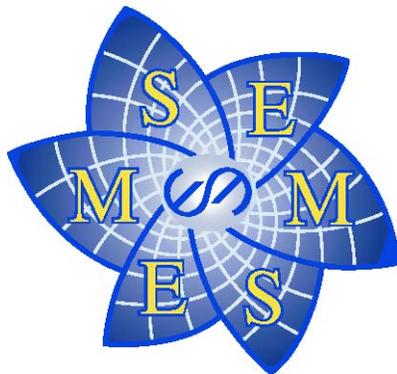


Council Meeting  
Prague 22-23 June 2018  
Late Papers



## Contents

1	B1 Report from the President	3
2	B4 Application for Corporate membership of SDAMS	12
3	B4 Information about SDAMS	13
4	E4 Report from the ERCOM Committee	17

## President Report to the EMS Council

This is an account of the main activities of the Society during the period from July 2016 to June 2018. A shorter and more qualitative oral version will be given at the meeting.

This is my second and last report, the next one will be given by my successor in the role of EMS President

### Scientific Activities

#### 7th European Congress of Mathematics

The four-year cycle of activity culminated by the *7th European Congress of Mathematics* held in Berlin on July 18–22, 2016, immediately following the previous Council meeting. The EMS highly appreciates the work of the local organizing committee which produced an excellent meeting demonstrating the strengths of European mathematics. At the same time, some weak spots were identified, in particular

- the choice of talk subjects was not optimally balanced and the Scientific Committee was a bit relaxed from the conflict-of-interests point of view
- a large part of registered participants, over 200 people, choose a stow-away attitude and avoided paying the congress fee

The Executive Committee (EC) took lessons and did everything possible to avoid such a trouble at the next congress.

#### 8th European Congress of Mathematics

By the decision of the Council meeting in Berlin the 8th ECM will be held in Portorož, Slovenia, on July 5-11, 2020, preceded by the Council meeting at Bled. The EC signed in August 2016 Memorandum of Understanding with the Local Organizing Committee (LOC) headed by Tomaž Pisanski and Klavdija Kutnar in which the obligations of each party are specified.

Among the most important duties of the EC is the composition of the congress committees including nomination of their chairs, specifically

- *Scientific Committee*, headed by *Maria Esteban* of Université Paris-Dauphine
- *EMS Prize Committee*, headed by *Martin Bridson* of the University of Oxford

- *Felix Klein Prize Committee*, headed by *Ralf Korn* of TU Kaiserslautern
- *Otto Neugebauer Prize Committee*, headed by *Eberhard Knobloch* of TU Berlin

After an extensive consultation with the member societies the committees have been composed, by the time of the Council they are complete except a gap in the ON Committee to be filled soon. Also, one of the Scientific Committee members passed away and we have to decide whether to replace him.

The calls for prize nominations will be published later this year. After that the committees will be made public with the exception of the EMS Prize Committee whose members will be by the prizes Statutes known only after the laureates are announced at the congress opening on July 6, 2020.

With thanks we expect that a substantial part of the EMS Prizes funding will be again provided by *Foundation Compositio Mathematica*. The Felix Klein Prize is endowed by the *Institute for Industrial Mathematics* in Kaiserslautern, the Otto Neugebauer Prize by *Springer Verlag*.

### Other Scientific Activities

The EMS is involved in the organization of different types of scientific activities, like schools, joint mathematical weekends and the EMS lectures, etc. In addition, it designates EMS distinguished speakers at some conferences, and contributes to various special events.

### Summer Schools

In earlier times the EMS support of summer schools went along two lines, the *European Summer Schools on Applied Mathematics (ESSAM)*, in the competence of the EMS Applied Mathematics Committee, and *EMS Summer Schools* chosen based on the evaluation of the submissions by the EMS Meetings Committee. We found it more reasonable to have all the applications 'mainstreamed' and evaluated on the same basis. In the period 2017-18 the following schools were or will be financially supported:

*Rationality, stable rationality and birationally rigidity of complex algebraic varieties*, Udine, September 3–9, 2017

*Geometry and Relativity*, Vienna, June 17–21, 2017

*EMS-ESMTB Summer School 2017: Mathematical Modeling in Neuroscience*, Centrarò, June 26–30, 2017 (ESSAM)

*Interactions between Dynamical Systems and Partial Differential Equations*, Barcelona, June 26–30, 2017

