Verification Mentoring Workshop

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VMW 2015

- Welcome to the field of computer aided verification and formal methods!
- Exciting area at the intersections of theory, programming languages, and systems

Theory

Logic, Automata, Constraint solvers, Optimization, Machine Learning

Programming Languages

Semantics,
Program Analysis,
Compilers

Take advantage of:

Courses at your University, MOOCs, Summer Schools: NSF SS Formal Methods, SAT/SMT SS, Marktoberdorf, Oregon PL SS

Systems

Hardware, Embedded, Cyber-physical, Networks, Distributed

Impact of CAV community at other conferences

Theory: IJCAR, SAT, CADE, LICS, LPAR, ...
PL: POPL, PLDI, OSDI, SPLASH/OOPSLA, FSE, ISSTA, ICSE, ...
Systems: DAC, ICCAD, EMSOFT, HSCC, SOSP, NSDI, Usenix, ...

Agenda

- Focus at the workshop: Overview, Mentoring, and Careers
 - Thanks for your input on topics and questions
 - Interactive sessions: discussion *starters*
 - Handouts: NSF Workshop report, recent survey article
- CAV Conference
 - Research frontiers, technical talks, practical tools
- Logistics
 - Reimbursement of expenses
 - Feedback survey and report

The CAV Buddy System

Introduced for the first time this year

 Goal: to help more junior students to get easier acquainted to attending a conference

 We hope that everyone who needed this year a buddy will be someone's else buddy next year.

BUDDIES!



Workshop Schedule

| 8.45am – 9.00am | Introduction by the organizers |
|-----------------|--|
| 9.00am – 10.00 | Session I: Formal Methods: Past, Present, Future Rajeev Alur (U. Pennsylvania), Gerard Holzmann (NASA/JPL) |
| 10.00 – 10.30 | Break: Say hello to your CAV Buddy |
| 10.30 – 12.00 | Session II: Industry and/or academia Ranjit Jhala (UC San Diego), Byron Cook (UCL), Armando Solar-Lezama (MIT), Andreas Kuehlmann (Coverity/Synopsys) |
| 12.00 – 13.30 | Lunch |
| 13.30 – 15.00 | Session III: Jobs Emina Torlak (U Washington), Aws Albarghouthi (U Wisconsin-Madison), Rishabh Singh (Microsoft) Temesghen Kahsai (NASA Ames) |
| 15.00 – 16.00 | Break (15.00-15.30 Coffee) |
| 16.00 – 17.00 | Session IV: Life in Science, Final Discussions Natarajan Shankar (SRI), Orna Grumberg (Technion) Questions/Discussions/Comments Informal discussions |

CAV Conference Highlights

- Day 1 (July 20)
 - Tutorials (2)
- Days 2-5 (July 21-24)
 - Paper presentations (58 long, 11 short)
 - Invited talks (5)
 - Wednesday, July 22: CAV Award, Competitions and Artifact Evaluation, Poster Session
 - Social events
 - Monday, July 20: Reception
 - Wednesday, July 22: Business Meeting, Banquet
 - Thursday, July 23: Excursion

Thanks

- Students
- Speakers: Leaders in the field
- Sponsors

 - NSF, Nina Amla
 - Corporate Sponsors: Amazon, Cadence, Calypto, Coverity/Synopsys, Real Intent











- Organization
 - Raphael Aryeetey (Princeton), Temesghen Kahsai (CMU/NASA), Mark Santolucito (Yale)
- Advice
 - Stephanie Weirich (U Pennsylvania)