

# Lab: Abstract Interpretation

## (Week 10)

Yulei Sui

School of Computer Science and Engineering  
University of New South Wales, Australia

# Lab-3 and Assignment-3 Marking

- Marks will be released after teaching week (Week 11 for Lab-3 and Week 12 for Assignment-3)
- If you have questions, feel free to post on Ed forums or email our course admins.

# Quiz-3 + Lab-Exercise-3 + Assignment-3

- Quiz-3 (5 points) (due date: **23:59, Wednesday, Week 10**)
  - Abstract domain and soundness, widening and narrowing
- Lab-Exercise-3 (5 points) (due date: **23:59, Wednesday, Week 10**)
  - **Goal:** Manually updating abstract states for assertion verification
  - **Specification:** <https://github.com/SVF-tools/Software-Security-Analysis/wiki/Lab-Exercise-3>
- Assignment-3 (25 points) (due date: **23:59, Wednesday, Week 11**)
  - **Goal:** Automated abstract trace update on ICFG for assertion verification and overflow detection
  - **Specification:** <https://github.com/SVF-tools/Software-Security-Analysis/wiki/Assignment-3>
  - **SVF AE APIs:** <https://github.com/SVF-tools/Software-Security-Analysis/wiki/AE-APIs>
  - **Test Cases:**
    - Assignment-3/Tests/ae (assertion verification)
    - Assignment-3/Tests/buf (overflow detection)