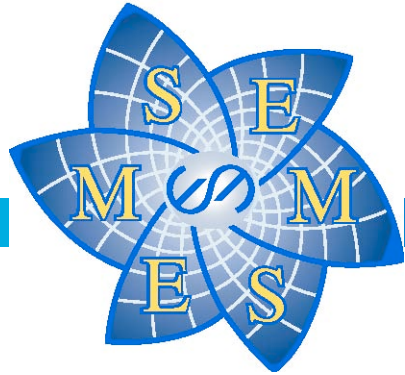


**The European Mathematical Society**

# AN INTRODUCTION TO THE EUROPEAN MATHEMATICAL SOCIETY

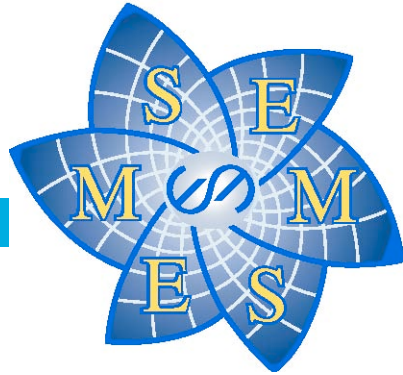
**Marta Sanz-Solé, EMS President**  
**Professor at the University of Barcelona**



**The European Mathematical Society**

What is the European Mathematical Society??

[www.euro-math-soc.eu](http://www.euro-math-soc.eu)



## The European Mathematical Society

The **EMS** is a learned society representing mathematicians throughout Europe

### Aims

To foster interaction between mathematicians of different countries.

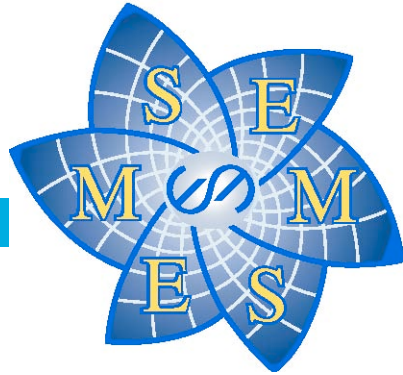
To promote mathematical research.

To assist and advise on problems of mathematical education.

To develop links between mathematics and society.

To establish a sense of identity amongst European mathematicians.

To represent the mathematical community in European institutions.



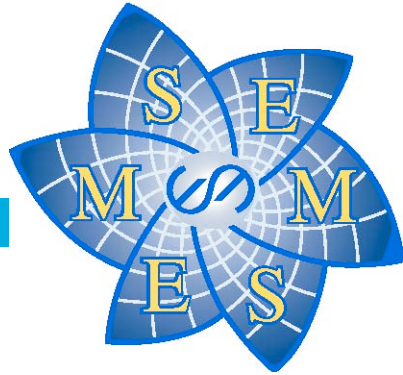
# The European Mathematical Society

## History

Discussions started at the IMU in 1978, in Helsinki.

The discussions were conducted within the European Mathematical Council, an initiative of Sir Michael Atiyah.

The EMS was founded in October 1990 in Mandralin (Poland).



## The European Mathematical Society

---

### Presidents of the EMS

**Friedrich Hirzebruch** (1991-1994), Max Planck I. Bonn,  
Germany

---

**Jean Pierre Bourguignon** (1995-1998), IHES, France

---

**Rolf Jeltsch** (1999-2002), ETH Zürich, Switzerland

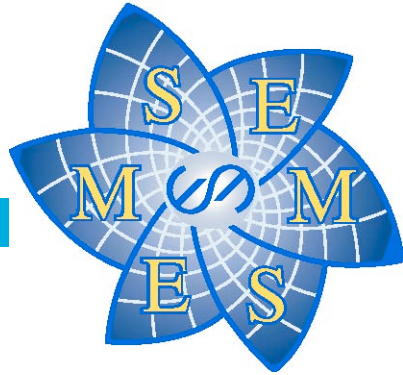
---

**Sir John Kingman** (2003-2006), U. of Bristol, UK

---

**Ari Laptev** (2007-2010), Imperial College London, UK; KTH,  
Stockholm

---



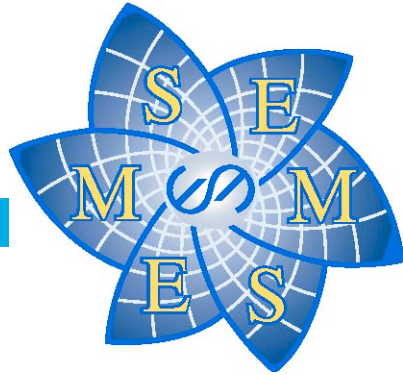
# The European Mathematical Society

## Membership

- About 60 mathematical societies in Europe
- International societies (ECMI, ESMTB, GAMM)
- Academic institutional members (about 20 research centers in Europe)
- About 2500 individual members

## Reciprocity Agreements

- AMS, Australian Mathematical Society, Canadian Mathematical Society



## The European Mathematical Society

---

### Benefits of Membership

---

EMS Newsletter, quarterly journal.

---

Free access to Zentralblatt MATH.

---

Reduced registration fees for the ECMs and for some EMS co-sponsored meetings.

---

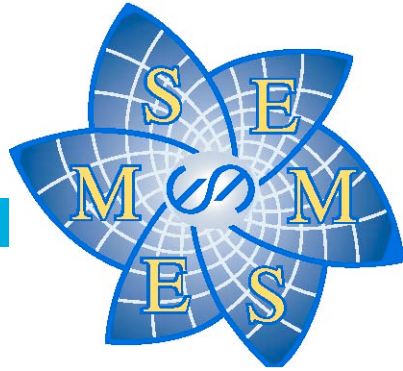
Discount on subscriptions to the Journal of the European Mathematical Society.

