

# BULLETIN

# INTERNATIONAL CENTER FOR MATHEMATICS

December 1999



# CIM Administration Board for 2000/2004

At the General Assembly meeting on 4th December 1999 the CIM Administration Board for the period 2000/2004 was elected. The next President will be Professor Luís Trabucho, Universidade de Lisboa, with Professors Amílcar Sernadas, Instituto Superior Técnico and João Filipe Queiró, Universidade de Coimbra, as Vice-Presidents.

Professors Carlos Guedes de Oliveira, Universidade do Porto and Luís Nunes Vicente, Universidade de Coimbra, will serve as Secretary and Treasurer respectively.

Professor Paula Oliveira, Universidade de Coimbra, will be the General Assembly President while Professora Estelita Vaz, Universidade do Minho, is the Administrative Council President.

### COMING EVENTS

# MACAU 2000 MATHEMATICS AND ITS ROLE IN CIVILIZATION

#### Organizers

#### **Portugal**

Graciano Neves de Oliveira, Department of Mathematics, University of Coimbra, president of the Portuguese Mathematical Society;

João Filipe Queiró, Department of Mathematics, University of Coimbra, representing the Centro Internacional de Matemática.

### China

Yu Chong-hua, Department of Mathematics, Fudan University, Shanghai;

Zhang Wen-ling, National Natural Science Foundation of China, Beijing.

#### Macau

Iu Vai Pan, dean of the Faculty of Science and Technology, University of Macau;

Raymond Che-Man Cheng, Faculty of Science and Technology, University of Macau;

Zhou Chao Chen, Director of UNU/IIST, International Institute for Software Technology, United Nations University.

SCIENTIFIC COMMITTEE

E. R.Arantes e Oliveira (Lisboa),

D. G.Crighton (Cambridge),

C. Dafermos (Providence, RI),

GU Chaohao (Shanghai),

G. Kahn (Paris),

LI Ta-tsien (Shanghai),

J-L. Lions (Chairman, Paris),

J. Palis (Rio de Janeiro),

J. F. Rodrigues (Lisboa).

#### STRUCTURE

Aiming at a worldwide participation, the scope of the conference includes topics such as:

Comparison of the role of Mathematics in different civilizations, and exchanges and interactions in the past, with particular emphasis on the East/West encounter of mathematical cultures:

The role of Mathematics in calendars, astronomy and cartography, and other aspects of Mathematics as a driving force in human progress;

Current co-operation between industrialized and developing countries in the mathematical sciences and contributions of Mathematics for sustainable economical, industrial and social development;

Mathematical research and education for science and technology and the popularization and understanding of Mathematics in diverse cultures;

Perspectives of Mathematics in the future of civilization and its role in the Information Society.

Main Speakers

E.R.Arantes e Oliveira,

M. S. Narasimhan,

C. Dafermos,

I.Fonseca,

QI Min-You,

Wu-Yi HSIANG,

A. Quarteroni,

G. Kahn,

M. Rabin,

J.Mawhin,

L. Saraiva,

WU Wen-Jun,

Philippe Flajolet.

ROUND TABLES

Mathematics, History and Culture,

Mathematics, Technology and Development,

Mathematics, Computer and Information Society.

DATE

11th to 14th January 2000.

REGISTRATION

Dr. Raymond C. M. Cheng, Faculty of Science and Technology, University of Macau, Macau. Fax: (853) 838 314. Email: mo2000@umac.mo.

It is also possible to register online, at:

http://www.fst.umac.mo/news/conf/mo2000/

where other information about the conference can be found.

#### THEMATIC TERM ON DYNAMICS, BIFURCATION AND BIOLOGY

#### ORGANIZERS

J.A. Basto-Gonçalves, I.S. Labouriau, CMAUP and Faculdade de Ciências da Universidade do Porto

Each subevent has its own organizing committee.

Date

May to July 2000.

#### STRUCTURE

2nd May to 5th May, School on Dynamical Systems

FCUP, PORTO, e-mail: dynsys@fc.up.pt

The school is specially intended for postgraduate students and young researchers in dynamical systems.

#### Courses:

- \* Genericity and weak forms of hyperbolicity C. Bonatti (Dijon, France).
- \* Dimension and its computation M. Pollicott (Manchester, UK).
- \* Ergodic theory of chaotic systems M. Viana (Rio de Janeiro, Brasil).
- \* Nonuniformly hyperbolic horseshoes J.-C. Yoccoz (Paris, France).