*Building Bridges: 4th EU/US Summer School on Automorphic Forms and Related Topics*, Budapest, July 9–14, 2018

*New Results in Combinatorial & Discrete Geometry*, Barcelona, May 7–11, 2018

*The Helsinki Summer School on Mathematical Ecology and Evolution*, Turku, August 19–26, 2018 (ESSAM)

*Dynamical Systems and Partial Differential Equations*, Barcelona, June 25–29, 2018

*4rd Barcelona Summer School on Stochastic Analysis*, July 9–13, 2018

*CRM Summer School on Advanced Techniques in Mathematical Modelling of Tumour Growth*, Barcelona, April 3–6, 2018 (ESSAM)

*EMS-IAMP summer school in mathematical physics, Universality in probability theory and statistical mechanics*, Naples, June 11–15, 2018

*GAeLXXV: Géométrie Algébrique en Liberté*, Strasbourg, June 18–22, 2018

The level of support varied, a typical EMS contribution was 6 thousand €. A support to school series is restricted, it is given at most once in three years.

We plan to have also *the* EMS Summer School run fully by the Society.

#### **EMS Lectures**

*EMS Lecturer 2018: Gigliola Staffilani* will give lectures at the EWM meeting, at Tor Vergata and KTH

#### **EMS Distinguished Speakers**

*EMS Distinguished Speaker 2016: Mireille Bousquet-Mélou* (CNRS & Université de Bordeaux), spoke at *Foundations of Computational Mathematics (FoCM'17)*, Barcelona, July 10–19, 2017

*EMS Distinguished Speaker 2017: Kathryn Hess* (EFPL) spoke at the *Meeting of the Catalan, Spanish and Swedish Math Societies*, Umea, June 12–15, 2017

*EMS Distinguished Speaker 2018: Benoît Perthame* (Sorbonne) spoke at the *Joint EMS-FMS-ESMTB Mathematical Weekend*, Joensuu, January 4–5, 2018

*EMS Distinguished Speaker 2018: André Neves* (Chicago) spoke at the *Seventh Iberoamerican Congress on Geometry*, Valladolid, January 22–26, 2018

### Joint Mathematical Weekend

*The 9th Joint Mathematical Weekend* was organized as a part of the opening of the *Year of Mathematical Biology* in Joensuu, January 4–5, 2018; <http://www.uef.fi/web/matematikanpaivat2018>

### Other supported conferences

*Caucasian Mathematics Conference (CMC II)*, Van Lake, August 22–24, 2017, <http://euro-math-soc.eu/cmcc/CMC-II/index.html>

*Seventh Iberoamerican Congress on Geometry*, Valladolid, January 22–26, 2018, <http://iberoamericangeometry2018.uva.es/>

*12th International Vilnius Conference on Probability Theory and Mathematical Statistics*, July 2–6, 2018, <http://ims-vilnius2018.com/>

*Emil Artin International Conference*, Yerevan, May 27 – June 2, 2018, <http://math.sci.am/conference/artin120>

In addition to above named activities, the EMS supported other ones in various non-financial ways.

### The EMS committees

The EC kept was meeting regularly, since the last Council it was in

- *Tbilisi*, November 4–6, 2016
- *Bratislava*, March 17–19, 2017
- *Portorož*, November 24–26, 2017
- *Koli*, January 6–7, 2018; an extraordinary brainstorming meeting
- *Rome*, March 23–25, 2018
- *Prague*, June 22, 2018

A substantial part of the EC work, however, was done through electronic communication and at *ad hoc* meetings.

Concerning the EMS topical committees, indispensable for the society functioning, the EC followed their work closed and made also a number of appointments and reappointments:

*Applied Mathematics Committee*: very active in EU-MATHS-IN, the Year of Mathematical Biology, European projects; since 2018 the committee substantially renewed, Stéphane Cordier replaced José Antonio Carrillo as its chair

*Committee for Developing Countries*: over the last two years chaired by Giulia di Nunno, then Leif Abrahamsson. They did a lot of work in the first place concerning Simons Foundation grants for African mathematics

*Education*: since 2017 substantially renewed, now chaired by Jürg Kramer; a scope broadened towards a more hands-on approach

*ERCOM*: chaired by Ari Laptev, contains to be a backbone of excellent mathematical research in Europe

