



# 1<sup>st</sup> International Conference on Language and Automata Theory and Applications

LATA 2007, March 29 - April 4, 2007  
Tarragona, Spain



## Programme

Thursday, March 29	
8:00 9:00	Registration
9:00 9:15	Opening
9:15 10:45 Francine Blanchet-Sadri	TOMÁŠ MASOPUST and ALEXANDER MEDUNA: <i>Descriptive Complexity of Grammars Regulated by Context Conditions</i> GUANGWU LIU, CARLOS MARTÍN-VIDE, ARTO SALOMAA and SHENG YU: <i>State Complexity of Basic Operations Combined with Reversal</i> HENNING FERNAU and JÜRGEN DASSOW: <i>Comparison of Some Descriptive Complexities of OL Systems Obtained by a Unifying Approach</i>
10:45 11:15	Coffee Break
11:15 12:15 Henning Bordihn	VINAY CHOUDHARY, ANAND KUMAR SINHA and SOMENATH BISWAS: <i>Universality for Nondeterministic Logspace</i> HERMANN GRUBER and MARKUS HOLZER: <i>Computational Complexity of NFA Minimization for Finite and Unary Languages</i>
12:15 12:30	Break
12:30 14:00 Zoltán Ésik	VOLKER DIEKERT: <i>Equations: From Words to Graph Products (I) – Tutorial</i>
14:00 16:00	Lunch
16:00 17:30 Carsten Damm	GRIGORIY POVAROV: <i>Descriptive Complexity of the Hamming Neighborhood of a Regular Language</i> BAPTISTE BLANPAIN, JEAN-MARC CHAMPARNAUD and JEAN-PHILIPPE DUBERNARD: <i>Geometrical Languages</i> OLIVIER BODINI, THOMAS FERNIQUE and ERIC REMILA: <i>A Characterization of Flip-accessibility for Rhombus Tilings of the Whole Plane</i>
17:30 18:00	Coffee Break
18:00 19:30 Pál Dömösi	BERND BORCHERT and KLAUS REINHARDT: <i>Deterministically and Sudoku-Deterministically Recognizable Picture Languages</i> RALF STIEBE: <i>Slender Siromoney Matrix Languages</i> KAZUYA OGASAWARA and SATOSHI KOBAYASHI: <i>Stochastically Approximating Tree Grammars by Regular Grammars and Its Application to Faster ncRNA Family Annotation</i>



Rectorat Building of the University

<b>Friday, March 30</b>	
8:45 10:15 Jozef Gruska	ANDREAS MALETTI: <i>Compositions of Extended Top-down Tree Transducers</i> EKATERINA KOMENDANTSKAYA: <i>First-order Deduction in Neural Networks</i> PÁL DÖMÖSI: <i>Automata Networks without any Letichevsky Criteria</i>
10:15 10:45	Coffee Break
10:45 12:15 Neil Immerman	HENNING BORDIHN and GYÖRGY VASZIL: <i>On Leftmost Derivations in CD Grammar Systems</i> SUNA BENSCH: <i>An Approach to Parallel Mildly Context-Sensitive Grammar Formalisms</i> YURII ROGOZHIN, CARLOS MARTÍN-VIDE and ARTIOM ALHAZOV: <i>Networks of Evolutionary Processors with two Nodes are Unpredictable</i>
12:15 12:30	Break
12:30 14:00 Zoltán Ésik	VOLKER DIEKERT: <i>Equations: From Words to Graph Products (II) – Tutorial</i>
14:00 16:00	Lunch
16:00 17:30 Martin Kutrib	VICTOR SELIVANOV: <i>Classifying Omega-Regular Partitions</i> PAOLO BOLDI, VIOLETTA LONATI, ROBERTO RADICIONI and SANTINI MASSIMO: <i>The Number of Convex Permutominoes</i> PAWEL BATURO and WOJCIECH RYTTER: <i>Occurrence and Lexicographic Properties of Standard Sturmiian Words</i>
17:30 18:00	Coffee Break
18:00 19:00 Volker Diekert	NEIL IMMERMANN: <i>Nested Words – Invited Talk</i>
19:30	Visit to the Old City



