

Schedule of Talks: Dagstuhl Seminar 13411

Deduction And Arithmetic

Version of October 10, 2013

Monday, 7 October 2013

Morning Session

Chair: Christoph Weidenbach

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|-------------|-----------------|--|
| 9:00–9:30 | Organizers, All | Welcome, Announcements,
Introduction of Participants |
| 9:30–10:00 | Jürgen Giesl | Analyzing Runtime and Size Complexity of
Integer Programs |
| 10:00–10:30 | André Platzer | Logic of Hybrid Games |

—*Coffee Break*—

Chair: Alberto Griggio

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|-------------|--------------------|---|
| 11:00–11:30 | Peter Baumgartner | Hierarchic Superposition With Weak Ab-
straction and the Beagle Theorem Prover |
| 11:30–12:00 | Wojciech Mostowski | Non-numerical Permissions for Concurrent
Reasoning |

—*Lunch Break*—

Monday, 7 October 2013 Cont'd

Afternoon Session

Chair: Marek Kosta

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|-------------|---------------------------|--|
| 14:00-14:30 | Enric Rodríguez-Carbonell | Proving Unsatisfiability in Non-linear Arithmetic by Duality |
| 14:30-15:00 | Wolfgang Ahrendt | Verifying (In-)Stability in Floating-point Programs by Increasing Precision, using SMT Solving |
| 15:00-15:30 | Carsten Fuhs | Cooperation for Better Termination Proving |

—*Coffee Break*—

Chair: Eva Darulova

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|-------------|---------------------|--|
| 16:00-16:30 | Marek Košta | An SMT-Based Approach To Memory Access Optimization Problems |
| 16:30-17:00 | Christian Sternagel | Certified Abstract Completion |
| 17:00-17:30 | David Monniaux | Death by a thousand cuts (worst-case execution time by bounded model checking) |

Tuesday, 8 October 2013

Morning Session

Chair: Philipp Ruemmer

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|-------------|-----------------|--|
| 9:00–9:30 | Aart Middeldorp | From Ordinal Interpretations to Elementary Interpretations |
| 9:30–10:00 | Pascal Fontaine | The Poor Man’s Way to Integrate Non Linear Real Arithmetic Reasoning Capabilities within SMT |
| 10:00–10:30 | Jeremy Avigad | Approximate decidability and the verification of hybrid systems |

—*Coffee Break*—

Chair: Ruzica Piskac

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|-------------|------------------------------|---|
| 11:00–11:30 | Viorica Sofronie-Stokkermans | Hierarchical reasoning and model generation in verification |
| 11:30–12:00 | Eva Darulova | Sound Compilation of Reals |

—*Lunch Break*—

Afternoon Session

Chair: Stephan Falke

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|-------------|--------------------|---|
| 14:00–14:30 | Assia Mahboubi | Automated (Formal) Proofs of Summation Identities |
| 14:30–15:00 | Konstantin Korovin | Solving Linear Arithmetic by Bound Propagation |
| 15:00–15:30 | Arie Gurfinkel | Interpolation for Software Verification |

—*Coffee Break*—

Chair: Christian Sternagel

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|-------------|------------------|---|
| 16:00–16:30 | Bernhard Beckert | On the Specification and Verification of Voting Schemes |
| 16:30–17:00 | Jérôme Leroux | Computing Vector Addition System Reachability Sets |
| 17:00–17:30 | Philipp Ruemmer | Exploring Interpolants |

Wednesday, 9 October 2013

Morning Session

Chair: Assia Mahboubi

9:00–9:30	Christoph Weidenbach	Hierarchic Superposition—Current Status and Future Steps
9:30–10:00	Dejan Jovanović	Model-Constructing Satisfiability Calculus
10:00–10:30	Nikolaj Bjørner	Basic Hilbert Basis

—*Coffee Break*—

Chair: Richard Bubel

11:00–11:30	Tjark Weber	Integrating SAT, QBF and SMT Solvers with Interactive Theorem Provers
11:30–12:00	Jasmin Blanchette	Arithmetic in Sledgehammer

—*Lunch Break*—

15:30–23:00	All	Social Activity
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Thursday, 10 October 2013

Morning Session

Chair: Enric Rodríguez-Carbonell

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|-------------|-------------------|---|
| 9:00–9:30 | Leonardo de Moura | Arithmetic Procedures in the Model-Constructing Satisfiability Calculus |
| 9:30–10:00 | Tobias Nipkow | Linear Quantifier Elimination for Linear Orderings with Endpoints |
| 10:00–10:30 | Thomas Sturm | Satisfiability Checking for the Sciences |
- Coffee Break*—

Chair: Dejan Jovanović

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|-------------|----------------|-------------------------------------|
| 11:00–11:30 | Stephan Falke | Making Invariants Inductive |
| 11:30–12:00 | Grant Passmore | Exact Global Optimization on Demand |
- Lunch Break*—

Afternoon Session

Chair: Jasmin Blanchette

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|-------------|---------------|--|
| 14:00–14:30 | Ruzica Piskac | Automating Separation Logic Using SMT |
| 14:30–15:00 | Carsten Sinz | Some Challenges in Applied Software Bounded Model Checking |
| 15:00–15:30 | — | Announcements |
- Coffee Break*—

Chair: Carsten Fuhs

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|-------------|-----------------|---|
| 16:00–16:30 | Tim King | Floating Point Simplex Solvers for SMT |
| 16:30–17:00 | Alberto Griggio | Simple Interpolation for Floating-Point Arithmetic with Abstract CDCL |
| 17:00–17:30 | | |

Friday, 10 October 2013

Morning Session

Chair: Wolfgang Ahrendt

9:00–9:30	Martin Fränzle	Deduction and Arithmetic—a Functional Marriage (iSAT, odeSAT, and related procedures)
9:30–10:00	René Thiemann	Partial Certification for Termination Proofs and More
10:00–10:30	James J. Hunt	Realtime Java and Formal Methods: Use and Open Issues
		— <i>Coffee Break</i> —
11:00–12:00	Organizers	Wrap-Up Session

End of Seminar/Lunch