

CS 621

Paper Selection Assignment

Due: **Tuesday, March 6, 2018, 9:00 AM EST** via [Moodle](#).

Below, you will find a list of papers. Each paper has a specific presentation day associated with it. You must sign up to present **one** paper.

The paper presentations will be done in groups of **two or three** students. The groups will be determined by who signs up for each paper. (Thus, if it is very important to you to work with specific friend(s), coordinate signing up for the same paper with the friend(s).) To sign up, look for the **Paper Selection Assignment** on [Moodle](#). Sign ups will open Thursday, March 1, 2018, 9:00 AM EST and will be done on a first-come first-served basis.

Research paper list

There are 9 papers to be presented this semester. Each paper has a presentation date associated with it.

All paper presentations will be 20 minutes. Each paper has three slots for students to sign up for. Every paper will end up with a team of either **two or three** students to work as a team for the presentation. All presentations will be during regular class times. *You will be given more guidance later on how to present a paper.*

Choosing the papers can take a bit of time. To make the most well-educated choices, you should take at least a brief look at each paper and read its abstract. Each paper below includes a URL. Some papers are available for free, and others are available for free only to you as UMass students. On campus, or when connected via the UMass VPN, the links will just work. If you are off campus, you may access the papers for free by adding `.silk.library.umass.edu` to the end of the domain. For example, <http://dl.acm.org/citation.cfm?id=2491459> becomes <http://dl.acm.org.silk.library.umass.edu/citation.cfm?id=2491459>. (Note that the addition does not go to the end of the URL, but rather the end of the domain.) You will be asked to log in with your UMass credentials.

List of papers:

Presentation date: Thursday, March 22:

1. Automatic Recovery from Runtime Failures. By Antonio Carzaniga, Alessandra Gorla, Andrea Mattavelli, Nicolo Perino, and Mauro Pezze. ICSE 2013. <http://dl.acm.org/citation.cfm?id=2486891>
2. Angelix: Scalable Multiline Program Patch Synthesis via Symbolic Analysis Sergey Mechtaev, Jooyong Yi, Abhik Roychoudhury, ICSE 2016 <http://www.comp.nus.edu.sg/~abhik/pdf/ICSE16-angelix.pdf>
3. Program Boosting: Program Synthesis via Crowd-Sourcing By Robert A Cochran, Loris D'Antoni, Benjamin Livshits, David Molnar, and Margus Veanes. POPL 2015. <https://www.microsoft.com/en-us/research/wp-content/uploads/2016/02/pop15paper45.pdf>

Presentation date: Tuesday, March 27:

4. Checking App Behavior Against App Descriptions. By Alessandra Gorla, Ilaria Tavecchia, Florian Gross, and Andreas Zeller. ICSE 2014. <http://www.st.cs.uni-saarland.de/chabada/CHABADA.pdf>
5. Are Mutants a Valid Substitute for Real Faults in Software Testing? By Rene Just, Darioush Jalali, Laura Inozemtseva, Michael D. Ernst, Reid Holmes, Gordon Fraser. FSE 2014. <https://homes.cs.washington.edu/~mernst/pubs/mutation-effectiveness-fse2014.pdf>
6. An Empirical Study on Mutation, Statement and Branch Coverage Fault Revelation that Avoids the Unreliable Clean Program Assumption. Titcheu Chekam Thierry, Mike Papadakis, Yves Le Traon, and Mark Harman. ICSE 2017. <https://dl.acm.org/citation.cfm?id=3097440>

Presentation date: Tuesday, April 3:

7. Natural Language is a Programming Language: Applying Natural Language Processing to Software Development. Michael D. Ernst. SNAPL 2017 <http://drops.dagstuhl.de/opus/volltexte/2017/7135/pdf/LIPIcs-SNAPL-2017-4.pdf>
8. DASE: Document-Assisted Symbolic Execution for Improving Automated Software Testing. Edmund Wong, Lei Zhang, Song Wang, Taiyue Liu, and Lin Tan. ICSE 2015. <https://doi.org/10.1109/ICSE.2015.78>
9. A Guided Genetic Algorithm for Automated Crash Reproduction. Mozhan Soltani, Annibale Panichella, and Arie van Deursen. ICSE 2017. <https://dl.acm.org/citation.cfm?id=3097394>

Deliverables

Using the **Paper Selection Assignment** on [Moodle](#), sign up to present one of the above papers. Sign ups will open Thursday, March 1, 2018, 9:00 AM EST and will be done on a first-come first-served basis.