**RDP = RTA + TLCA**

International Conference on Rewriting, Deduction, and Programming


---

### Program

<table>
<thead>
<tr>
<th>Sunday June 23</th>
<th>Monday June 24</th>
<th>Tuesday June 25</th>
<th>Wednesday June 26</th>
<th>Thursday June 27</th>
<th>Friday June 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reception</td>
<td>RTA</td>
<td>COS</td>
<td></td>
<td>WG1.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HART</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IWC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UNIF</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WIR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TLCA</td>
</tr>
</tbody>
</table>

---
RDP 2013 consists of

- the 24th International Conference, on Rewriting Techniques and Applications (RTA),
- the 11th International Conference on Typed Lambda Calculi and Applications (TLCA),
- the Workshop Control Operators and their Semantics (COS),
- the meeting of the IFIP Working Group 1.6 on Term Rewriting (WG1.6),
- the Workshop on Haskell And Rewriting Techniques (HART),
- the International Workshop on Unification (UNIF),
- the International Workshop on Confluence (IWC), and
- the Workshop on Infinitary Rewriting (WIR).

All these events are in the Auditorium of Eindhoven University of Technology. Also lunch is served there. Rooms 7 and 8 are downstairs, room 12 (on some days split up into 12a and 12b) are upstairs. More information of all events is on http://www.win.tue.nl/rdp2013/. Proceedings of RTA and workshops are on the memory stick in your conference package.

Hans Zantema
Sunday, June 23
17:00–19:00 Opening reception, De Zwarte Doos

Monday, June 24

RTA Session 1, Room 7
09:00–09:05 Opening
09:05–10:05 Pattern Generation by Cellular Automata
*Jarkko Kari (invited talk)*

RTA Session 2, Room 7
10:30–11:00 Formalizing Knuth-Bendix Orders and Knuth-Bendix Completion
*Christian Sternagel and René Thiemann*
11:00–11:30 Normalized Completion Revisited
*Sarah Winkler and Aart Middeldorp*
11:30–12:00 Rewriting with linear inferences in propositional logic
*Anupam Das*

RTA Session 3, Room 7
14:00–14:30 A Variant of Higher-Order Anti-Unification
*Alexander Baumgartner, Temur Kutsia, Jordi Levy and Mateu Villaret*
14:30–15:00 Unifying Nominal Unification
*Christophe François Olivier Calvès*
15:00–15:30 Unification Modulo Nonnested Recursion Schemes via Anchored Semi-Unification
*Gert Smolka and Tobias Tebbi*

COS Session 1, Room 12
14:30–14:40 Opening
14:40–15:40 Modeling a Practical Combination of Delimited Continuations, Exceptions, Dynamic-Wind Guards, Dynamic Binding, and Stack Inspection
*M. Flatt*
15:40–16:05  Reconsidering Intuitionistic Duality  
*A. Stump, H. Eades III and R. McCleeary*

**RTA Session 4, Room 7**  
Monday

16:00–16:30  Linear logic and strong normalization  
*Beniamino Accattoli*

16:30–17:00  A Homotopical Completion Procedure with Applications to  
Coherence of Monoids  
*Yves Guiraud, Philippe Malbos and Samuel Mimram*

**COS Session 2, Room 12**  
Monday

16:35–16:15  Continuation Calculus  
*B. Geron and H. Geuvers*

16:15–17:55  Induction by Coinduction and Control Operators in Call-by-Name  
*Y. Kakutani and D. Kimura*

---

**Tuesday, June 25**

**RTA Session 5, Room 7**  
Tuesday

09:00–10:00  Husserl and Hilbert on Completeness and Husserl’s Term  
Rewrite-based Theory of Multiplicity  
*Mitsu Okada (invited talk)*

**COS Session 3, Room 12**  
Tuesday

09:00–10:00  A Model of Control Operators in Coherence Spaces giving rise to a  
new model of ZF  
*T. Streicher*

10:00–10:25  The modalized Heyting calculus: modality-guarded continuations  
*T. Litak*

**RTA Session 6, Room 7**  
Tuesday

10:30–11:00  Proof Orders for Decreasing Diagrams  
*Bertram Felgenhauer and Vincent van Oostrom*