---

Discount on books and journals published by the EMS Publishing House, by Taylor & Francis and by Intern. Press.

---

Those derived from reciprocity agreements.



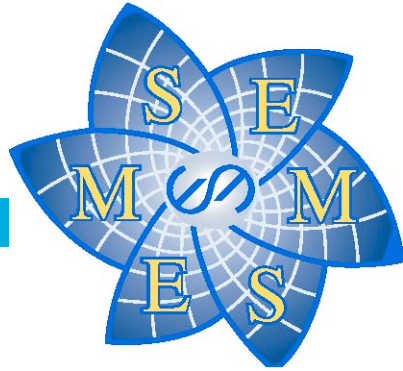
## The European Mathematical Society

### Executive Committee (... - 2010)

- President: **Ari Laptev** (UK and Sweden)
- Vice President: **Paul Exner** (Czech Rep.)
- Vice President: **Helge Holden** (Norway)
- Secretary: **Stephen Huggett** (UK)
- Treasurer: **Jouko Väinänen** (Finland)

### Members

- Zvi Artstein (Israel)
- Franco Brezzi (Italy)
- Igor Krichever (USA and Russia)
- Mireille Martin-Deschamps (France)
- Martin Raussen (Denmark)



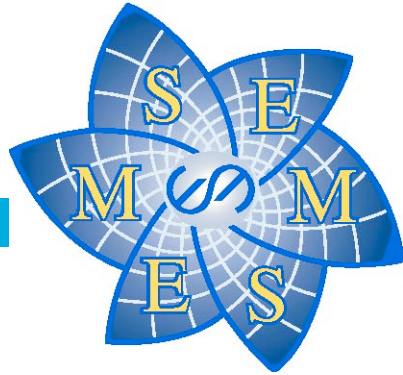
## The European Mathematical Society

### Executive Committee (2011-...)

- President: **Marta Sanz-Solé** (Spain)
- Vice President: **Mireille Martin-Deschamps** (France)
- Vice President: **Martin Raussen** (Denmark)
- Secretary: **Stephen Huggett** (UK)
- Treasurer: **Jouko Väänänen** (Finland)

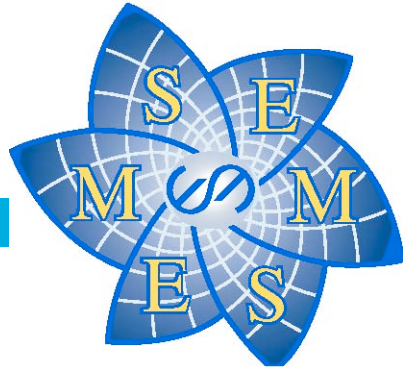
### Members

- Zvi Artstein (Israel)
- Franco Brezzi (Italy)
- Rui Loja Fernandes (Portugal)
- Igor Krichever (USA and Russia)
- Volker Mehrmann (Germany)



**The European Mathematical Society**

**Contact with Members**



## The European Mathematical Society

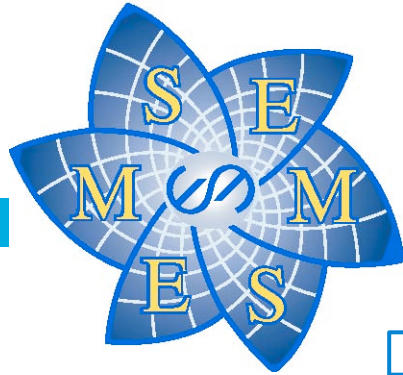
### The EMS Newsletter

Journal of record of the **EMS**.

One of the most widely read periodicals in Europe dealing with matters of interest to the mathematical community.

#### Contents:

- Articles outlining current trends in scientific development.
- Reports on member societies and institutional members.
- Reports on EMS activities and EMS Committees.
- Interviews.
- Announcements about meetings and conferences.
- Book reviews.
- Specific columns: ICMI, Personal, Zentralblatt...
- Ads of products and services to mathematicians, statisticians, computer scientists, engineers, etc.
- ...



# The European Mathematical Society

## Editorial Team (17 people)

### Editor-in-Chief

- Vicente Muñoz (Spain).

### Associate Editors

- V. Berinde (Romania), K. Ciesielski (Poland), M. Raussen (Denmark), R. Wilson (UK).

### Editors

- C. Budd (UK), J. Buescu (Portugal), M. Bartolini-Bussi (Italy), D. Feichtner-Kozlov (Germany), E. Miranda (Spain), M. Pacurar (Romania), F. Paugam (France) U. Persson (Sweden), T. M. Rassias (Greece), E. Scholz (Germany), O. Teschke (Germany).

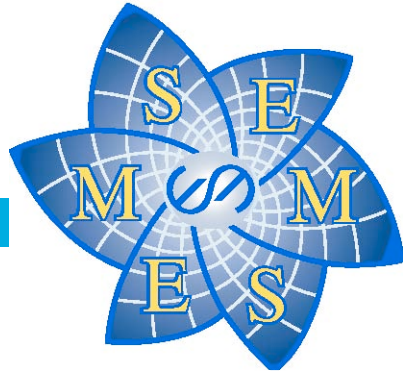
### Copy Editor

- C. Nunn (UK).

### Past Editors-in-Chief

- R. Wilson (UK), M. Raussen (Denmark).

