

ESF-EMS Mathematics Conferences

supported by the

European Research Centres on Mathematics (ERCOM)

within the framework of the

ESF Research Conferences Scheme

The **ESF Research Conferences Scheme** provides the opportunity for leading scientists and younger researchers to meet for discussions on the most recent developments in their fields of research. It acts as a catalyst for creating new synergistic contacts throughout Europe and the rest of the world. It develops principally through the establishment of long-term partnerships between the ESF and national and international organisations, including universities. **ESF Research Conferences** are open to scientists world-wide, whether from academia or industry. The conferences may be single events, or series, usually with a biennial meeting focusing on specific aspects of the same general topic. They generally last for four or five days and up to 150 participants and invited speakers may attend. Chairs select participants from applications received as a result of publicising the conferences. A conference fee is charged to participants.

Conference Guidelines

European Science Foundation

<http://www.esf.org>

The **European Science Foundation (ESF)**, with its headquarters located in Strasbourg, France, provides a common platform for its Member Organisations in order to advance European research and to explore new directions for research at the European level. Through its activities, the ESF serves the needs of the European research community in a global context.

European Mathematical Society

<http://www.emis.de/>

The **European Mathematical Society (EMS)** was founded in 1990. The purpose of the Society is to further the development of all aspects of mathematics in the countries of Europe. In particular, the Society aims to promote research in mathematics and its applications. It assists and advises on problems of mathematical education. It concerns itself with the broader relation of mathematics to society. In short, it seeks to establish a sense of identity amongst European mathematicians. Membership of EMS comprises about 50 mathematical societies in Europe, about 20 academic institutional members, three institutional members, and about 2000 individual members who have joined through their national societies.

European Research Centres on Mathematics (ERCOM) is a Committee of the European Mathematical Society. The aim of ERCOM is to contribute to the dynamic unity of Mathematics, from fundamentals to applications. The purposes of ERCOM are: to constitute a forum for communications and exchange of information between the centres themselves and EMS; to foster collaboration and coordination between the centres themselves and EMS; to foster advanced research training on a European level; to advise the Executive Committee of the EMS on matters relating to activities of the centres; to contribute to the visibility of the EMS and to cultivate contacts with similar research centres within and outside Europe.

ESF-EMS Mathematics Conferences supported by ERCOM

The European Science Foundation (ESF) and the European Mathematical Society (EMS), supported by the European Research Centres on Mathematics (ERCOM), have agreed to co-sponsor a series of Scientific Conferences, within the framework of the ESF Research Conferences Scheme. The Series will be known as '**ESF-EMS-ERCOM Mathematics Conferences**', and will be at the highest scientific level with respect to topics and choice of participants. The Conferences will bring together participants and experts in **mathematics** to discuss topics that are of major importance to the scientific community in Europe. Conferences in the series will be hosted in and co-sponsored by selected ERCOM institutions participating in the Scheme (list under ANNEX).

Topics

The topics should be at the forefront of scientific research and may be interdisciplinary when appropriate. ESF-EMS-ERCOM Mathematics Conferences will concentrate on topics in the broad area of **Mathematics**.

(1) Proposals and Deadlines for Submission

Proposals will be called for on the ESF Research Conferences website (<http://www.esf.org/conferences>), and they should be submitted to ESF by the deadline stated in the Call. Calls will be addressed to leading European scientists for Conferences that will take place in one of the ERCOM Centres. Proposals will be for a single event. Proposers will be able to choose the host ERCOM institution in which they wish to run the Conference. Adjustments in the choice of host institution may be made by the ESF-EMS-ERCOM Review Panel. The Proposals will be evaluated through international Peer Review for which Referees will be nominated by the appropriate ESF Science Committees. The final assessment, selection of topics, on the basis of two written reviews, and selection of the participating ERCOM Institute will be made jointly by the ESF, EMS and ERCOM through a small Review Panel composed of members of the ESF Science Committees and scientists nominated by EMS and ERCOM.

The Assessment Criteria will be:

- Scientific scope of the proposal;
- Scientific relevance in terms of novelty, originality and timeliness;
- European dimension and added value;
- Scientific quality of the draft programme;
- Likely participation interest.

Only conferences fulfilling all criteria at a high level will be supported.

