

Call for Papers

DCFS 2022 – 24th International Conference on Descriptive Complexity of Formal Systems

August 29 - 31, 2022, Debrecen, Hungary

<https://konferencia.unideb.hu/en/dcfs-2022/>

Invited speakers:

Mikołaj Bojańczyk (Warsaw, Poland)
Stefano Crespi Reghizzi (Milan, Italy)
Szabolcs Iván (Szeged, Hungary)
Galina Jirásková (Košice, Slovakia)

Program committee:

Henning Bordihn (Potsdam, Germany)
Johanna Björklund (Umeå, Sweden)
Cezar Câmpeanu (Charlottetown, Canada)
Erzsébet Csuhaj-Varjú (Budapest, Hungary)
Szilárd Zsolt Fazekas (Akita, Japan)
Paweł Gawrychowski (Wrocław, Poland)
Dora Giammarresi (Rome, Italy)
Yo-Sub Han (Seoul, Korea) - *co-chair*
Géza Horváth (Debrecen, Hungary)
Galina Jirásková (Košice, Slovakia)
Stavros Konstantinidis (Halifax, Canada)
Martin Kutrib (Giessen, Germany)
Ian McQuillan (Saskatoon, Canada)
Alexander Okhotin (St. Petersburg, Russia)
Andrei Păun (Bucharest, Romania)
Giovanni Pighizzini (Milan, Italy)
Narad Rampersad (Winnipeg, Canada)
Rogério Reis (Porto, Portugal)
Michel Rigo (Liège, Belgium)
Kai Salomaa (Kingston, Canada)
György Vaszil (Debrecen, Hungary) - *co-chair*
Matthias Wendlandt (Giessen, Germany)
Lynette van Zijl (Stellenbosch, South Africa)

Steering committee:

Cezar Câmpeanu (Charlottetown, Canada)
Erzsébet Csuhaj-Varjú (Budapest, Hungary)
Stavros Konstantinidis (Halifax, Canada)
Martin Kutrib (Giessen, Germany, chair)
Giovanni Pighizzini (Milan, Italy)
Rogério Reis (Porto, Portugal)
Kai Salomaa (Kingston, Canada)

Important dates:

Submission: April 24, 2022
Notification of acceptance: May 16, 2022
Final version: May 29, 2022

Please contact:

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Url: <https://konferencia.unideb.hu/en/dcfs-2022>

The conference is organized by the Faculty of Informatics of the University of Debrecen, and by the IFIP Working Group 1.02 “Descriptive Complexity”. It is co-located with NCMA 2022, the 12th International Workshop on Non-Classical Models of Automata and Applications (August 26-27, 2022) and MCU 2022, the 9th Conference on Machines, Computations and Universality (August 31 – September 2, 2022).

The conference will take place in a hybrid format: the possibility of both, in-person and online participation will be provided.

Aims and scope

Submissions concerning the descriptive complexity of formal systems and structures (and its applications) are invited for DCFS 2022. Topics include, but are not limited to:

- Automata, grammars, languages and other formal systems; various modes of operations and complexity measures.
- Succinctness of description of objects, state-explosion-like phenomena.
- Circuit complexity of Boolean functions and related measures.
- Size complexity of formal systems.
- Structural complexity of formal systems.
- Trade-offs between computational models and mode of operation.
- Applications of formal systems -- for instance in software and hardware testing, in dialogue systems, in systems modeling or in modeling natural languages -- and their complexity constraints.
- Co-operating formal systems.
- Size or structural complexity of formal systems for modeling natural languages.
- Complexity aspects related to the combinatorics of words.
- Descriptive complexity in resource-bounded or structure-bounded environments.
- Structural complexity as related to descriptive complexity.
- Frontiers between decidability and undecidability.
- Universality and reversibility.
- Nature-motivated (bio-inspired) architectures and unconventional models of computing.
- Blum Static (Kolmogorov/Chaitin) complexity, algorithmic information.

Submissions

Submissions to DCFS must not exceed 12 pages in Springer-Verlag's Lecture Notes style including bibliography. Simultaneous submissions of papers to any other conference with published proceedings or submitting previously published papers is not allowed. Information about the submission procedure is available on the conference web page.

Proceedings, special issue

The proceedings will be published by Springer-Verlag in the series *Lecture Notes in Computer Science*. In addition, a special issue of the journal *Theoretical Computer Science* will be devoted to revised and extended versions of selected papers of the conference.