Accessible online since 1999



## The European Mathematical Society

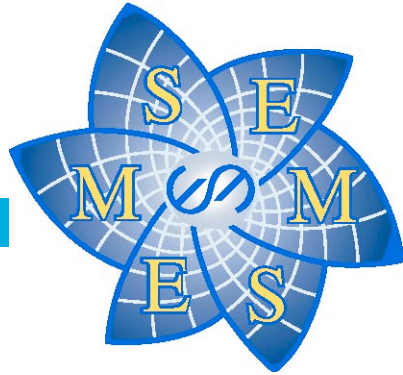
### Meetings of Presidents of European National Mathematical Societies

CIRM Luminy (France), April 26-27, 2008

Banach Center, Warsaw (Poland), May 9-10, 2009

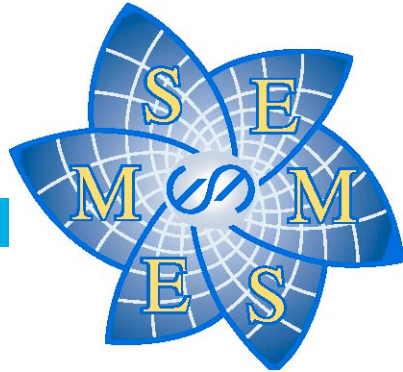
Romanian Math. Society, Bucharest (Romania), April 17-18, 2010

**Spanish Royal Math. Society, Bilbao (Spain), May 7-8, 2011**



**The European Mathematical Society**

**Committees of the European Mathematical Society**



# The European Mathematical Society

## Committees of the EMS

### Executive Committee

Applied Mathematics

Developing Countries

Education

Electronic Publishing

Meetings

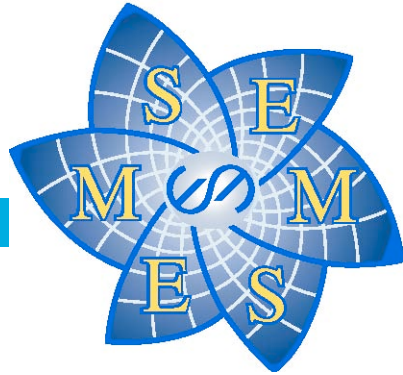
European Research Centers of Mathematics

Raising Public Awareness of Mathematics

Support of East European Mathematicians

Women in Mathematics

Ethics



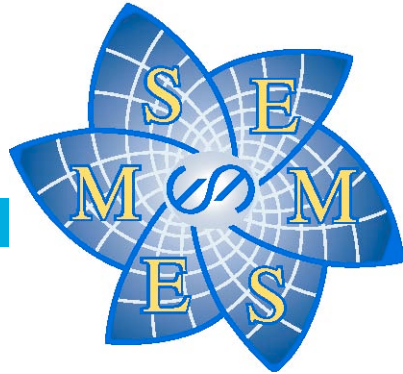
## The European Mathematical Society

### Executive Committee

It is the governing body of the Society

Represents the Society  
Carries out the wishes of the Council  
Appoints subcommittees  
Prepares the business for the Council

**President:** Marta Sanz-Solé

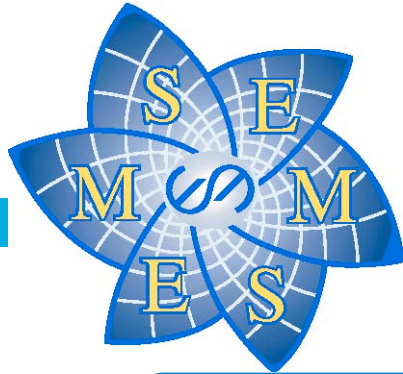


## The European Mathematical Society

### Applied Mathematics

Promotes Applied Mathematics as a whole through and within EMS. Cooperates with other European and global societies in improving the public and political awareness about the importance of mathematics to cultural, economic and social development.

**Chair:** Mario Primicerio



## The European Mathematical Society

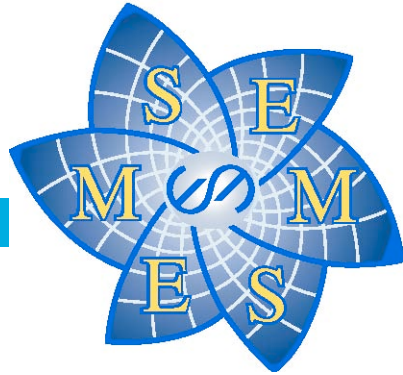
### Developing Countries

Assists developing countries with the goal of helping them to improve the level of mathematical education and research.

Mobilises funds for junior and senior researchers to attend conferences in developed countries.

Helps (both on an academic and financial level) organising conferences in DCs.

**Chair:** Tsou Sheung-Tsun

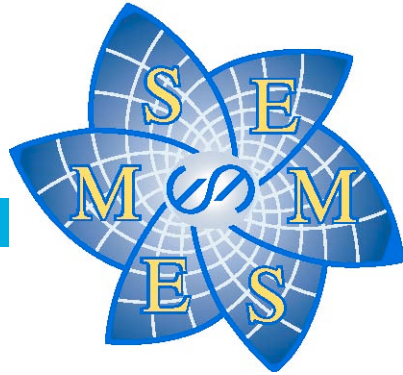


## The European Mathematical Society

### Education

The Committee reports, and where appropriate acts, on education issues that are, or should be, of concern to EMS members.

Chair: Günter Törner



## The European Mathematical Society

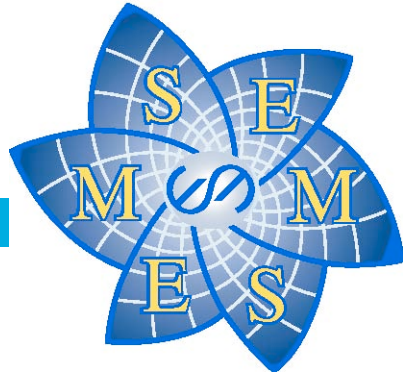
### Electronic Publishing

It keeps the EMS abreast with the development of electronic tools of doing mathematics such as:

electronic publishing,  
archiving and communication.

It reviews the progress in these areas and makes suggestions helping to build the appropriate electronic infrastructures.

