

## REPORT ON DCFS 2009

**The 11th Annual Workshop of Descriptive Complexity of Formal Systems  
July 6–9, 2009, Magdeburg, Germany**

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The Eleventh Annual International Workshop on Descriptive Complexity of Formal Systems (DCFS 2009) was held at Otto von Guericke University Magdeburg, in Magdeburg, Germany, on July 6–9, 2009. It was organized jointly by the IFIP Working Group 1.2 on Descriptive Complexity, and by the Faculty of Computer Science of the Otto von Guericke University Magdeburg. It took place immediately after the Conference on Developments in Language Theory (DLT), in Stuttgart, Germany.

Papers were submitted by 38 authors from 15 different countries. The Program Committee selected 16 papers for presentation. The program can be found on the conference website <http://theo.cs.uni-magdeburg.de/dcfs2009/>.

The conference was organized by Jürgen Dassow (chair), Ronny Harbich, Bernd Reichel, Bianca Truthe and Catharina Berner. The conference went forward smoothly, and the participants were able to engage in research discussion.



The organizers of DCFS 2009 were Ronny Harbich, Bianca Truthe, Jürgen Dassow (chair), Catharina Berner, Bernd Reichel (from left to right)

The proceedings, edited by Jürgen Dassow, Giovanni Pighizzini and Bianca Truthe, contain all invited talks and contributions, and have been published by Otto von Guericke University Magdeburg. They are also available in *Electronic Proceedings in Theoretical Computer Science* <http://published.eptcs.org>. Full versions of selected papers will be published in a special issue of the *Journal of Automata, Languages and Combinatorics*.

The invited lectures covered a broad range of topics in Descriptive Complexity. They were (in order of appearance),

- **Janusz Brzozowski** (Waterloo, Canada). “Quotient Complexity of Regular Languages.”
- **Christel Baier** (Dresden, Germany). “Probabilistic Automata over Infinite Words: Expressiveness, Efficiency, and Decidability.”
- **Nicole Schweikardt** (Frankfurt/Main, Germany). “The Descriptive Complexity of Fragments of Monadic Second-Order Logic.”
- **Andrei Păun** (Bucharest, Romania). “The Nondeterministic Waiting Time Algorithm: A Review.”

As part of the program, Jürgen Dassow gave an excellent presentation entitled *Ten Years DCFS*, which summarized many of the significant works from the history of the workshop. It was especially remarkable to see how the articles from DCFS have collectively advanced the field. It also offered future directions in descriptive complexity, and some interesting open questions to carry the workshop forward for another ten years. This presentation is available online at <http://theo.cs.uni-magdeburg.de/dcfs2009/text/TenYearsDCFS.pdf>. Giovanni Pighizzini also gave a presentation on important questions that can be addressed in the future. At the Business Meeting, a preview of the next DCFS was given by Ian McQuillan who will organize the workshop in Saskatoon, Canada in August 2010. DCFS 2010 will take place directly before CIAA and DLT, both also in Canada.

Our social excursions took place over two days. The first took the participants to the 800 year old Cathedral of Magdeburg. The next day we were taken on a scenic tour of some unique sights outside Magdeburg. We took a guided tour of Tangermünde, a 1000 year old town. Then, the participants visited a late Romanesque style monastery in Jerichow. There was also a visit to Europe’s longest aqueduct, where the Midland Canal crosses overtop the river Elbe. These social events culminated in the conference dinner which was held in nearby Hohenwarthe.



Many of the participants of DCFS 2009

Thank you to all the organizers of DCFS 2009, to the speakers for the interesting talks, and to the participants. We welcome you to DCFS 2010 in Saskatoon, Canada!