*Ethics*: from 2018 also substantially renewed, Jiří Rákosník replaced Adolfo Quiros as its chair, prepared Guidelines for dealing with conflict of interest

*European Solidarity Committee*: also renewed in 2018, now chaired by Sandra di Rocco

*Meetings Committee*: our instrument to evaluate application for support, now chaired by Ciro Ciliberto

*Publication and Electronic Dissemination Committee*: was created in 2017 by merging the *Electronic Publishing Committee* and *Publication Committee*, chaired by Thierry Bouche, deals with all problems in this area including open access, also acts as the Scientific Users Committee for zbMATH

*Committee for Raising of Public Awareness*: chaired Roberto Natalini, our instrument of 'mathematics propaganda'

*Women in Mathematics Committee*: follows the gender aspects in mathematicians work and life, now chaired by Alessandra Celletti

The listed topical committees are crucial for the EMS functioning and the EC is sincerely grateful to their chairs and members for their dedicated work.

## Publications

The EC is taking steps to a further development of the EMS Publishing House. The quality of new acquisitions is assessed by the *Science Advisory Board* headed by Jakob Yngvason.

Since the EMS-PH Managing Director, to whom the EMS is sincerely grateful for funding and running the Publishing House for a number of years, brought to the EC attention the fact that his *retirement age was approaching*, leaving not later than in a year, the EC works on the ways how the Publishing House, no doubt an asset of the Society, should be developed further, most probably *moving it from Switzerland to an EU country*.

The EMS is one of the partners responsible for running *Zentralblatt für Mathematik*, together with Springer and FIZ Karlsruhe. In particular, the EMS owns

the data of the zbMATH predecessor, the Jahrbuch über die Fortschritte der Mathematik. The EC appreciates the progress the zbMATH made recently in the competition with MathSciNet.

The *EMS Newsletter* is led by Valentin Zagrebnov as the Editor in Chief; the Editorial Board is periodically renewed. We appreciate the Newsletter quality regarding it a communication tool of primary importance.

### **Initiatives**

The EMS supports various mathematical initiatives, in particular

*EuDML* of which the EMS is one of the founding members, <https://eudml.org/>, aiming at the maintenance and further development of the European Digital Mathematics Library

*EU-MATHS-IN*, <http://www.eu-maths-in.eu/>, aiming at the needs of mathematics used in industry

### **Emerging Regional Centres of Excellence**

In order help the development of mathematics in economically weaker countries through education of students in the developed world to the Masters level, the EMS awards a five-year ERCE label to such centres, see <http://euro-math-soc.eu/EMS-CDC/erce.php>. The label is selective, though, in the last round none of the application was accepted.

### **Meetings of Presidents of EMS Member Societies**

These meetings are held annually since 2008 and provide a useful platform to discuss worries and ideas of the EMS Member Societies. In the period in question there were two of them:

*Lisbon, April 1–2, 2017* hosted by the Portuguese Mathematical Society

*Maynooth, April 14–15, 2018*, hosted by the Irish Mathematical Society

### **Relations with Mathematically Oriented Societies**

The EMS maintains contacts with other mathematical societies and professional societies in related fields. In the intercouncil period the following were active:

*International Mathematical Union*

- We advocated with the IMU that after 16 years it is desirable to return the ICM to Europe. We are glad seeing you now two European bids but as an all-European society, we remain neutral towards the choice which will be made in São Paulo

*International Council for Industrial and Applied Mathematics*

- The EMS is a member of ICIAM and actively participates in its activities, in particular, preparation of the next congress in Valencia or the choice of Tokyo as the ICIAM 2023 site

*American Mathematical Society*

- we have reciprocity agreement, the same with the Australian and Canadian Societies; we communicate regularly about topics of mutual interest

*Mathematical Society of Japan*

- in 2016 we signed agreements about cooperation and reciprocity membership

*Australian Mathematical Society*

- in 2017 we added a cooperation agreement

*Chinese Mathematical Society*

- in 2017 we signed a cooperation agreement. We are looking for ways how to make use of those newly declared intentions; one idea on the table are Euro-Pacific mathematical conferences

*UMALCA – Unión Matemática de América Latina y el Caribe*

- we have a cooperation agreement, in 2016 we supported a European speaker at the 5th Latin American Mathematical Congress

