

CAV13 Workshops: July 13

13th	(EC) <sup>2</sup>	Interpolation	SYNT	VPT	FWFM	VES
09:00	<p><b>9:30</b> BRAD BINGHAM  <u>Tutorial:</u>            Distributed Explicit State Model Checking</p>		<p><b>9:25</b> OPENING</p> <p><b>9:30</b> RUZICA PISKAC  <u>Invited talk:</u>            Software Synthesis using Automated Reasoning</p>	<p><b>9:25</b> OPENING</p> <p><b>9:30</b> ALBERTO PETTOROSSO,            MAURIZIO PROIETTI  <u>Invited talk:</u> Program Transformation for Program Verification</p>	<p><b>9:15</b> OPENING</p> <p><b>9:30</b> JOHN RUSHBY  <u>Invited talk:</u> The Ontological Argument in PVS: What Does This Really Prove?</p>	<p><b>9:00</b> ALEXEY KHOROSHILOV  <u>Invited talk:</u>            Layered Modeling and Verification of Embedded Systems</p>
10:30	<b>AM coffee break</b>					
11:00	<p>NIKOLAY SHILOV,            RENAT IDRISOV  <u>Position paper:</u>            Parallel Programming as a Programming Paradigm</p> <p>SATISH NARAYANASAMY  <u>Invited talk:</u>            A Path to Achieving Sequential Correctness for Parallel Programs</p>		<p>RASTISLAV BODIK,            EMINA TORLAK            Growing Solver-Aided Languages with Rosette</p> <p><b>11:45</b> VADIM ALIMGUZHIN,            FEDERICO MARI,            IGOR MELATTI,            IVANO SALVO,            ENRICO TRONCI            Control Software Synthesis from System Level Formal Specifications</p>	<p><b>9:30</b> AMIR M. BEN-AMRAM  <u>Invited talk:</u> Ranking Functions for Linear-Constraint Loops</p> <p><b>11:55</b> GEOFF W. HAMILTON            On the Termination of Higher-Order Positive Supercompilation</p>	<p><b>11:00</b> YURI KARPOV  <u>Invited talk</u>            Adequacy of Formal Models: a Supervisor Synthesis Problem</p> <p><b>11:45</b> CERONE ANTONIO,            MARKUS ROGGENBACH,            HOLGER SCHLINGLOFF,            GERARDO SCHNEIDER,            SIRAJ SHAIKH            Teaching Formal Methods for Software Engineering – Ten Principles</p> <p><b>12:15</b> FARON MOLLER            LIAM O'REILLY            Formal Methods for First Years</p> <p><b>12:45 Lunch</b></p>	<p>DANIIL ZORIN, VLADISLAV PODYMOV, DMITRY VOLKANOV, VLADIMIR ZAKHAROV, ALEVTINA GLONINA, IGOR KONNOV            An Experience on Using Simulation Environment DYANA Augmented with UPPAAL for Verification of Embedded Systems Defined by UML Statecharts</p> <p>PAVEL DROBINTSEV,            VSEVOLOD KOTLYAROV,            IGOR NIKIFOROV            Semantics adjustment of UCM Real Time Constructions for Implementation in Translator of UCM to Basic Protocols</p> <p>OLEG NENASHEV            PHRT: A Programmable Tool for Automated Hardware Reengineering and Verification</p>
12:30	<b>Lunch</b>					

