

Preface

DLT 2005 was the 9th Conference on Developments in Language Theory. It was intended to cover all important areas of language theory, such as grammars, acceptors and transducers for strings, trees, graphs, and arrays; efficient text algorithms; algebraic theories for automata and languages; combinatorial and algebraic properties of words and languages; variable-length codes; symbolic dynamics; decision problems; relations to complexity theory and logic; picture description and analysis; polyominoes and bidimensional patterns; cryptography; concurrency; and DNA and quantum computing.

DLT 2005 was held at Mondello (Palermo, Italy) during July 4–8, 2005 and was sponsored by the Department of “Matematica e Applicazioni,” University of Palermo, the Department of “Informatica e Applicazioni – R.M. Capocelli,” University of Salerno, and the MIUR Project “*Formal Languages and Automata: Methods, Models and Applications.*” The conference was also under the auspices of EATCS. We are grateful to these organizations.

Previous DLTs were held in Turku (1993), Magdeburg (1995), Thessaloniki (1997), Aachen (1999), Vienna (2001), Kyoto (2002), Szeged (2003) and Auckland (2004). Since 2001, a DLT conference takes place in every odd year in Europe, and in every even year in another continent.

The Program Committee selected 29 papers from 73 submitted papers. The papers came from the following countries: Austria, Belgium, Canada, Czech Republic, Finland, France, Germany, India, Italy, Portugal, Moldova, Russia, Spain, and the UK. Each submitted paper was evaluated by at least three members of the Program Committee, who were often assisted by their referees. All 29 selected papers are contained in this volume together with 6 invited presentations.

We would like to thank the members of the Program Committee for the evaluation of the submissions and the numerous referees who assisted in this work. The list of the referees is as complete as we could achieve and we apologize for any omissions and errors. We are grateful to the contributors to DLT 2005, in particular to the invited speakers, for the realization of a very successful conference. We also thank the members of the Organizing Committee and Chiara Epifanio and Marinella Sciortino in particular whose work behind the scenes contributed to this volume.

April 2005

Clelia De Felice and Antonio Restivo

Organization

Invited Lecturers

Jean Paul Allouche (France)
Aldo de Luca (Italy)
Dominique Perrin (France)
Jarkko Kari (Finland)
Cenk Sahinalp (Canada)
Howard Straubing (USA)
Mikhail V. Volkov (Russia)

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C. Calude (Auckland)
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Referees

J.-P. Allouche	P. Grabner	G. Pighizzini
M. Anselmo	V. Halava	H. Petersen
P. Arnoux	T. Harju	J.-E. Pin
E. Asarin	M. Hirvensalo	L. Polak
J.-M. Autebert	J. Holub	B. Ravikumar
M.-P. Béal	J. Honkala	E. Remila
D. Beauquier	H.J. Hoogeboom	A. Restivo
M. ter Beek	O.H. Ibarra	G. Richomme
B. Berard	C. Imreh	S. Rinaldi
A. Berlea	N. Jonoska	J. Rutten
J. Berstel	M. Jurdziński	N. Sabadini
V. Berthé	J. Justin	Y. Sakakibara
A. Bertoni	J. Karhumäki	J. Sakarovitch
D. Besozzi	J. Kari	K. Salomaa
J.-C. Birget	W. Karianto	K. Sato
V. Blondel	D. Kirsten	P. Schnoebelen
S.L. Bloom	F. Klaedtke	M. Sciortino
Y. Boukhad	J. Kleijn	P. Seebold
R. Brijder	S. Kobayashi	G. Senizergues
V. Bruyère	W. Kuich	O. Serre
C.S. Calude	M. Kunc	J. Shallit
G. Castiglione	S. La Torre	P.V. Silva
D. Caucal	P. Lecomte	S. Szabo
M. Cavaliere	E.L. Leiss	N. Tanida
C. Choffrut	M. Lewenstein	P. Tesson
T. Colcombet	V. Liskovets	D. Thérien
B. Courcelle	K. Lodaya	W. Thomas
S. Crespi Reghizzi	C. Löding	S. Tini
E. Csuhaj-Varju	S. Lombardy	S. Vagvolgyi
E. Czeizler	V. Lonati	G. Vaszil
F. D'Alessandro	S. Margolis	S. Varrichio
Z. Dang	P. Massazza	R. van Vliet
C. De Felice	J. Mazoyer	H. Vollmer
V. Diekert	C. Mereghetti	C. Wartena
J. Engelfriet	J.F. Michon	B. Watson
M. Faella	M. Mishna	P. Weil
S. Ferenczi	D. Niwinski	S. Wöhrle
P. Frisco	S. Okawa	Hsu-Chun Yen
A. Frosini	A. Okhotin	T. Yokomori
Z. Fulop	B. Palano	S. Yu
D. Giammarresi	M. Parente	R. Zizza
M. Goldwurm	A. Paun	