

April 11, 2024 Issue #6

The latest news, views, and announcements

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INSIDE Thursday 11 April

Welcome to the final day of the ETAPS conference! Today our unifying speaker is Ruzica Piskac, an associate professor at Yale University, giving a talk on the "Expressive and Scalable Privacy-Preserving Automated Reasoning".



Testing and Verification, Games, and Concurrency from TACAS; Verification and Analysis, and Abstract Interpretation from ESOP; Logic and Proofs, Infinite-State Systems, from FoSSaCS; and Verification Tools, Model Checking from SPIN, an Open Community Meeting from Test-Comp and the Award Winner Presentations!

Today also includes five Award Nominated Papers

- 10:30 | Verified Inlining and Specialisation for Pure Cake Hrutvik Kanabar, Kacper Korban and Magnus O. Myreen
- 11:30 | Craig Interpolation for Decidable First-Order Fragments Balder ten Cate and Jesse Comer
- 17:00 | OxiDD: A Safe, Concurrent Modular and Performant Decision Diagram Framework in Rust - Nils Husung, Clemens Dubslaff, Holger Hermanns and Maximilian Alexander Köhl



Highlighted Events

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- 17:00 | Formalizing Date Arithmetic and Statistically Detecting Ambiguities for the Law
 Raphaël Monat, Aymeric Fromherz and Denis Merigoux
- 17:30 | Detection of Uncaught Exceptions in Functional Programs by Abstract Interpretation - Pierre Lermusiaux and Benoit Montagu

And many other exciting talks!

Session Highlight

Tool Demo

Wednesday afternoon there was a demo session featuring the tools presented during the conference. In case you missed it, we asked the participants for a brief description of their tool.

- VerCors is a deductive verifier for concurrent programs which may be interesting for formal methods researchers and safety security researchers (<u>https://vercors.ewi.utwente.nl/</u>)
 - **Topllet** is a tool supporting query answering over temporal data with expressive background knowledge useful for safety engineers working on autonomous driving (<u>https://github.com/lu-w/topllet</u>)
 - **SootUp** is a Redesign of the Soot Static Analysis Framework interesting for researchers in application security (<u>https://soot-oss.github.io/SootUp/latest/</u>)
 - **JPF** is a Verification Platform for Java byte code, useful for lectures who want to teach concurrency and researcher or engineers who want to verify complex algorithm. (<u>https://github.com/javapathfinder/jpf-core</u>)
 - **Program Synthesis for Grader Type Systems**: a synthesis tool for the programming language Granule which allows users to synthesize a program with resource constraints useful for functional programmers. (<u>https://granule-project.github.io/</u>)
 - **AProVE** is a system for automated termination and complexity proofs for Java, Prolog, C and Haskell with a focus on term rewriting systems, interesting for verification researchers. It is also available as an eclipse plug in. (<u>https://aprove.informatik.rwth-aachen.de/</u>)
 - **VeSCMul** is a verifier for hardware multiplier design, designed for researchers in data path verification and hardware verification more broadly (<u>https://www.cs.utexas.edu/users/moore/acl2/manuals/current/manual/index-seo.php/ACL2 VESCMUL?path=3882/2691/4106/43172/469</u>)
 - **BenchExec** is a benchmarking framework that allows you to benchmark tools in reliable and convenient manner, meant for users, researchers, and developers of solvers and verifiers. (<u>https://github.com/sosy-lab/benchexec</u>)
 - **CPAchecker** is a verification platform for C Programs which may be useful for researchers and developers interested in the verification of C code. <u>https://cpachecker.sosy-lab.org/</u>
 - CESAR is a tool that synthesizes correct by construction characterizations of all the safe controllers of cyber physical systems meant for researchers and safety engineers.

(https://figshare.com/articles/software/Control_Envelope_Synthesis_via_Angelic_R efinements_CESAR_Artifact/24922896)

 CVC5 is an industry strength SMT solver for industry and research software verification (<u>https://cvc5.github.io/</u>)



ETAPS 2025

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As the conference comes to a close, we would like to remind everyone that the **ETAPS 2025 Call for Papers** is already out! The deadlines for the two rounds of ESOP submissions are May 30, 2024 and October 10, 2024. All other conferences have a submission deadline of October 10, 2024. More information can be found on the ETAPS 2025 Joint Call for Papers Webpage (<u>https://etaps.org/2025/cfp/</u>). Next year the conference will be held in Hamilton, Canada, from 3-8 May, 2025. We hope to see you there!

Useful Information

Wi-Fi, Programme, Transportation, Contact Information and Events in Luxembourg City Additionally, here are a few tips to make the conference smoother:

Wi-Fi: Each room at the venue will have its own Wi-Fi with the name being the room name and the password: "<u>R</u>oom-name"-1453. There will also be a sign in each room with the Wi-Fi name and password.

Transportation: Public transportation in Luxembourg is free, please check out www.mobiliteit.lu for schedules.

Contact: If you have any further questions or administrative requests, please feel free to contact us at <u>etaps2024@uni.lu</u>





Wednesday Photos











