DLT & WORDS 2023

– Program –

Monday, June 12

9:00–10:00	**Registration**
10:00–10:30	**Opening**

10:30–12:00	DLT session 1 (chair: Markus Schmid)	WORDS session 1 (chair: Zuzana Masáková)
	Benjamin Hellouin de Menibus, Victor Lutfalla and Camille Noûs. The Domino Problem is Undecidable on Every Rhombus Subshift	*Daniel Gabric and Jeffrey Shallit.* Smallest and Largest Block Palindrome Factorizations
	Marcella Anselmo, Giuseppa Castiglione, Manuela Flores, Dora Giammarresi, Maria Madonia and Sabrina Mantaci. Isometric Words Based on Swap, Mismatch Distance	*Savinien Kreczman, Luca Prigioniero, Eric Rowland and Manon Stipulanti.* Magic Numbers in Periodic Sequences
	Sam M. Thompson and Dominik D. Freydenberger. Languages Generated by Conjunctive Query Fragments of FC[REG]	*Lubomira Dvorakova and Jana Lepsova.* Critical Exponent of Arnoux-Rauzy Sequences

12:00–13:45	*Lunch*

13:45–14:45	DLT Invited Talk (chair: Richard Mörbitz)	WORDS Invited Talk (chair: Maxime Crochemore)
	Ismaël Jecker Transducers and the Power of Delay	*Shuo Li* On the Number of Squares in a Finite Word

14:45–15:15	*Coffee break*

15:15–16:45	DLT session 2 (chair: Maria Madonia)	WORDS session 2 (chair: Shuo Li)
	Shaull Almagor and Omer Yizhaq. Jumping Automata over Infinite Words	*Francesco Dolce.* String Attractors for Factors of the Thue-Morse Word
	Christopher Hugenroth. Zielonka DAG Acceptance, Regular Languages over Infinite Words	*France Gheeraert, Giuseppe Romana and Manon Stipulanti.* String Attractors of Fixed Points of k-Bonacci-Like Morphisms
	Benny G. Kenkireth and Ahaan Sameer Malhotra. On Word Representable, Multi-Word Representable Graphs	*Ahmed Mimouni and Valérie Berthé.* Recurrence and Frequencies

Tuesday, June 13

9:00–10:00	**Invited talk (chair: Marie-Pierre Béal)** *Émilie Charlier* Alternate Base Numeration Systems
10:00–10:30	*Coffee break*

	DLT session 3 (chair: Martin Kutrib)	WORDS session 3 (chair: Émilie Charlier)
10:30–12:00	*Alexandre Durand, Pascal Caron and Bruno Patrou.* The Exact State Complexity for the Composition of Root, Reversal	*Lucas Mol, Narad Rampersad and Jeffrey Shallit.* Dyck Words, Pattern Avoidance, and Automatic Sequences
	Sara Giuliani, Shunsuke Inenaga, Zsuzsanna Liptak, Giuseppe Romana, Marinella Sciortino and Cristian Urbina. Bit Catastrophes for the Burrows-Wheeler Transform	*Pierre-Adrien Tahay.* Characteristic Sequences of the Sets of Sums of Squares as Columns of Cellular Automata
	Sungmin Kim, Yo-Sub Han, Sang-Ki Ko and Kai Salomaa. On the Simon's Congruence Neighborhood of Languages	*Pierre Béaur and Benjamin Hellouin de Menibus.* Sturmian and Infinitely Desubstitutable Words Accepted by an ω-Automaton

12:00–13:45	*Lunch*
13:45–14:45	**Invited talk (chair: Moshe Y. Vardi)** *Markus Schmid* On Structural Tractability Parameters for Hard String Problems
14:45–15:15	*Coffee break*
15:15–17:00	**Dome Theatre visit**

Wednesday, June 14

9:00–10:00	**DLT session 4 (chair: Pascal Caron)** **WORDS session 4 (chair: Daniel Reidenbach)**

