Call for Papers

MCU 2022 – 9th Conference on Machines, Computations, and Universality

August 31 – September 2, 2022, Debrecen, Hungary

https://konferencia.unideb.hu/en/mcu-2022/

Invited speakers:

Enrico Formenti (Nice, France)
Mika Hirvensalo (Turku, Finland)
Hava T. Siegelmann (Amherst, MA, USA)
Bianca Truthe (Giessen, Germany)

Program committee:

Artiom Alhazov (Chişinău, Moldova)
Pablo Arrighi (Paris-Saclay, France)
Nathalie Aubrun (Paris-Saclay, France)
Péter Battyányi (Debrecen, Hungary)
Paola Bonizzoni (Milan, Italy)
Erzsébet Csuhaj-Varjú (Budapest, Hungary)
Jérôme Durand-Lose (Orléans, France) - *co-chair*
Henning Fernau (Trier, Germany)
Rudolf Freund (Vienna, Austria)
Kaoru Fujioka (Fukuoka, Japan)
Christine Gaßner (Greifswald, Germany)
Daniela Genova (Jacksonville, FL, USA)
Peter Leupold (Bremen, Germany)
Maurice Margenstern (Lorraine, France)
Kenichi Morita (Hiroshima, Japan)
Benedek Nagy (Famagusta, North Cyprus)
Agustín Riscos-Núñez (Seville, Spain)
Shinnosuke Seki (Chofu, Japan)
Hava T. Siegelmann (Amherst, MA, USA)
Petr Sosík (Opava, Czech Republic)
K. G. Subramanian (Penang, Malaysia)
György Vaszil (Debrecen, Hungary) - *co-chair*
Sergey Verlan (Paris, France)

Steering committee:

Jérôme Durand-Lose (Orleans, France) *chair*
Erzsébet Csuhaj-Varjú (Budapest, Hungary)
Natasha Jonoska (Tampa, FL, USA)
Maurice Margenstern (Lorraine, France)
Kenichi Morita (Hiroshima, Japan)
Benedek Nagy (Famagusta, North Cyprus)
K. G. Subramanian (Penang, Malaysia)
Sergey Verlan (Paris, France)

Important dates:

Submission:	~~April 24, 2022~~ **May 8, 2022**
Notification of acceptance:	May 23, 2022
Final version:	June 5, 2022

Please contact:

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Url: *https://konferencia.unideb.hu/en/mcu-2022*

The 9th edition of MCU will take place at the University of Debrecen in Hungary, it will be co-located with DCFS 2022 (24th International Conference on the Descriptional Complexity of Formal Systems, August 29-31) and NCMA 2022 (12th International Workshop on Non-Classical Models of Automata and Applications, August 26-27).

Aims and scope

The scope of the conference topics includes computation in the setting of various discrete models, analog and hybrid models, and the meaning and implantation of universality in these contexts.
- Analog computation
- Automata theory
- Cellular automata
- Classical computability and degree structures
- Computability theoretic aspects of programs
- Computable analysis and real computation
- Computable structures and models
- Continuous computing
- Decidability of theories
- DNA computing, self-assembly and tiling
- Dynamical systems and computational models
- Emerging and non-standard models of computation
- Finite model theory
- Generalized recursion theory
- Higher type computability
- Hyper-computational models
- Infinite time Turing machines
- Membrane computing
- Molecular computation
- Morphogenesis and developmental biology
- Multi-agent systems
- Natural computation and Hybrid systems
- Neural nets and connectionist models
- Physics and computability
- Proof theory and computability
- Randomness and Kolmogorov complexity
- Relativistic computation
- Swarm intelligence and self-organisation
- Theory of Petri nets
- Turing, Counter, Register, Signal machines
- Universality of systems

Submissions

Submissions must describe work not previously published, and they must neither be accepted nor under review at a journal or at another conference with refereed proceedings.

Proceedings, special issue

The proceedings will be published by Springer-Verlag in the series *Lecture Notes in Computer Science*. A special issue with extended versions of selected contributions will appear in the *International Journal of Foundations of Computer Science*.