Organizers: M. J. Costa, A. A. Pinto, M. Pollicott

## 8th May to 13th May, International Conference on Dynamical Systems

FCUP, PORTO, e-mail: dynsys@fc.up.pt

Scientific Commitee:

M. Benedicks, J. Palis, Ya. Sinai, S. van Strien and J.-C. Yoccoz.

Organizers: M. J. Costa, A. A. Pinto, M. Pollicott

#### June, School on singularities

## 29th June to 4th July, Conference on Bifurcations, Symmetry and Patterns

(in honour of Martin Golubitsky and Ian Stewart)

FCUP, PORTO, e-mail: bif2000@fc.up.pt

#### Confirmed invited speakers:

P. Ashwin (UK), P. Chossat (F), B. Dionne (CA), B. Fiedler (D), M. Field (USA), M. Golubitsky (USA), E. Knobloch (USA), J. Lamb (UK), W. Langford (CA), I. Melbourne (USA), M. Roberts (UK), M. Silber (USA), I. Stewart (UK), H. Swinney (USA).

#### Organizers:

I. Labouriau, S. Castro, J. Buescu, A. Dias.

# 5th July to 14th July, School on Bifurcations, Symmetry, and Patterns

CIM (Observatório Astronómico), COIM-BRA, e-mail: bif2000@fc.up.pt

The school is specially intended for postgraduate students and young researchers in bifurcation and its applications. It also has a course in common with the school in Mathematical Biology.

#### Courses:

- \* Numerical methods for dynamical systems M. Dellnitz (D).
- \* Complex dynamics in symmetric systems M. Field (Houston, USA).
- \* Symmetry, dynamics, bifurcations and applications M. Golubitsky (Houston, USA) and I. Stewart (Warwick, UK).
- \* Models of biological pattern formation H. Meinhardt (D).

#### Organizers:

I. Labouriau, S. Castro, A. Dias.

# 10th July to 21st July, School on Dynamics and Patterns in Biology

CIM (Observatório Astronómico), COIM-BRA

### 24th July to 28th July, Workshop on Dynamics and Patterns in Biology

CIM (Observatório Astronómico), COIM-BRA

#### SUPPORT

Centro Internacional de Matemática (Portugal) Centro de Matemática Aplicada, UP

Fundação Calouste Gulbenkian (Portugal)

Fundação para a Ciência e Tecnologia (Programa Praxis XXI)

Departamento de Matemática Aplicada, UP

Departamento de Matemática Pura, UP

Faculdade de Ciências, UP

Centro de Análise Matemática, Geometria e Sistemas Dinâmicos, IST

For more information on these events and registration forms, please visit the site:

http://www.fc.up.pt/ma/cma/act/trimes/

#### MATHEMATICAL ASPECTS OF EVOLVING INTERFACES

**ORGANIZERS** 

P.Colli, University of Pavia, Italy; J.F.Rodrigues, University of Lisbon, Portugal.

This is a CIM/CIME Summer School.

Date

3rd to 9th July 2000.

#### STRUCTURE

Series of five complementary courses with 3 or 4 lectures of 1h/1h30m for each course and a limited number of selected talks of 20/30 minutes each by young researchers or postdocs.

For details please see http://maei.lmc.fc.ul.pt/

#### Workshop on Partially Known Matrices and Operators

The present state of knowledge on the study of eigenvalues and other properties of matrices when only part of the entries are known will be discussed. Applications of this kind of problems to Systems Theory, extensions to operators in infinite dimensional spaces and the use of techniques from Combinatorics and Algebraic Combinatorics will also be discussed.

Several experts in the field will be present.

**ORGANIZERS** 

Fernando C. Silva, University of Lisbon; António Leal Duarte, University of Coimbra; Isabel Cabral, New University of Lisbon; Susana Furtado, University of Oporto.

Date

3 days in September 2000.

STRUCTURE

12 invited 1-hour talks and some contributed 20-minute talks.

Support

Centro de Estruturas Lineares e Combinatórias Centro de Matemática da Universidade de Coimbra

Fundação para a Ciência e Tecnologia

# GREAT MOMENTS IN XXTH CENTURY MATHEMATICS BY EFIM ZELMANOV

Professor F. J. Craveiro de Carvalho asked me to choose two outsanding mathematical events of this century. I'll restrict myself to the field of Abstract Algebra (even that won't be easy!).

Emmy Noether's work on ideals in commutative rings (preceded and influenced by the work of her

mentor David Hilbert). I don't think that this work is very deep and certainly it is not the best work of Emmy Noether. Still I find it remarkable as a manifesto of the beautiful, controversial, and seductive axiomatic method. Time tempered the euphorea and indicated the limits within which this