Venues and Date

Within the ESF Research Conferences Scheme, a limited number of venues, each linked to a certain scientific disciplinary area, is being established in order to create a clear 'brand-name' for the Conferences, and a predictable relation for the scientific community. ESF-EMS-ERCOM Conferences will take place in one or more of the participating ERCOM Institutes. The maximum capacity at the venues is **150 participants**. The Conferences may be held all year round subject to the availability in the venue. The typical duration of a Conference is 4-5 days. Participants will normally arrive on a Friday or Saturday afternoon, and depart on Wednesday or Thursday after breakfast. When submitting a Proposal for a Conference, the desired **month** and **the year** should be indicated as a minimum.

Scientific Programme

The Chair or Co-Chairs, supported by a Vice-Chair and, a small Scientific Committee, will be responsible for developing the **scientific programme** for the Conference. The membership of this Scientific Committee will be international.

Profile and Format of the Conferences

The core activities of the Conferences will be based on **lectures by invited scientists**, who are leaders in their respective fields, followed by **extensive discussion periods** e.g. 30-minute lecture followed by an extended discussion period. An informal exchange of ideas, both inside and outside the lecture room will be encouraged, and the number of sessions in the daily timetable will be limited in order to allow sufficient time for interaction between the participants. In addition to the 5-6 hours per day of lecture room activities, poster sessions, round-table discussions or discussion groups will be organised. Either one afternoon or extended lunch periods will be usually kept free of lectures in order to allow time for free time activities.

One evening should be reserved for a '**Forward Look Plenary Discussion**' about future developments in the field. The format of this discussion will be provided by ESF ¹.

In order to encourage speakers to present their latest results and ideas, which may not yet be fully explored and ripe for publication, no written papers will be requested. The publication, as proceedings, of selected papers prepared after the Conferences may be approved by the Chair, subject to the agreement of the speakers concerned.

Participants will take all their meals together to encourage further contact and networking, which will be particularly beneficial to **younger researchers** who may be less outspoken in the more formal lecture room setting. In order to gain optimum benefit from the Conference, both the speakers and the participants are expected to stay for the whole duration.

In particular, the Conferences should:

- promote research activity in the mathematical sciences and cognate subjects across the European Union;
- emphasise emerging issues and new applications;
- be high-profile events that attract the best mathematicians and related scientists from around the world;
- develop activities and ideas concerned with the application of mathematics and instructional meetings aimed at end users in industry, commerce, medicine and life sciences;
- disseminate research achievements and innovative applications of mathematics internationally;
- nurture the next generation of mathematical scientists by encouraging the participation of young researchers and address the gender gap in mathematics by encouraging the participation of women.

The Conferences may also include scientific training activities – like series of lectures – providing the opportunity for young researchers to gain expertise in new subjects and to establish connections for further collaboration.

Poster Sessions

Poster sessions will be a very important feature of this series of conferences. Ideally, the venue for the poster session will be located close to the main meeting room and will be large and light enough to host such an event. Moreover, a **social event** may be incorporated into the meeting. The following factors should also be considered:

- each participant should give a one-slide presentation about the contents of his/her poster contribution at the beginning of the scheduled poster discussion sessions;
- sufficient time should be allowed for posters to be viewed, ideally throughout the entire meeting.

(2) Organisation

In order to encourage leading scientists within Europe to chair ESF-EMS-ERCOM Mathematics Conferences, only the **scientific** aspects of the meeting organisation (including any decisions on financial support for invited

¹ (ESF's Forward Looks are the key to the development of strong links between the European scientific community and science policy makers. The purpose of a Forward Look is to define research agendas and priorities in a particular research domain and to communicate the results to research funders. The themes are selected on the basis of their importance to European research.. See <http://www.esf.org/flooks>).

speakers and other participants) will be undertaken by the Chair (or Co-chairs) and the Scientific Committee. However, it is recommended that Chairs seek **additional sponsorship** from other sources, and they should advise ESF which organisation(s) they intend to approach. All other organisational tasks and logistics will be the responsibility of the ESF Conference Unit, working in close co-operation with the host ERCOM Institute, and an ESF Conference Officer will be assigned to each Conference. His/her tasks will include coordinating the administrative arrangements at the venue, publicising the Conference, financial and budgetary matters, the processing of applications, communicating with participants and speakers, making payments and collecting fees. The ESF Conference Unit is well equipped to manage the organisation of the Conferences in a standardised, streamlined manner, in close co-operation with the Chairs.

