

# REPORT ON DCM 2011

## 7th Workshop Developments of Computational Models 3 July 2011, Zürich, Switzerland

Manfred Kudlek

DCM 2011 (Developments of Computational Models), the 7<sup>th</sup> in this series, took place on July 3, 2011, at Zürich, colocated with ICALP 2011. Conference site was ETH Zürich, building CAB, room G61. It was organized by Emmanuel Krievine, Jérôme Koenig, and Frédéric Reutenauer. The workshop was attended by about 20 participants. The scientific program consisted of 1 invited tutorial, 2 invited talks, and 8 contributions. For details visit <http://www.pps.jussieu.fr/~krivine/conferences/DCM2011/Program.html>.

The distribution by countries was as follows (C country, I=invited, A=accepted):

C	CH	DE	FR	IL	IT	JP	US	Σ
I	2					1		3
A		2	1 $\frac{2}{3}$	2	1		1 $\frac{1}{3}$	8

The workshop was opened on Sunday morning by Frédéric Reutenauer. The morning was mainly devoted to Q (quantum). In the invited tutorial ‘*Quantum Information Processing on Tensor-network States*’ Tommaso Morvan gave a good introduction into mathematical basics of quantum computing, as matrix product space, tensor network state, measurement based quantum computing, and virtual space.

Manfred Kudlek, with the invited lecture ‘*Quantum Entanglement*’, presented a very nice and interesting overview on the role of entanglement in quantum computation. ‘*Algebras of the Brain*’ by Emmanuel Krievine was a very good and interesting second invited talk on models of the brain as neural networks and neural algebra, and related devices as universal cellular automata. Also to mention are the two good presentations by Nicolas Dür (co-authors Yngve Gunnarsson, Alexander B. Kolchin and Ueli B. Schindler, Emmanuel F. Fritzsche) on the generic model of computation and the extended Church-Turing thesis. The proceedings will be published in EPTCS.

Next DCM 2012 will be held on June 17, 2012 as a satellite workshop of CIE 2012 in Cambridge, University of Cambridge, UK.

Coffee, mineral water, juice, croissants, and fruits were offered in the breaks. After the end there was a reception for participants of all workshops, being also the welcome reception for ICALP participants, which well lasted from 19 to 21.30 h. Red and white wine, beer, mineral water, juice, fruits cheese, and bread were offered. Weather was sunny and warm, with highest temperature at 25°C.

The workshop was successful, well organized, and in a relaxed atmosphere. Pictures from the workshop can be found at

[http://picasaweb.google.com/103109175860301247641?authkey=Gv1sRgCL\\_Z8LyayIfvFg](http://picasaweb.google.com/103109175860301247641?authkey=Gv1sRgCL_Z8LyayIfvFg).