*Bernoulli Society for Mathematical Statistics and Probability*

- The BS-EMS Joint Lecture 2017 was delivered by *Alexander Holevo* at the European Meeting of Statisticians in Helsinki, July 24–28
- The BS-EMS Joint Lecture 2018 was delivered by *Samuel Kou* at the 11th European Conference on Mathematical and Theoretical Biology, Lisbon, July 23–27

- The BS-EMS Joint Lecture 2019 will be given by *Aad van der Vaart* at the 32st European Meeting of Statisticians in Palermo, July 22–26, 2019

*International Association of Mathematical Physics*

- EMS-IAMP summer school “Universality, Scaling Limits and Effective Theories”, Rome, July 11–15, 2016  
<http://www.smp2016.cond-math.it/>
- EMS-IAMP summer school “Universality in probability theory and statistical mechanics”, Naples, June 11–15, 2018  
[http://www.mat.uniroma3.it/users/giuliani/public\\_html/Ischia\\_Summer\\_School/pagine\\_sito/index.html](http://www.mat.uniroma3.it/users/giuliani/public_html/Ischia_Summer_School/pagine_sito/index.html)

*European Society of Mathematical and Theoretical Biology*

- we collaborate in a number of activities within the the *Year of Mathematical Biology*

### Relations with Political Bodies and Other Organizations

*Simons Foundation*, <https://www.simonsfoundation.org/about-us/>, is providing to the EMS a support of 50 thousand \$ yearly over the period of five years to improve the mathematicians situation in Africa. The EMS Committee for Developing Countries is administering this money.

*Initiative for Science in Europe*, <http://www.initiative-science-europe.org/> is a scientist lobbying organization of which the EMS was a member. As its efficiency evaporated, we left it and we are working out other ways of lobbying for mathematics

*Other lobbying*: while the EMS is not a political organization, occasionally we have to speak out if our fellow academicians suffer a serious harassment. In the last two-year period that was in the first place in defence of our Turkish colleagues and against the visa policy of the Trump administration.

### Nominations

On behalf of the EMS, the EC has nominated

- a member of the *Abel Prize* Committee 2017/2018
- a member of the *Fermat Prize* Committee 2017
- two members of the *Banach Center* Scientific Council
- three members of the *TICMI* Scientific Council 2017

speakers for the BS-EMS Joint lecture 2017, 2019  
a speaker for the Second Caucasian Mathematical Conference  
chair and members *Gordin Prize* selection committee  
two members of the *Heinz Hopf Prize* committee

**A selection of occasions of representing the EMS**

Heidelberg Laureate Forum, September 2016  
60th anniv. of the Australian Mathematical Society, Canberra, December 2016  
10th anniversary of the ERC, Brussels, March 2017  
Abel Ceremonies, Oslo, May 2017 and 2018  
Pan-African Mathematical Congress, Rabat, July 2017  
120th anniversary of Bulgarian Mathematical Union, Sofia, February 2018

A more detailed information about these matters can be found in the minutes of the EC meetings and other EMS documents.

Prague, July 23, 2018

Pavel Exner

Slovensko društvo za diskretno in uporabno matematiko  
Associazione slovena per la matematica discreta e applicata  
Slovenian Discrete and Applied Mathematics Society  
Kettejeva 1, SI – 6000 Koper, Slovenia  
<http://sdams.si/en>  
[info@sdams.si](mailto:info@sdams.si)



Koper, June 6, 2018

To: Professor Pavel Exner  
President of the European Mathematical Society

#### Application for membership of the EMS

Dear Professor Exner

This is an application on behalf of the Slovenian Discrete and Applied Mathematics Society for membership of the European Mathematical Society. Please find enclosed some information about mathematics in Slovenia and about our Society. We sincerely hope that our application will be approved.

Sincerely yours,

  
Tomaz Pisanski

President of the Slovenian Discrete and Applied Mathematics Society

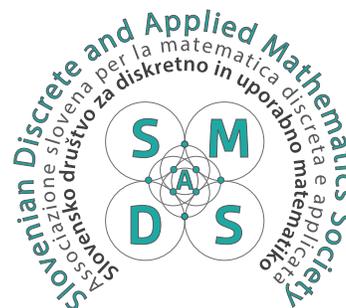


## Slovenian Discrete and Applied Mathematics Society

### Background

Slovenia is a European nation with population of 2 million, and a strong mathematical tradition.

