First Call for Papers

International Conference on Membrane Computing 2021 (ICMC 2021) Chengdu, China and Debrecen, Hungary, August 24-26, 2021

http://imcs.org.cn/coming_conferences.php

Due to the continuing of the pandemic caused by the Corona virus, the two main conferences organized annually by the Membrane Computing community through IMCS, the 10th Asian Conference on Membrane Computing (ACMC 2021) and the 22nd (European) Conference on Membrane Computing (CMC 2021) are united in one joint conference also in 2021.

The International Conference on Membrane Computing 2021 (ICMC 2021) will be organized by the Chengdu University of Information Technology, Chengdu, China and by the Faculty of Informatics of the University of Debrecen, Hungary as hybrid event with face-to-face participation in Chengdu for attendees from within China, and as an electronic conference with the possibility of online participation for attendees from the rest of the world outside of China.

Conference Information

The European Branch of ICMC is held every year from the year of 2000 in different European Countries, while the Asian Branch of ICMC is held since 2012 in the Asian region. More information can be found at the International Membrane Computing Society Webpage http://imcs.org.cn/conferences.php .Due to the pandemic situation, the European and the Asian conferences were organized as one joint, online-only conference in 2020.

ICMC 2021 is intended to be a special event honoring the 10th anniversary of the Asian conference series ACMC, while also bringing together researchers from all over the world working in Membrane Computing and related areas by providing the possibility of online participation enhancing communication and cooperation in the virtual place of an electronic conference.

Conference Topics

Like artificial neural networks, evolutionary algorithms, swarm intelligence, cellular automata and DNA computing, membrane computing is also a branch of natural computing or nature-inspired computing and was initiated by Gheorghe Păun in 1998. It aims to abstract computing models, called membrane systems or P systems, from the structure and the functioning of the living cell as well as from the cooperation of cells in tissues, organs, and populations of cells. This research area has grown into a vigorous scientific discipline and has attracted a large number of researchers all over the world. For more information, please refer to the P systems Webpage http://ppage.psystems.eu/.

The International Conference on Membrane Computing (ICMC2021) is organized to honor the 10th anniversary of the Asian conference series ACMC while also providing an open platform to bring together scholars worldwide to present their recent work on membrane computing, on topics related to theory, application and implementation of membrane computing but not limited to as follows:

(1) Theoretical aspects of membrane computing Various variants of computing models: cell-, tissue- and neural-like P systems.
Computing power of membrane computing models.
Computing efficiency of membrane computing models.

(2) Applications of membrane computing
Robot controller design.
Modeling using P systems for biosystems, biomedicine, ecological systems, etc.
Membrane-inspired optimization algorithms for various problems.
Fault diagnosis of various systems, such as robots, power systems, etc.
Information and communication technologies.
Information security and cryptography.
Other applications.

(3) Implementation of membrane computing models
Software implementation.
Hardware implementation.
Biological implementation.
Biochip implementation.
Other implementation.

(4) Related topics
Bio-Inspired Optimization Techniques, such as optimization algorithms
inspired by cells or DNA computing.
Other topics related to membrane computing or dealing with cellular
computing, DNA computing, etc.

Invited Speakers

To be announced soon.

Submission of Papers

Authors are invited to submit their original research contributions (including significant work in progress) on membrane computing, its applications and related subjects. Papers (of reasonable length) should be formatted according to Lecture Notes in Computer Science (LNCS) format (please refer to ftp://ftp.springer.de/pub/tex/latex/llncs/latex2e/llncs2e.zip). All papers should be submitted as PDF files through EasyChair conference system website.

The submission Web page for ICMC 2021:
https://easychair.org/conferences/?conf=icmc20211

Important Dates

Submission: June 14, 2021
Notification of acceptance: July 12, 2021
Submission of final versions for the pre-proceedings: July 26, 2021

Proceedings and Publications

Papers accepted for presentation will appear in the Pre-Proceedings volume of ICMC 2021. Selections of accepted papers will be re-reviewed and considered for publication in the international journal "Journal of Membrane Computing (JMC)" (https://www.springer.com/journal/41965) and other international journals.

Host institutions

Chengdu University of Information Technology, Chengdu, China
Faculty of Informatics, University of Debrecen, Hungary

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More details are to be announced soon.