Grant

The Grant available for the Conference will normally be used to meet the expenses of the invited speakers and selected young scientists. Travel should be by rail or by economy air. Experience shows that it is often possible for speakers to obtain some of their travel costs from other sources, if the sponsor offers partial support. The co-sponsors will jointly provide a total grant of **EUR 40 000** per Conference. It is expected that participants (other than the speakers and selected young scientists) will pay their own travel and subsistence costs, and the registration fee.

Management of the Grant

The ESF Conference Unit, in close consultation with the ERCOM host institution and the Chair, will manage the Grant. ESF will be responsible for all payments.

Registration Fee

A **registration fee**, in the order of EUR 250-300 will be levied, in order to cover the costs to ESF of organising and administering the Conference. This levy will be in addition to the subsistence costs. The Conference fees (subsistence + registration) will be all-inclusive i.e. full board and lodging, meeting facilities for the duration of the meeting, a social programme, and group bus transfers. All fees will be paid to ESF, and an online fee payment facility will be available.

Additional Sponsorship

The Conference will be advertised as "ESF-EMS-ERCOM Mathematics Conference on '*Title and subtitle*". Additional sponsorship may be acknowledged in publicity material in terms such as "With major support from..." or "With additional sponsoring from...". If an external sponsor wishes to have its logo included in advertising material, the Chairs should advise ESF accordingly. ESF, EMS and ERCOM do not usually favour co-sponsorship that requires formal proceedings to be published. There should be no confidential information. Eventual IPR or copyrights are the property of all participants contributing financially or intellectually to the Conference.

Publicity

ESF will publicise the Conference in appropriate scientific journals and on its **web site**. ESF will be responsible for the publicity of each Conference, and for disseminating information to potential applicants. The Conference will be advertised to **appropriate individuals and laboratories**, to **ESF Member Organisations** and to a **network of scientists**.

EMS will also publicise the Conferences in its Newsletter, on its website and through special mailings to its members, making sure that the information reaches every European mathematician.

The identity of a Conference will be promoted through a standardised, graphical presentation of all its documents, which will include the logos of ESF, EMS and of the ERCOM Institution hosting the Conference.

Whenever possible, individual advertisements and calendar entries will also be placed free-of-charge in the scientific press, and in other appropriate journals and newsletters, according to the associated science disciplines.

In addition, it is very important that Chairs provide a **comprehensive, substantial emailing list** for circulation of an advertisement. (Important: this list of email addresses must be in the form of either a Word or an Excel document with all addresses listed in **one** column only and with a single address **per** row).

As soon as it is agreed to go ahead with the Conference, Chairs will be expected to email the ESF Conference Unit with the following documents in order to advertise the event:

- the **preliminary scientific programme**, including a paragraph about the scope of the Conference, the list of topics to be covered, the list of confirmed invited speakers with their affiliations and the titles of their lectures;
- the full address and email list of the **invited speakers**;
- a **comprehensive, geographically-balanced email list** of all potentially interested scientists;
- a **list of scientific journals** or reviews and their websites for publicity and free inserts in calendars of events.

Applications to Attend the Conference and Deadlines for Application

An online **application facility** is available via the ESF Research Conferences website (<http://www.esf.org/conferences>). The deadline for applications is to be no later than 3 months before the event. The ESF Conference Unit will process all applications and email them to the Chair for decision, together with each applicant's one-page abstract and list of publications.

Participation

Chairs will select participants from applications received as a result of ESF and EMS publicising the Conferences. The basic criteria for accepting participants will be their scientific merit and their scientific needs. Participants, including speakers, may be accepted from any country, although there should normally be a high proportion of Europeans. Without compromising scientific standards, organisers should aim for a wide geographical representation of scientists, with a recommended ratio of **about two-thirds European participation to one-third non-European**. Special attention should also be paid to the involvement of **younger applicants** and those from **developing countries**, and over-representation of scientists from the host country should be avoided. Moreover, the gender balance should be taken into consideration. ESF Research Conferences are expected to be large conferences of up to 150 participants. The attendance should generally be at least 80 participants and in very exceptional circumstances no less than 60.

Final Selection, Programmes & Invitations

The Chair should decide on the participation within **3 weeks** of receiving the applications. At this stage he/she should finalise the scientific programme and email it to ESF, together with the list of participants and the allocation of financial support. An invitation will be emailed to each invited speaker and participant. The Programme and Practical Information will be available on the ESF Research Conferences website.

