (5:59:59am, Champaign time), write a three-item report for one of these two papers:  
(hw11-21-1.txt) Empirical Evaluations of Regression Test Selection Techniques: A Systematic Review  
Emelie Engström, Mats Skoglund, Per Runeson (ESEM 2008)  
(hw11-21-2.txt) Robust Test Automation using Contextual Clues  
Rahulkrishna Yandrapally, Suresh Thummalapenta, Saurabh Sinha, Satish Chandra (ISSTA 2014) |
| 11/26W | Thanksgiving Break |  |
| 11/28F | Thanksgiving Break |  |
| 12/3W | TBD | HW 12-3 DUE (5:59:59am, Champaign time), write a three-item report for one of these two papers:  
(hw12-3-1.txt) Maintaining and Evolving GUI-Directed Test Scripts  
Mark Grechanik, Qing Xie and Chen Fu (ICSE 2009)  
(hw12-3-2.txt) Improving Oracle Quality by Detecting Brittle Assertions and Unused Inputs in Tests  
Chen Huo and James Clause (FSE 2014) |
| 12/5F | TBD | HW 12-5 DUE (5:59:59am, Champaign time), write a three-item report for one of these two papers:  
(hw12-5-1.txt) Covrig: A Framework for the Analysis of Code, Test, and Coverage Evolution in Real Software  
Paul Dan Marinescu, Petr Hosek, Cristian Cadar (ISSTA 2014)  
(hw12-5-2.txt) Strategies for Avoiding Text Fixture Smells during Software Evolution  
Michaela Greiter, Andy Zaidman, Arie van Deursen, and Margaret-Anne Storey (MSR 2013) |
16 | 12/10W | TBD | TBD |
---|---|---|---|

- HW12-10 DUE (5:59:59am, Champaign time), write a three-item report for one of these two papers:
  - (hw12-10-1.txt) Efficient Instrumentation for Code Coverage Testing
    Mustafa M. Tikir and Jeffrey K. Hollingsworth (ISSTA 2002)
    Haryadi S. Gunawi et al. (SOCC 2014)

16 | 12/13Sat | FINAL PROJECT REPORTS DUE at 11:59:59pm AoE |
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- Submit final.txt as described on Piazza post @214
- If you need an extension, email Darko as soon as possible