**Chair:** Ulf Rehmann



## The European Mathematical Society

### European Research Centres of Mathematics (ERCOM)

**ERCOM consists of Scientific Directors of eligible European Research Centres in the Mathematical sciences**

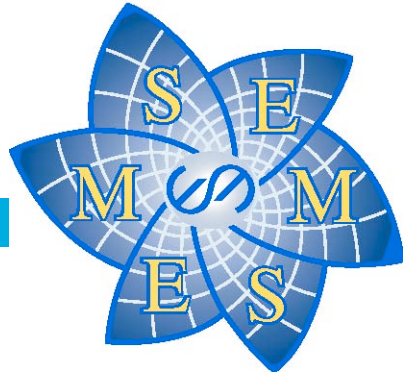
Constitutes a forum for communications and exchange of information between the centres themselves and EMS.

Fosters collaboration and coordination between the centres themselves and EMS.

Fosters advanced research training on a European level.

Cultivates contacts with similar research centres within and outside of Europe.

**Chair:** Gert-Martin Greuel



## The European Mathematical Society

### Some ERCOM members (out of 26)

Centre de Recerca Matemàtica, Spain

Centrum voor Wiskunde en Informatica (CWI), The Netherlands

Erwin Schrödinger Institute, Austria

Institut des Hautes Études Scientifiques, France

Institut Mittag-Leffler, Sweden

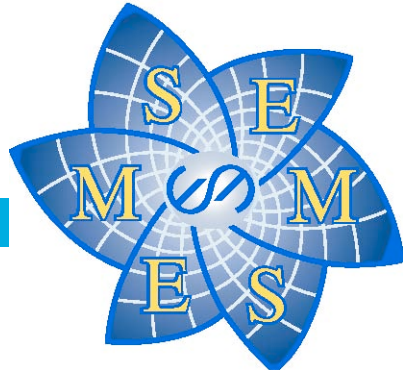
Isaac Newton Institute for Mathematical Sciences, UK

Istituto Nazionale di Alta Matematica Francesco Severi, Italy

Mathematisches Forschungsinstitut Oberwolfach, Germany

Stefan Banach International Mathematical Center, Poland

Weierstrass I. for Appl. Analysis and Stochastics (WIAS), Germany



## The European Mathematical Society

### Meetings

**Coordinates series of meetings, both in pure and applied mathematics, helping with organisation and, when possible, with funding.**

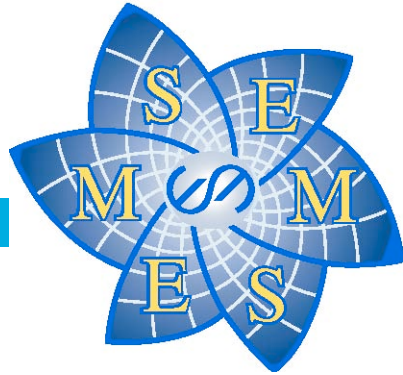
Summer schools

Joint meetings with other societies

Joint "Mathematical Week-ends" with corporate societies

EMS Mathematical Lectures

**Chair:** Zvi Artstein



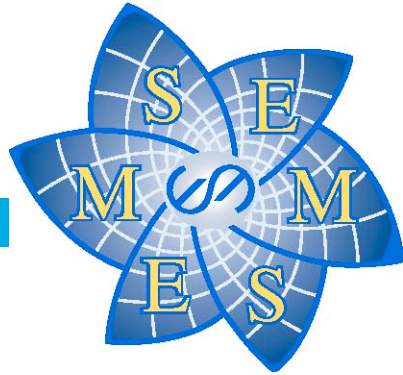
## The European Mathematical Society

### Raising Public Awareness of Mathematics

It aims at:

- Encouraging and inspiring actions directed towards raising public awareness of the importance of mathematics for contemporary society in a cultural and historical perspective.
- Assisting in the furtherance of concerted actions with other European or international organisations in matters of raising public awareness of science and technology and other important aspects of society with a strong component of mathematics.

**Chair:** Ehrhard Behrends

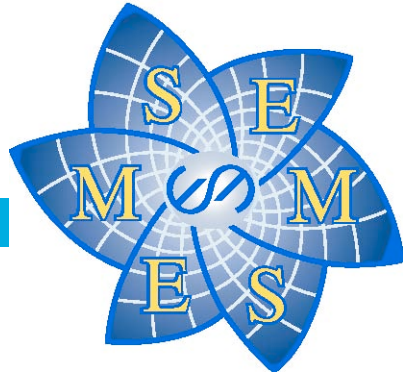


## The European Mathematical Society

### Support of East European Mathematicians

It aims to support mathematics in Eastern Europe. Its main activity is to give travel grants to conferences to enable young qualified mathematicians to attend.

**Chair:** Carles Casacuberta



## The European Mathematical Society

### Women in Mathematics

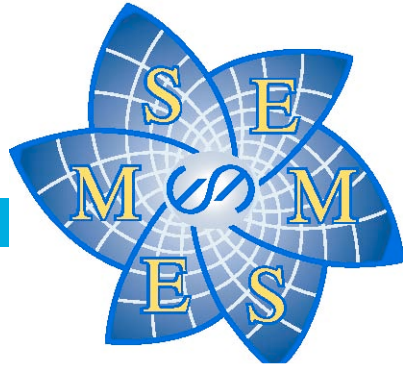
It addresses issues relating to the involvement, retention and progression of women in mathematics.

It supports and promotes the recognition of the achievements of women mathematicians.

It aims to act as the coordinating body for the committees for women in mathematics of EMS member societies.

Cooperates with other associations for women in mathematics.

**Chair:** Dusanka Perisic



## The European Mathematical Society

### Ethics

It focuses on unethical behavior in mathematical publications: plagiarism, duplicate publication, inadequate citations, inflated self citations, dishonest refereeing, etc.