Already in the 12th century the renowned *Herman de Carinthia* (c. 1110–1160), also known as *Herman Dalamata*, and born somewhere between Austria and Croatia, translated Euclid's *Elements* and other classical texts. Also *Andreas Perlach* (1490–1551) from the vicinity of Maribor taught mathematics and other subjects at the University of Vienna, and was its Rector (Chancellor) in 1550/1551.



But it was *Jurij Vega* (1754–1802) from Zagorica, a tiny village only a few kilometers from Ljubljana, who first put mathematics into the collective minds of Slovenians. His renowned logarithm tables, his calculations of 140 digits of  $\pi$  on one hand, his achievements in ballistics and military successes in Austrian wars against the Turks and the French revolution made him well-known throughout Europe. He became a member of several learned societies (in Berlin and other places), and his work on  $\pi$  was published with the St Petersburg Academy. The fact that Vega got all his formal education in Ljubljana testifies to the quality of teaching of mathematics in Slovenia, which was part of Austrian empire at the time. Vega's books were translated into several languages, and the last edition of his logarithm tables were published in the 1950s in New York.

Following Vega, *Franc Močnik* (1814–1892) from Cerkno near Idrija was even more prolific. His textbooks of elementary mathematics helped to shape the mathematical minds of subjects of the Austrian Empire and several other European nations in the 19th century, with over 1200 editions translated in 12 languages. His only known research paper was written under the influence of Cauchy. The first Slovenian mathematician who worked in a modern style, publishing a lot of his work in mathematical journals, was *Franc Hočevar* (1835–1919), from Metlika, but teaching at the Graz University of Technology.

A major change came after WWI, when the Austrian Empire collapsed and Yugoslavia was established. *Josip Plemelj* (1873–1967), originally from Bled, returned to Slovenia and accepted the position of the first Rector of the newly established University of Ljubljana. From then on, Slovenian mathematicians were able to be educated in Slovenia and do mathematics in Slovenia. Political changes following WWII and the absolute rule of communists in federal Yugoslavia shaped science and mathematics in a common mould in each of its republics, including Slovenia.

The Society of Mathematicians, Physicists and Astronomers of Slovenia (DMFA) was founded in 1949, and was immediately included in the federal Union of such societies. In mathematics, the DMFA assumed several important roles that helped further develop mathematics in Slovenia. It began publishing the journal *Obzornik za matematiko in fiziko* (OMF). It also began publishing mathematical books in the Slovenian language, which made interesting new mathematics accessible to high-school students and undergraduates. Moreover, it initiated mathematical competitions for high-school students. The winners at the Slovenian level competed at the Yugoslav level, and many members of the Yugoslavia team at the IMOs came from Slovenia. The DMFA also promoted mathematics and physics to wider audience, in particular to high-school students through a series of lectures of general nature by university professors and some university students. Although the DMFA is still engaged in diverse activities, nowadays mathematical competitions play a dominant role at the DMFA. Slovenia organised a highly successful IMO in 2006.

The third quarter of the 20th century witnessed further development of mathematics in Slovenia, largely thanks to *Ivan Vidav* (1918–2015). Under his leadership, a graduate school of mathematics was created at the University of Ljubljana. In the 1970s, the Institute of Mathematics, Physics and Mechanics (IMFM) became the heart of mathematical research in Slovenia, and a second university (the University of Maribor) was founded. The DMFA began publishing *Presek*, a journal aimed at promoting mathematics, physics and later also computer science, to high-school students. At the University of Ljubljana, Mathematics and Physics moved to a common new building near the Institute Jožef Stefan, and a brand new IBM-1130 computer was installed. This occupied an entire floor, offered less than 100k of memory, and the room needed constant air-conditioning whenever the computer was running; but soon after, computer programming became an important part of the curriculum of every undergraduate student of mathematics.

### More contemporary developments

The system in which mainstream mathematics was organised in Slovenia, however, knew little outside its ‘core’. All prominent Slovenian mathematicians encouraged fertile cooperation between mathematics and physics, but there was relatively little support for the belief that serious applications of mathematics to other (‘softer’) sciences are possible and valuable. For example, Lah numbers were discovered in 1954, but it took over half a century to realise that they were first studied in a paper by Slovenian mathematician and actuary *Ivo Lah* (1896–1979).