11:00–11:30  Confluence by Decreasing Diagrams Formalized  
*Harald Zankl*

11:30–12:00  Over-approximating Descendants by Synchronized Tree Languages  
*Yohan Boichut, Chabin Jacques and Pierre Rety*
COS Session 4, Room 12  
10:40–11:20 Strong Normalization for HA + EM1 by Non-Deterministic Choice  
F. Aschieri

11:20–12:00 Interpreting a Classical Geometric Proof with Interactive Realizability  
G. Birolo

COS Session 5, Room 12  
13:40–14:20 Hereditary Substitution for the lambda-Delta Calculus  
H. Eades and A. Stump

14:20–15:00 Proving termination of evaluation for System F with control operators  
M. Biernacka, D. Biernacki, S. Lenglet and M. Materzok

RTA Session 7, Room 7  
14:00–14:30 Extending Abramsky’s Lazy Lambda Calculus: (Non)-Conservativity of Embeddings  
Manfred Schmidt-Schau, Elena Machkasova and David Sabel

14:30–15:00 Expressibility in the Lambda Calculus with Mu  
Clemens Grabmayer and Jan Rochel

15:00–15:30 Decidable structures between Church-style and Curry-style  
Ken-Etsu Fujita and Aleksy Schubert

COS Session 6, Room 12  
15:30–16:10 Type Directed Partial Evaluation for Level-1 Shift and Reset  
D. Ilik

16:10–16:50 Combining and Relating Control Effects and their Semantics  
J. Laird

RTA Session 8, Room 7  
16:00–16:30 Abstract Logical Model Checking of Infinite-State Systems Using Narrowing  
Kyungmin Bae, Santiago Escobar and Jose Meseguer

16:30–17:00 Automatic Decidability: A Schematic Calculus for Theories with Counting Operators  
Elena Tushkanova, Christophe Ringeissen, Alain Giorgetti and Olga Kouchnarenko

17:00 RTA Business Meeting
Wednesday, June 26

RTA Session 9 = TLCA Session 1, Room 7

09:00–10:00 Type-Directed Compilation in the Wild: Haskell and Core
(invited talk)
Simon Peyton-Jones

TLCA Session 2, Room 8

10:25–10:30 TLCA Opening and Welcome

10:30–11:00 System Fi: a Higher-Order Polymorphic Lambda Calculus with
Erasable Term-Indices
Ki Yung Ahn, Tim Sheard, Marcelo Fiore and Andrew Pitts

11:00–11:30 Proof-Relevant Logical Relations for Name Generation
Nick Benton, Martin Hofmann and Vivek Nigam

11:30–12:00 Completeness of Conversion between Reactive Programs for
Ultrametric Models
Paula Severi and Fer-Jan de Vries

RTA Session 10, Room 7

10:30–11:00 Algorithms for Alpha-Equivalence and Complexity
Manfred Schmidt-Schauß, Conrad Rau and David Sabel

11:00–11:30 A Combination Framework for Complexity
Martin Avanzini and Georg Moser

11:30–12:00 Compression of Rewriting Systems for Termination Analysis
Alexander Bau, Markus Lohrey, Eric Noeth and Johannes Waldmann

RTA Session 11, Room 7

14:00–14:30 Beyond Peano Arithmetic Automatically Proving Termination of
the Goodstein Sequence
Sarah Winkler, Harald Zankl and Aart Middeldorp

14:30–15:00 Tyrolean Complexity Tool: Features and Usage
Martin Avanzini and Georg Moser

15:00–15:30 Termination Competition
René Thiemann
TLCA Session 3, Room 8  Wednesday
14:00–14:30  A Type-Checking Algorithm for Martin-Loef Type Theory with Subtyping Based on Normalisation by Evaluation
  Daniel Fridlender and Miguel Pagano
14:30–15:00  Moritz Martens and Jakob Rehof Intersection Type Matching with Subtyping
  Boris Duedder
15:00–15:15  About “Lambda Calculus with Types”
  Henk Barendregt
15:15–15:30  On TLCA List of Open Problems
  Pawel Urzyczyn