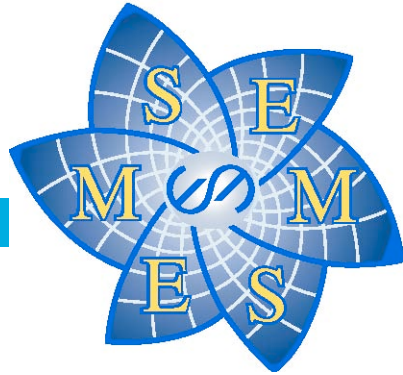
It is responsible for the following three tasks:

To raise the awareness of the problem by preparing a code of practice.

To encourage journals and publishers to respond to allegations of unethical behavior in a conscientious way.

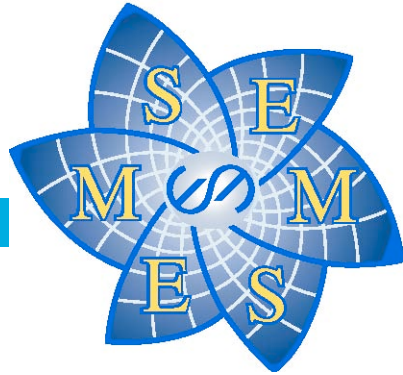
To provide a mechanism whereby researchers can ask the Committee to help them pursue claims of unethical behavior.

**Chair:** Arne Jensen



**The European Mathematical Society**

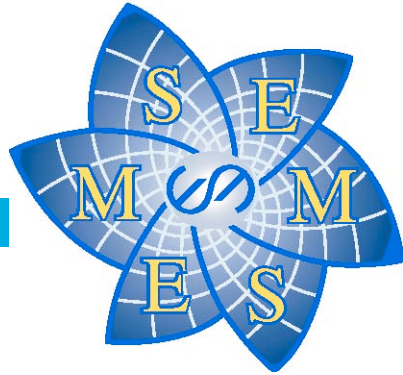
**Some Activities and Projects**



## The European Mathematical Society

### European Congresses of Mathematics (ECMs)

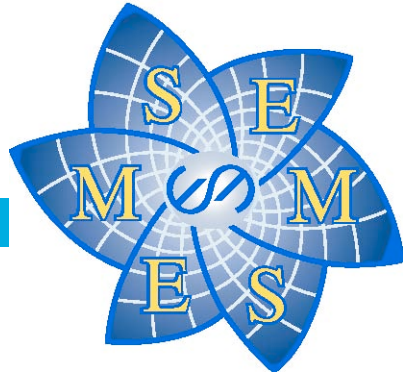
- 1992 Paris
- 1996 Budapest
- 2000 Barcelona
- 2004 Stockholm
- 2008 Amsterdam
- **2012** 6th ECM, Krakow, July 2-7 [www.6ecm.pl](http://www.6ecm.pl)
- **2016** Call for bids for the 7th ECM is now open  
Deadline: February 28, 2011.



## The European Mathematical Society

### Format of ECMs

- Plenary lectures (10)
- Invited lectures (30)
- Minisymposia
- Science lectures
- Poster sessions
- Round Table Discussions
- ...



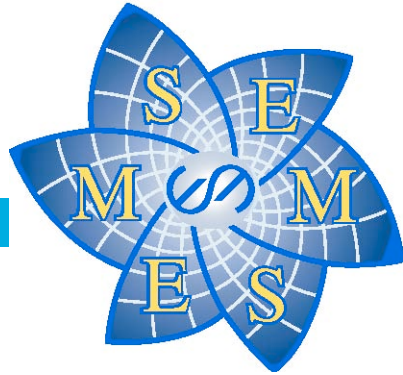
## The European Mathematical Society

### EMS Prizes

- Ten prizes presented at each ECM.
- To recognize excellent published work in Mathematics by young researchers not older than 35 years.

### Some recipients

- Borchers, Gowers, Kontsevitch, Lindenstrauss, Okounkov, Perelman, Smirnov, Villani, Werner (Fields Medalist), Avila, Ben Green, Siylvie Serfaty, Tolsa, Claire Voisin, ...



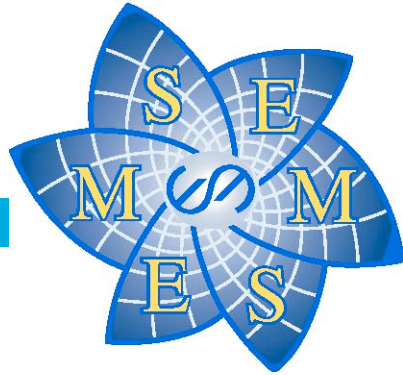
## The European Mathematical Society

### The Felix Klein Prize

- Established in 1999 by the **EMS** and the endowing organisation, the **Institute for Industrial Mathematics** in Kaiserslautern.
- Awarded to a young scientist, or a small group of young scientists, for *using sophisticated methods to give an outstanding solution, which meets with the complete satisfaction of industry, to a concrete and difficult industrial problem.*

### Previous recipients

- David Dobson (2000), Joselin Garnier (2008).



## The European Mathematical Society

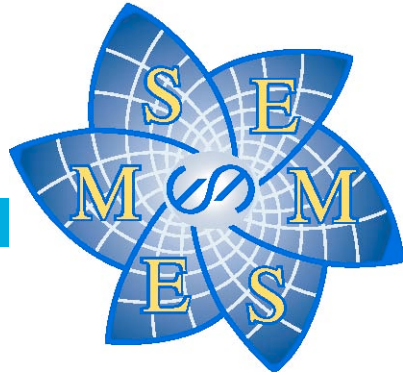
### Otto Neugebauer Prize in the History of Mathematics

A EMS-Springer prize, funded by Springer.