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14:00	<p>JADE ALGLAVE Weakness is Virtue</p> <p>MALAY GANAI <u>Invited Talk</u>: Small-Scale Testing of Scalable Distributed Systems</p>	<p>KEN MCMILLAN <u>Invited Talk</u></p>	<p>RISHABH SINGH, SUMIT GULWANI, ARMANDO SOLAR-LEZAMA Using Synthesis for Automated Feedback Generation for Programming Assignments</p> <p><b>14:45</b> ERIC WOLFF, UFUK TOPCU, RICHARD MURRAY Optimal Control of Non-deterministic Systems for a Computationally Efficient Fragment of Temporal Logic</p>	<p>JÉRÔME LEROUX <u>Invited talk</u>: Acceleration For Presburger Petri Nets</p> <p><b>15:00</b> <u>Discussion</u></p>	<p><b>14:00</b> ALEXEI LISITSA Tackling Fibonacci words puzzles by finite countermodels</p> <p><b>14:30</b> NATALIA GARANINA Eleusis: Perfect Recall for Inductive Reasoning</p> <p><b>15:00</b> VLADIMIR ITSYKSON, EVGENIY ZAYCHENKO, VASILIIY GALUZIN Solving Puzzles: Making Use of SMT Solvers Easy</p>	<p>OLEKSANDR LETYCHEVSKYI Experiments with deductive testing of Reactive systems</p> <p>YEVGENY GERLITS MC/DC coverage measurement of C programs</p> <p>MORITZ SINN, FLORIAN ZULEGER Automatic Amortized Complexity Analysis for C Programs</p>
15:30	<b>PM coffee break</b>					
16:00	<p>RASTISLAV BODÍK <u>Invited talk</u>: Modeling Biology with Solver-Aided Programming Languages</p> <p><u>Discussion</u></p>	<p>YAKIR VIZEL Interpolants and SAT-based Model Checking</p> <p>ARIE GURFINKEL DAG-Interpolation for Software Model Checking</p> <p>ISIL AND THOMAS DILLIG Logical Abduction and Applications in Program Verification</p>	<p>M.-H. TSAI, YIH-KUEN TSAY <u>Invited talk</u>: Playing Games with GOAL and Büchi Store</p> <p><b>17:00</b> <u>End of Day 1</u></p>	<p>EMANUELE DE ANGELIS, FABIO FIORAVANTI, ALBERTO PETTOROSSO, MAURIZIO PROIETTI Verification of Imperative Programs through Transformation of Constraint Logic Programs</p> <p><b>16:35</b> ABDULBASIT AHMED, ALEXEI LISITSA, ANDREI NEMYTYKH Cryptographic Protocol Verification via Supercompilation (A Case Study)</p>	<p><b>16:00</b> PAUL CURZON, PETER MCOWAN Teaching Formal Methods using Magic Tricks</p> <p><b>16:30</b> NIKOLAY SHILOV Four Men and a Boat (To Say Something about Formal Models of Parallelism)</p> <p><b>17:00 – 17:15</b> <u>Closing</u></p>	<p>OLGA V. MAMOUTOVA Processor-driven Emulated Upset-like Fault Injection for Memory Validation</p> <p>ALEXEY BELYAEV Symbolic Algorithm for Synthesis Distributed Discrete-Event Supervisory Control from LTL Specification</p> <p>IRINA SHOSHMINA Symbolic Algorithm Translating LTL Formula to Buchi Automaton</p>

CAV13 Workshops: July 14

14th	(EC) <sup>2</sup>	Interpolation	SYNT	VPT	REORDER	VeriSure
09:00	<p><b>9:30</b> KOUSHIK SEN <u>Invited talk:</u> From Active Testing to a Domain Specific Language for Testing and Reproducing Concurrency Bugs</p>	<p>PAVEL HRUBEŠ <u>Invited talk:</u> The interpolation technique in proof complexity, and its limitations</p>	<p><b>9:30</b> ROHIT SINGH <u>Invited talk:</u> Synthesis of formula optimizers for Synthesizers and SMT Solvers</p>	<p>BERND FINKBEINER <u>Invited talk:</u> Transforming Undecidable Synthesis Problems into Decidable Problems</p>	<p>RICHARD BORNAT Dentelle logic: a programmer's view of relaxed concurrency</p> <p>JULIEN SCHMALTZ Some Issues and Challenges with Message Ordering Models of Communication Fabrics</p> <p>ALEXEI LISITSA First-Order Logic for the Analysis of Programs on Weak Memory Models</p>	<p>ROBIN BLOOMFIELD <u>Invited talk:</u> Reasoning in Safety Cases: Logic and Epistemic</p> <p>BORZOO BONAKDARPOUR Gaining Runtime Assurance Through Runtime Verification in Safety-critical Systems</p>
10:30	<b>AM coffee break</b>					
11:00	<p><b>Joint session with REORDER</b></p> <p>see <b>REORDER</b></p>	<p>MARIA PAOLA BONACINA Two-stage Interpolation Systems</p> <p>ALEXANDER NADEL, VADIM RYVCHIN, YAKIR VIZEL Generating Tiny Interpolants and Near-interpolants from a Resolution Refutation</p> <p>SIMONE FULVIO ROLLINI PeRIPLO: Proof tRansformer and Interpolator for Propositional Logic</p>	<p><b>11:00 - 12:00</b> FRANCK CASSEZ <u>Invited talk:</u> Efficient On-the-Fly Algorithms for Partially Observable Timed Games</p>	<p>SIMON THOMPSON <u>Invited talk:</u> Building Trustworthy Refactoring Tools</p> <p><b>12:00</b> <u>Discussion</u></p>	<p><b>Joint session with (EC)<sup>2</sup></b></p> <p>MARC SHAPIRO <u>Invited talk:</u> Having High Concurrency, and Correctness Too; Or How I Stopped Worrying about Eventual Consistency</p> <p>ALEXEY GOTSMAN <u>Invited talk:</u> Understanding Eventual Consistency</p>	<p>HARDI HUNGAR Assuring Standard Conformance of Partial Interfaces</p> <p>SEBASTIAN VOSS, BERNHARD SCHAETZ, MAGED KHALIL, CARMEN CARLAN A step towards Modular Certification using integrated model-based Safety Cases</p>
12:30	<b>Lunch</b>					
14:00	<p>CHAO WANG Runtime Verification Methods for Concurrent Data Structures</p>	<p>ANDREI VORONKOV <u>Invited Talk</u> Interpolation in First-Order Logic and Vampire</p>	<p><b>13:45</b> RODERICK BLOEM <u>Invited talk:</u> Synthesizing</p>	<p>ONDREJ SERY, GRIGORY FEDYUKOVICH, NATASHA SHARYGINA</p>	<p>ROBIN MORISSET Compiler Testing via a Theory of Sound Optimisations in the</p>	<p>VLADIMIR SHELEKHOV Validation of Rules for Deductive</p>