Excursion, Conference Dinner, DAF Museum  Wednesday
17:00  Excursion
19:00  Conference Dinner

Thursday, June 27

TLCA Session 4, Room 7  Thursday
09:00–10:00  Proving with Side-Effects (invited talk)
  Hugo Herbelin

IFIP WG 1.6 Session 1, Room 12a  Thursday
09:00–09:30  Automata-Based Parsing by Run Rewriting
  Aaron Stump
09:30–10:00  Vincent van Oostrom (chair):
  Discussion on ISR
  Report on ISR 2014 in Valparaiso, change in ISR Bylaws, proposals for ISR 2015

UNIF Session 1, Room 12b  Thursday
09:00–10:00  Unification and Anti-unification modulo Equational Theories (invited talk)
  Santiago Escobar
TLCA Session 5, Room 7
10:30–11:00 Games with Sequential Backtracking and Complete Game Semantics for Subclassical Logics
Stefano Berardi and Makoto Tatsuta
11:00–11:30 Realizability for Peano Arithmetic with Winning Conditions in HO Games
Valentin Blot
11:30–12:00 On Interaction, Continuations and Defunctionalization
Ulrich Schoepp

IFIP WG 1.6 Session 2, Room 12a
10:30–11:00 Unranked Tree Rewriting and Effective Closures of Languages
Florent Jacquemard
11:00–11:30 Unification, Matching, and Transformation of Unranked Terms
Temur Kutsia
11:30–11:45 Georg Moser (chair):
Discussion on the Future of RTA
RTA and TLCA, RTA at FLoC 2014, application papers at RTA
11:45–12:00 Hans Zantema (chair):
Discussion on the List of Open Problems in Rewriting
(every participant of the meeting is encouraged to bring an open problem)

UNIF Session 2, Room 12b
10:30–11:00 Unification Problems Modulo a Theory of Until
Shreyaben Brahmakshatriya, Sushma Danturi, Kimberly Gero and Paliath Narendran
11:00–11:30 Hybrid Unification in the Description Logic EL
Franz Baader, Oliver Fernández Gil and Barbara Morawska
11:30–12:00 Detecting ACU Structural Symmetries
Maria Alpuente, Santiago Escobar and Javier Escrop

IFIP WG 1.6 Session 3, Room 12a
13:00–14:00 Jürgen Giesl (chair)
Business Meeting (WG members only)

HART Session 1, Room 12a
14:00–14:30 A Haskell Library for Term Rewriting
Bertram Felgenhauer, Martin Avanzini and Christian Sternagel
14:30–15:00 Certified HLints with Isabelle/HOLCF-Prelude
Joachim Breitner, Brian Huffman, Neil Mitchell and Christian Sternagel
15:00–15:30 Type-Changing Program Transformations with Pattern Matching
Joeri van Eekelen, Sean Leather and Johan Jeuring

**UNIF Session 3, Room 12b**
Thursday
14:00–15:00 Anti-Unification: Algorithms and Applications (invited talk)
*Temur Kutsia*

**TLCA Session 6, Room 7**
Thursday
14:30–15:00 Non-Determinism and the Strong Normalization of System T
*Federico Aschieri and Margherita Zorzi*
15:00–15:30 Bounding Skeletons, Locally Scoped Terms and Exact Bounds for Linear Head Reduction
*Pierre Clairambault*

**UNIF Session 4, Room 12b**
Thursday
15:30–16:00 Is it possible to unify sequential programs?
*Tatyana Novikova and Vladimir Zakharov*
16:00–16:30 Hierarchical Combination of Unification Algorithms
*Serdar Erbatur, Deepak Kapur, Andrew M Marshall, Paliath Narendran and Christophe Ringeissen*
16:30–17:00 Unranked Anti-Unification with Hedge and Context Variables
*Alexander Baumgartner and Temur Kutsia*

**TLCA Session 7, Room 7**
Thursday
16:00–16:30 Using Models to Model-check Recursive Schemes
*Sylvain Salvati and Igor Walukiewicz*
16:30–17:00 The Resource Lambda Calculus is Short-Sighted in Its Relational Model
*Flavien Breuvart*
17:30 TLCA Business Meeting