Named after Otto Neugebauer, the **father of both, Zentralblatt and Mathematical Reviews.**

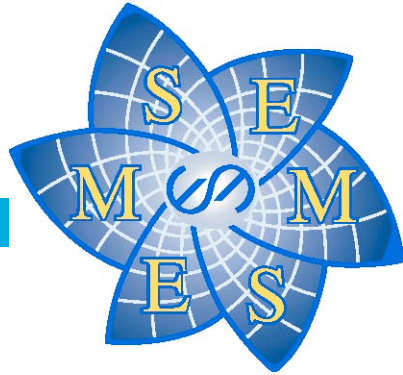
[www-gap.dcs.st-and.ac.uk/history/Biographies/Neugebauer.html](http://www-gap.dcs.st-and.ac.uk/history/Biographies/Neugebauer.html)

The prize winner will be presented at each ECM.



**The European Mathematical Society**

**Publication Activities**



## The European Mathematical Society

---

### Zentralblatt MATH

---

[www.zentralblatt-math.org/zblmath](http://www.zentralblatt-math.org/zblmath)

---

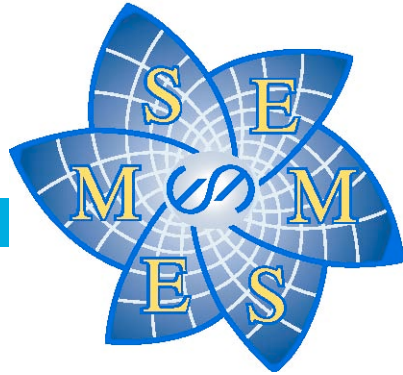
Owners: FIZ Karlsruhe, **EMS**, Heidelberger Akademie der Wissenschaften.

---

Publisher: Springer Verlag.

---

Funded by the German Government.



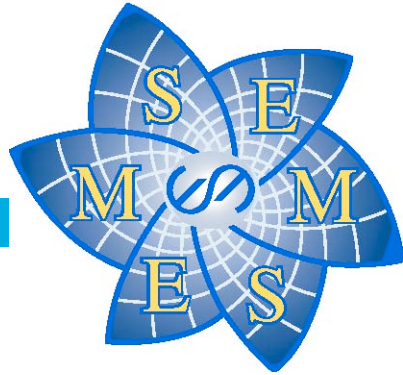
## The European Mathematical Society

**European Mathematical Foundation**

**EMS Publishing House**

[www.ems-ph.org](http://www.ems-ph.org)

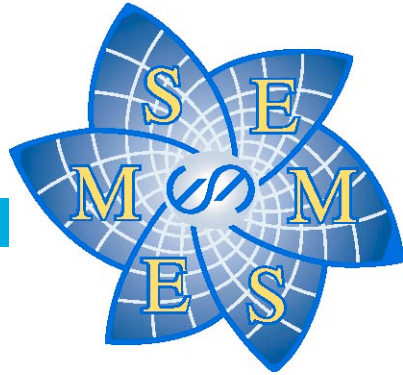
- Created by EMS in 2002.
- Permanent office at ETH, Zürich.
- Board of Trustees consisting of EMS officers.
- Director: Thomas Hintermann.
- Publishing Director: Manfred Karbe.



## The European Mathematical Society

### Mission statement of the EMF

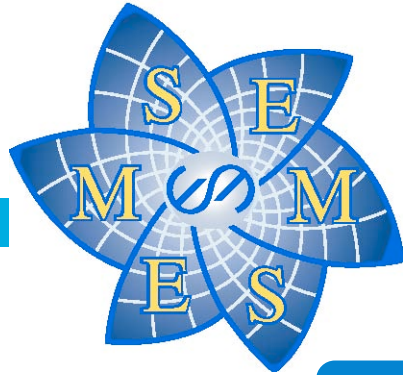
The EMS Publishing House is a not-for-profit organization dedicated to the publication of high-quality peer-reviewed journals and high-quality books, on all academic levels and in all fields of pure and applied mathematics. The proceeds from the sale of our publications will be used to keep the Publishing House on a sound financial footing; any excess funds will be spent in compliance with the purposes of the EMF laid down in its statutes. The prices of our products will be set as low as is practicable in the light of our mission and market conditions.



# The European Mathematical Society

## Publications

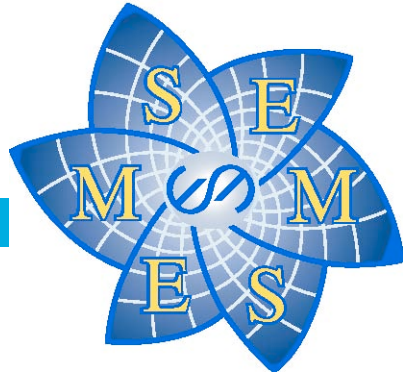
- Books
- e-Books
- Journals
- Oberwolfach Reports
- EMS Newsletter



## The European Mathematical Society

### Books Series

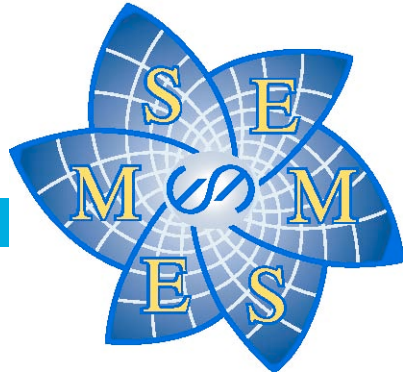
- EMS Monographs in Mathematics
- EMS Series of Congress Reports
- EMS Series of Lectures in Mathematics
- EMS Textbooks in Mathematics
- EMS Tracts in Mathematics
- ESI Lectures in Mathematics and Physics
- Heritage of European Mathematics
- IRMA Lectures in Mathematics and Theoretical Physics
- Zurich Lectures in Advanced Mathematics