Cathedral of Tarragona

<b>Monday, April 2</b>	
9:00 10:30 Markus Holzer	FRANCINE BLANCHET-SADRI, KEVIN CORCORAN and JENELL NYBERG: <i>Fine and Wilf's Periodicity Result on Partial Words and Consequences</i> COSTAS ILIOPOULOS, BOŘIVOJ MELICHAR, JAN ŠUPOL and INUKA JAYASEKERA: <i>Weighted Degenerated Approximate Pattern Matching</i> KRYSTYNA STAWIKOWSKA and EDWARD OCHMAŃSKI: <i>On Star-Free Trace Languages and their Lexicographic Representations</i>
10:30 11:00	Coffee Break
11:00 12:30 Lucian Ilie	ZOLTÁN L. NÉMETH: <i>On the Regularity of Binoid Languages: A Comparative Approach</i> MARKUS LOHREY and BENJAMIN STEINBERG: <i>The Submonoid and Rational Subset Membership Problems for Graph Groups</i> CAMILO THORNE: <i>Categorical Module Grammars of Bounded Size have Finite Bounded Density</i>
12:30 12:45	Break
12:45 13:45 Victor Mitrana	ERICH GRÄDEL: <i>Infinite Games (I) – Tutorial</i>
13:45 15:45	Lunch
15:45 17:15 Satoshi Kobayashi	MATHIEU PLOUDRET, JEAN-PAUL COMET, PASCALE LE GALL, AGNÈS ARNOULD and PHILIPPE MESEURE: <i>Topology-based Geometric Modelling for Biological Cellular Processes</i> FARID ABLAYEV and AIDA GAINUTDINOVA: <i>Classical Simulation Complexity of Quantum Branching Programs</i> MARTIN KOCHOL, NADA KRIVOŇÁKOVÁ, SILVIA SMEJOVÁ and KATARÍNA ŠRANKOVÁ: <i>Reductions of Matrices Associated with Nowhere-Zero Flows</i>
17:15 17:45	Coffee Break
17:45 18:45 Reinhard Rapp	JUNTAE YOON and SEONHO KIM: <i>Rule-based Word Spacing in Korean Based on Lexical Information Extracted from a Corpus</i> JULIEN BOURDAILLET and JEAN-GABRIEL GANASCIA: <i>Practical Block Sequence Alignment with Moves</i>
18:45 19:00	Break
19:00 20:00 Sheng Yu	HELMUT JÜRGENSEN: <i>Synchronization – Invited Talk</i>



Circ Romà

<b>Tuesday, April 3</b>	
9:00 10:30 <i>Alexander Okhotin</i>	PAVLOS ANTONIOU, MAXIME CROCHEMORE, COSTAS ILIOPOULOS and PIERRE PETERLONGO: <i>Application of Suffix Trees for the Acquisition of Common Motifs with Gaps in a Set of Strings</i> FRANTIŠEK MRÁZ, FRIEDRICH OTTO and MARTIN PLÁTEK: <i>Free Word-Order and Restarting Automata</i> MARTIN KUTRIB and JENS REIMANN: <i>Succinct Description of Regular Languages by Weak Restarting Automata</i>
10:30 11:00	Coffee Break
11:00 12:30 <i>Holger Petersen</i>	HARTMUT MESSERSCHMIDT and FRIEDRICH OTTO: <i>On Determinism Versus Non-Determinism for Restarting Automata</i> MARTIN KUTRIB and ANDREAS MALCHER: <i>Fast Reversible Language Recognition Using Cellular Automata</i> PIETRO DI LENA and LUCIANO MARGARA: <i>Computational Complexity of Dynamical Systems: the Case of Cellular Automata</i>
12:30 12:45	Break
12:45 13:45 <i>Victor Mitrana</i>	ERICH GRÄDEL: <i>Infinite Games (II)</i> – Tutorial
13:45 15:45	Lunch
15:45 17:15 <i>Friedrich Otto</i>	CHRISTOS NOMIKOS and PANOS RONDOGIANNIS: <i>Locally Stratified Boolean Grammars</i> ALEXANDER OKHOTIN: <i>Unambiguous Boolean Grammars</i> YO-SUB HAN and DERICK WOOD: <i>Generalizations of One-Deterministic Regular Languages</i>
17:15 17:45	Coffee Break
17:45 18:45 <i>Nissim Francez</i>	FRANZ BAADER, JAN HLADIK and RAFAEL PEÑALOZA: <i>SI! Automata Can Show PSPACE Results for Description Logics</i> LIVIU P. DINU, RADU GRAMATOVICI and FLORIN MANEA: <i>On the Syllabification of Words via Go-Through Automata</i>
18:45 19:00	Break
19:00 20:00 <i>Erich Grädel</i>	NISSIM FRANCEZ and MICHAEL KAMINSKI: <i>Extensions of Pregroup Grammars and Their Correlated Automata</i> – Invited Talk
20:30	Visit to the City Hall



City Hall of Tarragona



Inner Courtyard



<b>Wednesday, April 4</b>	
9:15 10:45 <i>Helmut Jürgensen</i>	DEIAN TABAKOV and MOSHE VARDI: <i>Model Checking Buechi Specifications</i> BENEDIKT BOLLIG and DIETRICH KUSKE: <i>Muller Message-Passing Automata and Logics</i> PAVEL MARTJUGIN: <i>A Series of Slowly Synchronizable Automata with a Zero State Over a Small Alphabet</i>
10:45 11:15	Coffee Break
11:15 12:15 <i>Jürgen Dassow</i>	GENARO PARLATO, SALVATORE LA TORRE, MARGHERITA NAPOLI and MIMMO PARENTE: <i>Verification of Succinct Hierarchical State Machines</i> MIKLÓS KRÉSZ: <i>Nondeterministic Soliton Automata with a Single External Vertex</i>
12:15 12:30	Break
12:30 13:30 <i>Victor Mitrana</i>	ERICH GRÄDEL: <i>Infinite Games (III) – Tutorial</i>
13:30	Closing

We acknowledge the support by:

