

International Conference
MACHINES ET CALCULS UNIVERSELS
UNIVERSAL MACHINES AND
COMPUTATIONS

CHISINAU, 2001, MOLDOVA

Institute of Mathematics and Computer Science of the Academy of
Sciences of Moldova

23-30 MAY, 2001

Organizing institutions :

- Institute of Mathematics and Computer Science of the Academy of Sciences of Moldova
- LITA, University of Metz, France

First sponsors

- Laboratoire d'Informatique Théorique et Appliquée, (LITA), the University of Metz, Metz, France

TOPICS :

- Digital Computations:
Turing machines, register machines, cellular automata, other automata, tiling of the plane, polyominoes, snakes, neural networks, molecular computations, word processing (groups and monoids), other machines
- Analog and Hybrid Computations:
BSS machines, infinite cellular automata, real machines, quantum computing

- In both cases:
 - frontiers between a decidable halting problem and an undecidable one in the various computational settings
 - minimal universal codes:
size of such a code, namely, for Turing machines, register machines, cellular automata, tilings, neural nets, Post systems, ...
 - computation complexity of machines with a decidable halting problem as well as universal machines
 - self-reproduction and other tasks
 - universality and decidability in the real field

PROGRAM COMMITTEE :

Erzsebet CSUHAJ-VARJU, Hungarian Academy of Sciences

Gabriel CIOBANU, A.I. Cuza University, Iasi, Romania

Serge GRIGORIEFF, University of Paris 7, France

Manfred KUDLEK, University of Hamburg, Germany

Maurice MARGENSTERN, GIFM, LITA, University of Metz, France,
co-chair

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Saint-Petersburg, Russia

Liudmila PAVLOTSKAYA, Moscow, Russia

Yurii ROGOZHIN, Institute of Mathematics, Chisinau, Moldova, co-
chair

Arto SALOMAA, Turku, Finland

Mephodii RATSA, Institute of Mathematics, Chisinau, Moldova

ORGANIZING COMMITTEE :

Maurice MARGENSTERN, GIFM, LITA, University of Metz, co-chair

Yurii ROGOZHIN, Institute of Mathematics and Computer Science,
Chisinau, co-chair

INVITED SPEAKERS :

Sergei ADIAN, Steklov Institute, Moscow, Russia
Claudio BAIOCCHI, University of Roma, Italy
Martin DAVIS, University of Berkeley, U.S.A.
Jozef GRUSKA, Masaryk University, Brno, Czech Republic
Juhani KARHUMÄKI, Turku, Finland
Giancarlo MAURI, University of Milano II, Milano, Italy
Kenichi MORITA, University of Hiroshima, Japan
Maurice NIVAT, University of Paris VII, Paris, France
Gheorghe PAUN, Institute of Mathematics, Bucharest, Romania
Ge'raud SE'NIZERGUES, University of Bordeaux I, Bordeaux, France
Hava SIEGELMANN, Technion, Haifa, Israel
Klaus SUTNER, Pittsburgh, USA
Boris TRAKHTENBROT, Tel Aviv, Israel
Vladimir ZAKHAROV, Moscow, Russia

MCU/UMC'95 and MCU'98 gave rise to TCS special issues on "Universal Machines and Computations" : 168-2 (1996) and 231-2 (2000). The interest of computer scientists for the topics of the conference increased in the last years. New domains appeared, continuing them in a natural way. This explains why a regular scientific meeting on this topics must hold, each three years. And so, three years after MCU'98 the turn of MCU'2001 comes.

CONFERENCE PROCEEDINGS

Besides invited lectures, about thirty contributions are planned. In a first time, lectures and contributions will be published in a volume of Lecture Notes in Computer Science devoted to the proceedings of the conference. Participants will receive that volume at their arrival.

Contributions should be submitted as 12 page papers with an extra page indicating the name of the author(s), his/her/their affiliation, e-mail and addresses as well as the title of the contribution, a list of key-words and a short abstract within 300 words. Submissions must conform to the usual LNCS format, see

[http : //www.springer.de/comp/lncs/authors.html](http://www.springer.de/comp/lncs/authors.html).

Contributions will be submitted by e-mail as a NON ENCODED PostScript file (any encoding will entail rejection of the submission). Accepted contributions will possibly have to be corrected according to the remarks of the referee. In any case, accepted contributions should be send in LATEX format, conform to instructions to be found at the above URL.

Please, keep in mind the following dates:

Deadline for submission :	December, 1, 2000
Notification of acceptance or rejection :	February 1, 2001
Deadline for receiving corrected version of accepted papers :	February, 15, 2001

TCS SPECIAL ISSUE

A special issue of Theoretical Computer Science devoted to “MCU’2001, Machines, Computations and Universality”, will be published on the topics of the conference. A selection of the best works of the conference, among invited lectures and accepted contributions will be published in this special issue. It will be possible for a paper accepted for the Proceedings to be extended for the special issue, provided that the selection process for the special issue accepts again the paper.

GRANTS FOR STUDENTS :

If our grant applications are successful enough, a certain number of grants will be presented to young post-doc researches or PhD students in order to attend the sessions of the conference.

REGISTRATION FEES :

In order to attending the conference, send your registration form

by surface mail at the below indicated address, by FAX or by e-mail. Registration fees amount to 300 EURO's if paid before March 1st 2001 and to 350 EURO's after that date. In that latter case, they must be paid to the conference organization account before May, 1st, 2001. ALL participants have to pay the registration fees.

Please, note that registration fees will be received by the University of Metz at an account that will later be indicated.

LANGUAGE OF THE CONFERENCE

English.

RECEPTION

Reception of participants will hold on Tuesday, May 22, from 14h until 18h and on Wednesday, May, 23 from 9h, a.m. until 10h00. The colloquium will start on that day at 10h.

REGISTRATION FORM

Family name :
First name :
Affiliation :
Address :
Country :
e-mail :
FAX :
Phone :
Arrival :
Departure :

ACCOMMODATION

The accommodation will be provided by the local organization committee. Around one month before the colloquium, you will receive all indications on the accommodation by the organizing committee.

International Conference

MAIL:

– **by surface mail:**

Yurii ROGOZHIN

International Conference “Machines, Computations and Universality”

Institute of Mathematics and Computer Science,

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Maurice MARGENSTERN

International Conference “Machines et calculs universels”

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html site (reachable starting from March 15, 2000) :

http : //mcu2001.iut.univ – metz.fr/ mcu2001

http : //www.math.md/mcu2001

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