## The European Mathematical Society

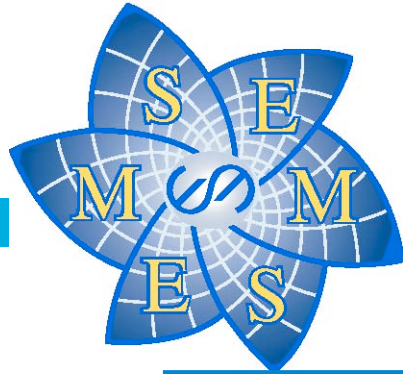
### Journals

- Commentarii Mathematici Helvetici
- Elemente der Mathematik
- *Groups, Geometry and Dynamics*
- *Interfaces and Free Boundaries*
- *Journal of Noncommutative Geometry*
- *Journal of Spectral Theory*
- *Journal of the European Mathematical Society*
- Portugaliae Mathematica
- Publications of the Research Institute for Mathematical Sciences
- *Quantum Topology*
- Rendiconti Lincei - Matematica e Applicazioni
- Zeitschrift für Analysis und ihre Anwendungen



**The European Mathematical Society**

**A Sample of Projects**



## The European Mathematical Society

---

### ESF Forward Look Project Mathematics and Industry

[www.ceremade.dauphine.fr/FLMI](http://www.ceremade.dauphine.fr/FLMI)

---

*Quoting Mario Primicerio, Chairman  
of the Applied Mathematics C.:*

How can mathematics respond to the needs  
of industry and provide the right tools?

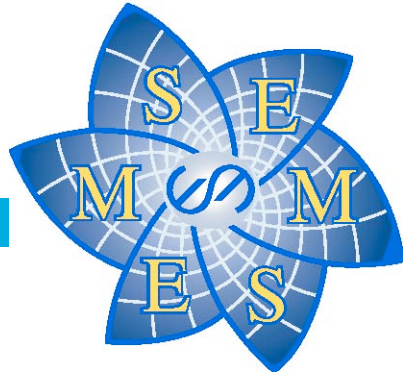
---

How can industrial issues give birth to new  
lines of research in mathematics?

---

How can we extend to the European level  
isolated positive experiences from different  
European countries and organisations?

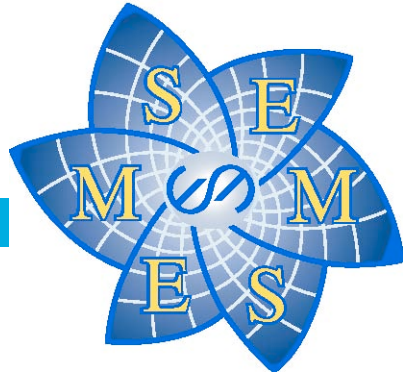
---



## The European Mathematical Society

### It would be important:

1. To identify modern trends in research in the mathematical sciences in academia and the mathematical challenges faced by industry in the globalised economic environment, and analyse the implications of the trends for the relationship between mathematical scientists in academia and industry.
2. To identify and analyse major challenges and opportunities for a mutually beneficial partnership between industry and academia.
3. To give recommendations concerning training young researchers in applied mathematics.
4. To identify the resources necessary for the implementation of various recommendations.



## The European Mathematical Society

### Three working groups on specific topics:

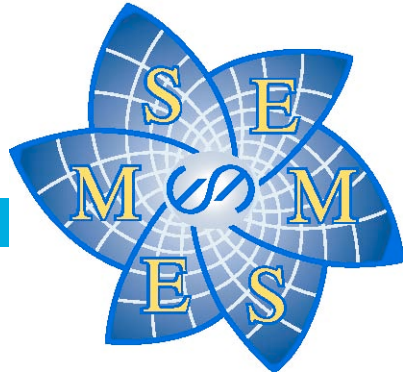
- Training and career development (Magnus Fontes, Sweden).
- Academia-Industry interface (Volker Mehrman, Germany).
- Opportunities and challenges (Yvon Maday, France).

### Two documents:

- Final Report
- Success Stories

### Final Conference:

- Presentation of conclusions at Brussels, December 2, 2010, attended by the Vice-President of the European Parliament.



## The European Mathematical Society

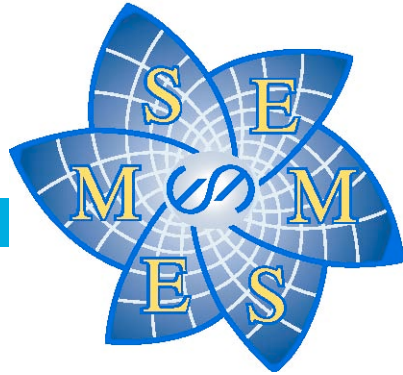
### The European Digital Mathematics Library

[www.eudml.eu](http://www.eudml.eu)

The EuDML portal will be a single well-organised resource offering a long-standing reliable system with sophisticated tools available for search and exploration. This will be achieved by implementing a single access portal for heterogeneous and multilingual collections, on top of a rich metadata repository endowed with a user-focused interface.

Funded by the EU Programme CIP (2009 - 2013)

Partners in Bulgaria, Czech R., France, Germany, Greece, Poland, Portugal, Spain, UK.



# The European Mathematical Society

## ESF-EMS-ERCOM Conferences

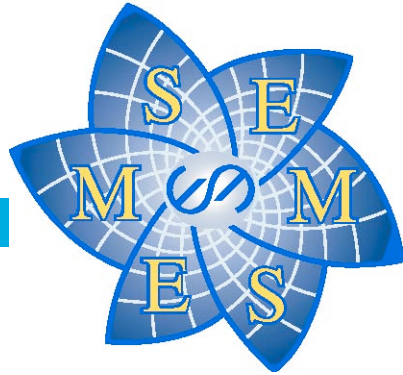
[www.esf.org/activities/esf-conferences.html](http://www.esf.org/activities/esf-conferences.html)

Partnership with ESF (2008-2013)

### ESF Research Conferences Scheme

Up to 6 conferences per year financed 50% by ESF

Conferences should be held at an **ERCOM** center



# The European Mathematical Society

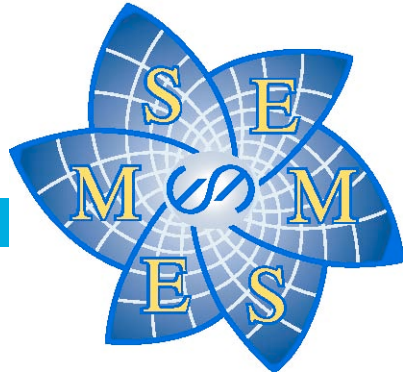
## Objectives

To promote research activity in the mathematical sciences and cognate subjects across Europe.

