

# REPORT ON NCMA 2011

## 3rd Workshop on Non-Classical Models of Automata and Applications 18-19 July 2011, Milano, Italy

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NCMA 2011, the 3rd workshop in this series, took place at Milano from July 18-19, in Sala Rossa of the main building of Università di Milano, a nice room for representation and meetings in a historical building.

The organizing committee consisted of Roberto Formisano, Marco Heule, Christian Mohnert, Francesco Ollivari, Barbara Pichler, as well as Luca Scahill, and Igor Gontchev. The workshop was supported by Italian CNR and the University of Würzburg. NCMA 2011 was attended by 32 participants from 10 countries, with details as follows:

DE	10	CH	3	LV	2	CZ	1	HU	1
IT	10	CA	2	AT	1	FR	1	SK	1

The scientific program consisted of 2 invited lectures and 12 contributions selected from 18 submissions from 9 countries as shown below (C country, I invited, A accepted):

C	I	A	C	I	A	C	I	A	C	I	A
CA		$1\frac{1}{6}$	DE		3	IT		2	RS		1
CH		2	FR		$\frac{1}{3}$	LV	1		SK	1	
CZ		1	HU		$\frac{5}{6}$	RO		$\frac{1}{6}$			

It can be found at

<http://www.informatik.uni-giessen.de/ncma2011/>.

The workshop was opened on Monday morning by Christian Mohnert, introducing NCMA, welcoming participants, and giving information on organization.

The first invited lecture ‘Quantum Finite Automata’ by Alexander A. was a very good survey on quantum finite automata (QFA), in particular on their space efficiency, on the difference between 1-way and 2-way QFA, and relations between QFA and quantum Markov chains. With the second invited talk, ‘An Alternating Hierarchy for Finite Automata’, Valentin G. gave an excellent presentation on the infinite hierarchy of state complexity classes of 2-way alternating finite automata, also solving several open problems. Good and interesting talks

were given by M. P. B. on regularity of languages defined by formal series, and on normal forms for unary probabilistic automata, by A. F. on Parikh automata and related models, by M. W. on string assembling systems, and by O. K. on bioautomata.

The proceedings, edited by R. F., M. H., C. M., F. O., and B. P., containing all invited talks and contributions, have been published as Band 282 of *Ö C G*. In the coffee breaks coffee, mineral water, juice, and pastries were offered. On Monday evening there was a social dinner in the restaurant C. P., about 2 minutes walk from the conference site. There we were offered a choice of typical regional dishes and wines. It lasted well until 24 h. Weather was warm and sunny, with highest temperatures around 25°C.

In summary, the workshop was successful, at a high level, and in a nice atmosphere. Next NCMA will be held in 2012 in F., Switzerland.