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	<p>DOMAGOJ BABIĆ <u>Invited talk:</u> Asynchronously Communicating Visibly Pushdown Systems</p> <p><u>Discussion</u></p>		<p>boolean controllers for systems with uninterpreted functions</p> <p><b>14:45</b> ANDREW NOYES, TODD WARSZAWSKI, PAVOL CERNY, NATE FOSTER Toward Synthesis of Network Updates</p>	<p><u>Presentation only:</u> Incremental Upgrade Checking by Means of Interpolation-based Function Summaries</p> <p><b>14:35</b> ANTONINA NEPEIVODA Ping-Pong Protocols as Prefix Grammars and Turchin Relation</p> <p><b>15:10</b> <u>Discussion</u></p>	<p>C11/C++11 Memory Model</p> <p>ANTONIU POP Correct and Efficient Concurrent Algorithms for Weak Memory Models</p> <p>JOSEF WIDDER Wait-Free Stabilizing Dining Using Regular Registers</p>	<p>Verification of Predicate Programs</p> <p>MARTIN HOFMANN, HARALD RUESS Certification for mu-calculus with winning strategies</p>
15:30	<b>PM coffee break</b>					
16:00	<p>SHAZ QADEER <u>Invited talk:</u> Safe Asynchronous Event-Driven Programming in P</p> <p><u>Discussion</u></p>	<p>LIYUN DAI, BICAN XIA, NAIJUN ZHAN Non-linear interpolant generation and its applications to program verification</p> <p>FRANCESCO ALBERTI, SIMONE FULVIO ROLLINI Interpolation goes on SAFARI</p> <p>ASHUTOSH GUPTA, CORNELIU POPEEA, ANDREY RYBALCHENKO Generalised Interpolation by Solving Recursion-Free Horn Clauses</p>	<p>SWEN JACOBS <u>Presentation and Discussion:</u> The Synthesis Competition</p> <p><b>17:00</b> <u>Closing</u></p>	<p>ANDREI NEMYTYKH Graphical Tracing of Supercompilation: An Intermediate Report</p> <p>DOMINIQUE MERY, ROSEMARY MONAHAN Transforming Event B Models into Verified C# Implementations</p>	<p>EGOR DEREVENETC A Theory of PGAS APIs for One-Sided Communication</p> <p>VINCENT NIMAL Inferring fences for Power and ARM in a fully static manner</p> <p><b>17:00</b> <u>Closing</u></p>	<p>SAM OWRE Building an Assurance Case with The Evidential Tool Bus</p> <p>ARIE GURFINKEL Trust in Formal Methods Toolchains</p> <p>EVERYONE <u>Discussion and open forum for 5-minute talks</u></p>
18:00-19:00		<u>Discussion</u> on proof formats, proof representations, tooling and benchmarking				