To organise conferences of **high scientific quality** and **timeliness**, emphasising **emerging** issues.

To develop activities and ideas for conferences concerned with the **application of mathematics** and **instructional meetings** aimed at end users in industry, commerce, medicine and life sciences.

To **nurture the next generation** of mathematical scientists by encouraging participation of **young** researchers and address the **gender gap** in mathematics by encouraging the participation of women.



## The European Mathematical Society

[www.mathematics-in-europe.eu](http://www.mathematics-in-europe.eu)

### Mathematics in Europe

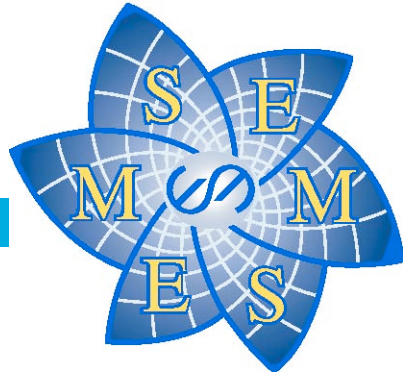
An EMS project funded by Munich Re (Germany)

#### Addressed to:

- Everyone who is interested in mathematics: journalists, school children, students, teachers, professional mathematicians.
- Everyone looking for suggestions for increasing public awareness of mathematics.

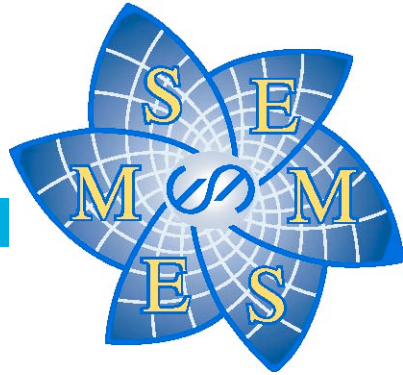
#### Entries include:

- News, Information, Popularization Activities, Math Help, Math(s) as a profession, Competitions.



**The European Mathematical Society**

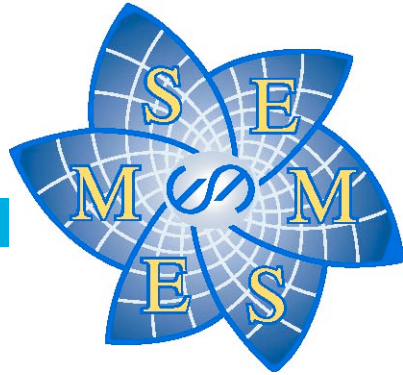
**Influence of the EMS**



## The European Mathematical Society



- is representing mathematics in the European Union,
- is an effective intermediary between mathematicians and politicians at the EU Research-Directorate General,
- has been influential in the creation of the **European Research Council**,
- nominates representatives on the **Abel Prize Committee** and other scientific boards,
- sits as an observer at the Standing Committee for Physical and Engineering Sciences (**PESC**) of the ESF,
- participates in the lobbying group *Initiative for Science in Europe*,
- ...

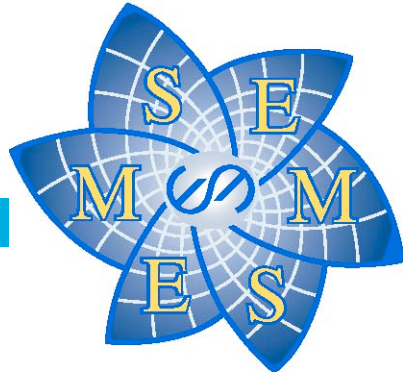


## The European Mathematical Society

### At the EU Research-Directorate General

- Position papers on the *Framework Programmes*.
- Negotiates specific funding for *Mathematics*.

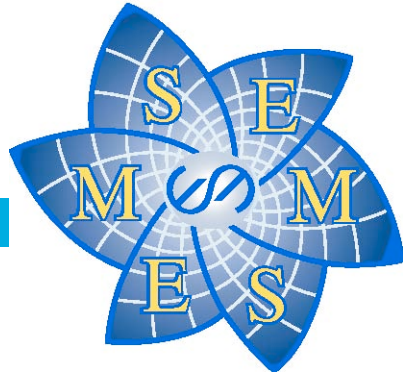
2009 EU Call for Research European Infrastructures: *Infrastructures for Mathematics and its interfaces in science, technology and society at large*.



## The European Mathematical Society

### Some Final Remarks

- EMS provides a good structure for the development of **mathematics in its unity**.
- Acting at an **European scale**, we can address crucial questions for mathematics at the **critical level**.
- There is an increasing necessity of **strong and large social and scientific networks** to support the demands of mathematical developments from other sciences and from innovative technologies in a sophisticated knowledge society.
- EMS interacts with EU officials, and informs persistently about **the specific needs of mathematical research**.
- European research in mathematics is at the highest level. Through its actions, EMS aims to obtain the **appropriate European investment** to maintain this level, and to assure its **long-term development**.



The European Mathematical Society

Not yet a member of EMS?

**Please, join!**

[www.euro-math-soc.eu](http://www.euro-math-soc.eu)