Book of Abstracts

If the Conference Chair wishes to have the lecture abstracts and/or (extended) abstracts for posters assembled into a **Book of Abstracts**, the cost should be included in the conference budget or covered by the Chair's own funds. The ESF Office cannot be involved in actually arranging for the production of this booklet and suggests that this task could be delegated to a young collaborator who could be offered a grant to cover his/her attendance at the conference.

On-site Administrative Arrangements

The ESF Conference Unit will finalise all on-site administrative arrangements with the hosting institution. A **Conference Officer** from ESF will be present for the duration of the Conference to take care of registration, any travel payments and to oversee the local administrative organisation. Owing to the size of the events, Chairs are encouraged to provide an **assistant or young researcher** to be responsible for the organisation of the poster sessions and/or other on-site scientific aspects and to help at the registration desk as required.

Questionnaires

Participants will be required to complete a **questionnaire** on various aspects of the Conference. The completed questionnaires should be returned to the on-site secretariat during the event.

Report on the Conference

The Chair is expected to write a **conference report**, as it is a condition of sponsorship that a scientific report be submitted after every Conference. The **conference report** should have the following format:

1. An **introduction** (up to two pages) on the topic in non-specialist terms (especially for highly technical subjects);
2. **Scientific content** of the conference:
 - a. a summary of the conference sessions focusing on the scientific highlights
 - b. an assessment of the results and their potential impact on future research or applications
3. **'Forward Look'²Plenary Discussion'**:
 - a. State-of-the-art in the field;
 - b. Emerging topics;
 - c. Visions for the future of the research field – identification of issues in the 5-10 years+ timeframe;
 - d. Is there a need for a foresight-type initiative?
4. The **reaction of the participants** to the location and the organisation, including networking, and any other relevant comments.

The reports should be sent to ESF **no later than six weeks** after the end of the Conference. The reports will be forwarded to the appropriate ESF Standing Committees and Expert Committees for information and consideration in their science policy discussions and also to ESF's Partners in the ESF Research Conferences Scheme. The **Report** may be posted on a **'Conference Highlights'** page within the ESF Research Conferences website (subject to the explicit authorisation of the Author).

Enquiries and Further Information

For all enquiries and/or for further information concerning the Conference, please contact conferences@esf.org.

3 June 2008

² See <http://www.esf.org/flooks>

ERCOM Institutions participating in the Scheme

Centre de Recerca Matemàtica, Bellaterra (Spain)

<http://www.crm.cat/>

Centro di Ricerca Matematica Ennio De Giorgi, Pisa (Italy)

<http://www.crm.sns.it>

Centro Internacional de Matematica, Coimbra (Portugal)

<http://www.cim.pt>

Emmy Noether Research Institute for Mathematics, Bar Ilan (Israel)

<http://www.cs.biu.ac.il/~eni/>

Erwin Schrödinger International Institute for Mathematical Physics, Vienna (Austria)

<http://www.esi.ac.at/>

EURANDOM, Eindhoven (The Netherlands)

<http://www.eurandom.nl>

Institut Mittag-Leffler, Djursholm (Sweden)

<http://mittag-leffler.se>

International Centre for Mathematical Sciences, Edinburgh (UK)

<http://www.icms.org.uk>

Issac Newton Institute for Mathematical Sciences, Cambridge (UK)

<http://www.newton.cam.ac.uk/>

Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach (Germany)

<http://www.mfo.de> or www.oberwolfach.org

Istituto Nazionale di Alta Matematica Francesco Severi, Rome (Italy)

<http://www.altamatematica.it>

The Abdus Salam International Centre for Theoretical Physics, Trieste (Italy)

<http://www.ictp.it/>

Mathematical Research Institute Universiteit Utrecht, Utrecht (The Netherlands);

<http://mri.math.uu.nl/>

Johann Radon Institute for Computational and Applied Mathematics (RICAM), Linz (Austria)

<http://www.ricam.oeaw.ac.at/>

Stefan Banach International Mathematical Center, Polish Academy of Sciences, Bedlewo, Poland

<http://www.impan.gov.pl/>

Thomas Stieltjes Institute for Mathematics, Leiden (The Netherlands)

<http://www.stieltjes.org/>

Weierstrass Institute for Applied Analysis and Stochastics (WIAS), Berlin (Germany)

<http://www.wias-berlin.de/>