



SAPIENZA
UNIVERSITÀ DI ROMA



TCS 2014

Theoretical Computer Science

1-3 September, Rome, Italy

Conference Programme

Monday, 1st September 2014 (Aula del Chiostro)

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| 09:00-10:00 | Invited Talk (Chair: Josep Diaz) <i>Giuseppe Italiano</i> : Strong Bridges and Strong Articulation Points of Directed Graphs |
| 10:00-10:30 | Coffee break |
| 10:30-12:30 | AUTOMATA AND ALGEBRAS (TCS-B) (Chair: TBA) <ul style="list-style-type: none">• <i>Sergey Goncharov, Stefan Milius and Alexandra Silva</i>. Towards a Coalgebraic Chomsky Hierarchy• <i>Dominique Larchey-Wendling and Didier Galmiche</i>. Looking at Separation Algebras with Boolean BI-eyes• <i>Helle Hvid Hansen, Clemens Kupke and Raul Leal</i>. Strong completeness of iteration-free coalgebraic dynamic logics• <i>Sebastian Küpper and Barbara König</i>. Generic Partition Refinement Algorithms for Coalgebras and an Instantiation to Weighted Automata |
| 12:30-14:00 | Lunch |
| 14:00-16:00 | (TCS-A) (Chair: Pino Italiano) <ul style="list-style-type: none">• <i>Jiri Wiedermann</i>. Fast nondeterministic matrix multiplication via derandomization of Freivald's algorithm• <i>Andreas Darmann, Ulrich Pferschy and Joachim Schauer</i>. The Shortest Path Game. Complexity and Algorithms• <i>Laurent Gourves, Jerome Monnot and Aris Pagourtzis</i>. The Lazy Matroid Problem• <i>Stanley Fung</i>. Online Scheduling of Unit Length Jobs with Commitment and Penalties |
| 16:00-16:30 | Coffee break |
| 16:30-18:30 | ANALYSIS TECHNIQUES (TCS-B) (Chair: TBA) <ul style="list-style-type: none">• <i>Soumyodip Chakraborty and Joost-Pieter Katoen</i>. Parametric LTL on Markov Chains• <i>H.J. Sander Bruggink, Barbara König and Hans Zantema</i>. Termination Analysis for Graph Transformation Systems• <i>Vincenzo Ciancia, Diego Latella, Michele Loreti and Mieke Massink</i>. Specifying and Verifying Properties of Space• <i>Jon Hael Brenas, Rachid Echahed and Martin Strecker</i>. A Hoare-like calculus using SROIQ-sigma logic on transformations of graphs |

Tuesday, 2nd September 2014 (Aula 17)

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| 09:00-10:00 | Invited Talk - joint with CONCUR (Chair: D. Sangiorgi) (Aula del Chiostro) <i>Jane Hillston</i> . The Benefits of Sometimes Not Being Discrete |
| 10:00-10:30 | Coffee break |
| 10:30-12:30 | (TCS-A) (Chair: Jacques Sakarovich) <ul style="list-style-type: none">• Tomoyuki <i>Yamakami</i>. Not All Multi-Valued Partial CFL Functions Are Refined by Single-Valued Functions• Anna <i>Bernasconi</i> and Valentina <i>Ciriani</i>. Zero-Suppressed Binary Decision Diagrams Resilient to Index• Ilkka <i>Törmä</i>. Subshifts, MSO Logic, and Collapsing Hierarchies• Hiroki <i>Morizumi</i>. Sensitivity, Block Sensitivity, and Certificate Complexity of Unate Functions and Read-Once Functions |
| 12:30-14:00 | Lunch |
| 14:00-16:00 | Logics (TCS-B) (Chair: TBA) <ul style="list-style-type: none">• Simona <i>Ronchi Della Rocca</i>, Antonio <i>Bucciarelli</i> and Delia <i>Kesner</i>. The inhabitation problem for non-idempotent intersection types• Delia <i>Kesner</i> and Daniel <i>Ventura</i>. Quantitative Types for the Linear Substitution Calculus• Jeremy E. <i>Dawson</i>, Ranald <i>Clouston</i>, Rajeev <i>Gore</i> and Alwen <i>Tiu</i>. From Display Calculi to Deep Nested Sequent Calculi: Formalised for Full Intuitionistic Linear Logic• Patrick <i>Baillet</i>, Erika <i>De Benedetti</i> and Simona <i>Ronchi Della Rocca</i>. Characterizing polynomial and exponential complexity classes in elementary lambda-calculus |
| 16:00-16:30 | Coffee break |
| 16:30-18:30 | (TCS-A) (Chair: Giorgio Ausiello) <ul style="list-style-type: none">• Bugra <i>Caskurlu</i>, Vahan <i>Mkrtchyan</i>, Ojas <i>Parekh</i> and K. <i>Subramani</i>. On Partial Vertex Cover and Budgeted Maximum Coverage Problems in Bipartite Graphs• Martin <i>Lange</i> and Etienne <i>Lozes</i>. Capturing Bisimulation Invariant Complexity Classes with Higher Order Modal Logics• Riko <i>Jacob</i>, Tobias <i>Lieber</i> and Matthias <i>Mnich</i>. Treewidth Computation and Kernelization in the Parallel External Memory Model• Fei <i>Chen</i> and Xiaowei <i>Wu</i>. Perfect Pipelining for Streaming Large File in Peer-to-peer Net |
| 18:30-20:30 | Welcome Reception (In the cloister of the venue) |

Wednesday, 3rd September 2014 (Aula del Chiostro)

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| 09:00-10:00 | DECIDABILITY (TCS-B) (Chair: TBA) <ul style="list-style-type: none">• <i>Carlos Cotrini Jimenez, Yuri Gurevich, Ori Lahav and Artem Melentyev</i>. Primal Infn Logic with Conjunctions as Sets• <i>Vincent Carnino and Sylvain Lombardy</i>. Tropical two-way automata |
| 10:00-10:30 | Coffee break |
| 10:30-13:00 | SESSION ON TC1 WORKING GROUPS <ul style="list-style-type: none">• WG 1.2 Descriptive Complexity, Speaker: <i>Giovanni Pighizzini</i>, WG 1.2 Chair• WG 1.5 Cellular Automata, Speaker: <i>Jarkko Kari</i>, WG 1.5 Chair• WG 1.8 Concurrency Theory, Speakers: <i>Ilaria Castellani</i>, WG 1.8 Chair, and <i>Marco Bernardo</i> Title: Recent Trends in Concurrency Theory: Report from a WG 1.8 co-sponsored Event in Bertinoro |
| 13:00-15:00 | Lunch |
| 15:00-23:00 | Excursion & Conference Dinner (Optional) |