9:00–10:00	DLT session 4 (chair: Pascal Caron) *Hyunjoon Cheon and Yo-Sub Han.* Weak Inverse Neighborhood of Languages *Takao Yuyama.* Groups whose Word Problem is Accepted by an Abelian G-Automaton	WORDS session 4 (chair: Daniel Reidenbach) *Hiroto Fujimaru, Yuto Nakashima and Shunsuke Inenaga.* On Sensitivity of Compact Directed Acyclic Word Graphs *Duncan Adamson, Maria Kosche, Tore Koß, Florin Manea and Stefan Siemer.* Longest Common Subsequence With Gap Constraints
10:00–10:30	*Coffee break*
10:30–12:00	**Salomaa Prize ceremony** Laudation by Wolfgang Thomas Talk by the awardee Moshe Y. Vardi *Logic, Automata, Games, and Algorithms* The automata-theoretic approach to decision procedures, introduced by Buechi, Elgot, Rabin and Trakhtenbrot in the 1950s and 1960s, is one of the most fundamental approaches to decision procedures. Recently, this approach has found industrial applications in formal verification of hardware and software systems. The path from logic to practical algorithms goes not only through automata, but also through games, whose algorithmic aspects were studied by Chandra, Kozen, and Stockmeyer in the late 1970s. In this overview talk we describe the path from logic to algorithms via automata and games.
12:00–17:00	**Excursion (incl. lunch)**
19:00–	**Conference Dinner**

Thursday, June 15

9:00–10:00	**Invited talk (chair: Johanna Björklund)** *Jussi Karlgren* When the Map is More Exact than the Terrain
10:00–10:30	*Coffee break*

10:30–12:00	DLT session 5 (chair: Wolfgang Thomas)	WORDS session 5 (chair: Jarkko Peltomäki)
	Stefan Hoffmann. Completely Distinguishable Automata and the Set of Synchronizing Words	*Philippe Schnoebelen and Julien Veron.* On Arch Factorization and Subword Universality for Words and Compressed Words
	Stefan Hoffmann. Synchronization of Parikh Automata	*Duncan Adamson.* Ranking and Unranking k-Subsequence Universal Words
	Jakub Ruszil. Synchronizing Automata with Coinciding Cycles	*Aleksi Saarela.* On the Solution Sets of Entire Systems of Word Equations

12:00–13:45	*Lunch*

13:45–14:45	DLT Invited Talk (chair: Frank Drewes) *Will Merrill* Formal Languages and the NLP Black Box	WORDS Invited Talk (chair: Edita Pelantova) *Mélodie Andrieu* Complexities of Hypercubic Billiard Words

14:45–15:15	*Coffee break*

15:15–16:45	DLT session 6 (chair: Giovanni Pighizini)	WORDS session 6 (chair: Mélodie Andrieu)
	Ansuman Banerjee, Kingshuk Chatterjee and Shibashis Guha. Set Augmented Finite Automata over Infinite Alphabets	*Lubomíra Dvořáková, Martin Mašek and Edita Pelantová.* On a Class of 2-Balanced Sequences
	Martin Kutrib and Uwe Meyer. Tree-Walking-Storage Automata	*Sébastien Ferenczi, Pascal Hubert and Luca Q. Zamboni.* Order Conditions for Languages
	Zuzana Masakova, Edita Pelantova and Katarína Studeničová. Rewriting Rules for Arithmetics in Alternate Base Systems	*Valérie Berthé and Herman Goulet-Ouellet.* Substitutions Preserving Their Return Sets

16:45–	**Steering Committee meetings**

Friday, June 16

9:00–10:00	**Extra invited talk (chair: Martin Berglund)** *Richard Mörbitz* The M-monoid Parsing Problem and its Application to Constituency Parsing
10:00–10:30	*Coffee break*

10:30–11:30	DLT session 7 (chair: Will Merrill)	WORDS session 7 (chair: Christophe Reutenauer)
	Marie-Pierre Béal and Maxime Crochemore. Fast Detection of Specific Fragments against a Set of Sequences	*Michel Rigo, Manon Stipulanti and Markus Whiteland.* Automaticity and Parikh-Collinear Morphisms
	Arseny Shur. Approaching Repetition Thresholds Via Local Resampling, Entropy Compression	*Narad Rampersad and Jeffrey Shallit.* Rudin-Shapiro Sums Via Automata Theory and Logic

11:30–12:00	**Best (Student) Paper Award** **Announcements of next DLT & WORDS** **CLOSING**
12:00–13:45	*Lunch*
13:00–	**Optional activity for those interested**