**HART Session 2, Room 12a**
Thursday
16:00-16:30 Propositional Encoding of Constraints over Tree-Shaped Data
*Alexander Bau and Johannes Waldmann*
16:30–17:00 Towards a Verification Framework for Haskell by Combining Graph Transformation Units and SAT Solving
*Marcus Ermler*
17:00–17:30 *(Panel Discussion)*
How can Haskell support rewriting better? What can rewriting learn from Haskell?
Friday, June 28

**TLCA Session 8, Room 7**
09:00–10:00  Non-Linearity as the Metric Completion of Linearity (invited talk)
*Damiano Mazza*

**IWC Session 1, Room 12a**
09:00–09:05  Opening
09:05–10:00  Three Termination Problems (invited talk)
*Patrick Dehornoy*
10:30–10:50  Disproving Confluence of Term Rewriting Systems by Interpretation and Ordering
*Takahito Aoto*
10:50–11:10  Automatically Finding Non-confluent Examples in Term Rewriting
*Hans Zantema*
11:10–11:30  Confluent Unfolding in the Lambda-Calculus with letrec
*Jan Rochel and Clemens Grabmayer*
11:30–11:50  Rule Labeling for Confluence of Left-Linear Term Rewrite Systems
*Bertram Felgenhauer*
11:50–12:10  Commutation via Relative Termination
*Nao Hirokawa and Aart Middeldorp*

**WIR Session 1, Room 12b**
09:00–09:30  Infinitary Lambda Calculi from a Linear Viewpoint
*Ugo Dal Lago*
09:30–10:00  Closure Operators, Equivalences and Models — a Reader’s Digest
*Stefan Kahrs*

**TLCA Session 9, Room 7**
10:30–11:00  Small Induction Recursion
*Peter Hancock, Conor McBride, Neil Ghani, Lorenzo Malatesta and Thorsten Altenkirch*
11:00–11:30  Generalizations of Hedberg’s Theorem
*Nicolai Kraus, Martin Escardo, Thierry Coquand and Thorsten Altenkirch*
11:30–12:00 A Constructive Model of Uniform Continuity
Chuangjie Xu and Martin Escardo

12:00–12:10 Closing

**WIR Session 2, Room 12b**

Friday

10:30–11:00 Orthogonality and Weak Convergence in Infinitary Rewriting
Stefan Kahrs

11:00–11:30 A Coinductive Treatment of Infinitary Term Rewriting
Joerg Endrullis, Helle Hvid Hansen, Dimitri Hendriks, Andrew Polonsky and Alexandra Silva

11:30–12:00 Infinitary Standardisation — Computed
Jeroen Ketema

**IWC Session 2 = WIR Session 3, Room 7**

Friday

14:00–14:45 Confluence and Infinity — a kaleidoscopic view
Jan Willem Klop (invited talk)

**IWC Session 3, Room 7**

Friday

15:00–15:30 2nd Confluence Competition (CoCo 2013)

**WIR Session 4, Room 12b**

Friday

15:30–16:00 Proof Terms for Infinitary Rewriting
Carlos Lombardi, Alejandro Rios and Roel de Vrijer

16:00–16:30 Challenges, discussion

**IWC Session 4, Room 7**

Friday

16:00–16:20 Proving Confluence of Conditional Term Rewriting Systems via Unravelings
Karl Gmeiner, Naoki Nishida and Bernhard Gramlich

16:20–16:40 A Confluent Pattern Calculus with Hedge Variables
Sandra Alves, Besik Dundua, Mario Florido and Temur Kutsia

16:40–17:00 Synchronizing Applications of the Parallel Moves Lemma to Formalize Confluence of Orthogonal TRSs in PVS
Ana Cristina Rocha Oliveira, André Luiz Galdino and Maurício Ayala-Rincón

17:00–17:20 KBCV 2.0 - Automatic Completion Experiments
Thomas Sternagel

17:20–17:40 Confluent Let-Floating
Clemens Grabmayer and Jan Rochel

17:40–17:45 Closing