The boom of discrete mathematics research began in the 1980s, and the advent of the internet and information technology had a profound influence in the way we organise and publish mathematics. In Slovenia, almost half of the over 200 research mathematicians now publish in the fields of discrete and applied mathematics.

After Slovenia became independent in 1991, its system of higher education underwent further changes. The University of Primorska was founded as the third Slovenian public university, on the Adriatic Coast. This new university embraced discrete mathematics

from its start. It has enabled Slovenian mathematicians to establish two high-quality research-oriented peer-reviewed mathematical journals, one in purely electronic form, and both at no cost for authors and readers.

Slovenian mathematics now has strong international connections, including significant exchange of students and scholars. Without doubt, the highest achievement of Slovenian mathematics is the recent successful bid for the 8th European Congress of Mathematics, to be hosted by the University of Primorska in 2020 in Portorož.

Changing established culture and structures for the better can be very hard and time-consuming. Two years ago, the time was ripe to establish a new mathematical society that would focus on applied mathematics, as is common in many other nations in Europe and worldwide. In the case of Slovenia, it was natural to combine applied mathematics with discrete mathematics.

#### A new scientific society

The *Slovenian Discrete and Applied Mathematics Society* (SDAMS) was founded in Koper (Slovenia), on 14 December 2016. The aim of this society is to promote the mathematical sciences, with special emphasis given to discrete and applied mathematics. The Society is research-oriented, and publishes scientific literature and organises scientific meetings.

In particular, the SDAMS is involved in publishing two international mathematical journals:

- *Ars Mathematica Contemporanea* (<https://amc-journal.eu/>), and
- *The Art of Discrete and Applied Mathematics* (<https://adam-journal.eu/>).

The SDAMS is also involved in organising valuable scientific meetings, including the following so far:

- 7th PhD Summer School in Discrete Mathematics, 23–29 July 2017, Rogla, Slovenia (<https://conferences.famnit.upr.si/event/2/>)
- Workshop on Discrete and Computational Biomathematics and Mathematical Chemistry 2017, 15–17 November 2017, Koper, Slovenia (<https://conferences.famnit.upr.si/event/5/>)
- Non-commutative structures 2018: A workshop in honour of Jonathan Leech, 23–27 May 2018, Portorož, Slovenia (<https://conferences.famnit.upr.si/event/6/>)
- Graphs, groups, and more: celebrating Brian Alspach's 80th and Dragan Marušič's 65th birthdays, 28 May – 1 June 2018, Koper, Slovenia (<https://conferences.famnit.upr.si/event/4/>)

- 8th PhD Summer School in Discrete Mathematics, 1–7 July 2018, Rogla, Slovenia (<https://conferences.famnit.upr.si/event/7/>)
- Discrete Biomathematics Afternoon at the Adriatic Coast, 13–14 February, 2019, Koper, Slovenia (<https://conferences.famnit.upr.si/event/9/>).

The SDAMS has members, fellows and honorary members. A ‘Member’ may be any individual actively engaged in mathematical research, as evidenced in practice by authorship of a paper covered by *MathSciNet* or *zbMATH* (formerly *Zentralblatt MATH*), or by enrolment in a research degree (supported by a recommendation letter from the student’s supervisor). A ‘Fellow’ is a member who has strong international visibility and has made a positive impact on mathematics in Slovenia. Typically, a fellow would be expected to have at least 500 citations in the *MathSciNet* database, or be noted for some other achievements (such as an international award, or a keynote address in a large conference, or supervision of a PhD student in or from Slovenia). An ‘Honorary Member’ is an individual who has made outstanding contributions to the development of discrete or applied mathematics in Slovenia.

The SDAMS has a Council to oversee its operations. It has a Nomination Committee, for nominating candidates for fellowship, and for considering candidates for honorary membership. Under the current rules, the Council of the Society will elect new Fellows and a limited number of Honorary Members at its annual meeting each year.

The SDAMS seeks contacts with other similar domestic and international societies, worldwide.

**ERCOM - EUROPEAN RESEARCH CENTRES ON MATHEMATICS**

A committee of the European Mathematical Society

**Report for the period from March 2017 to April 2018**

ERCOM is an EMS committee consisting of scientific directors of European Research Centres in the mathematical sciences, or their chosen representatives. Only European centres which are predominantly research oriented, with a large international visiting programme covering a broad area of mathematical sciences, are eligible for representation in ERCOM. ERCOM aims to contribute to the unity of mathematics, from fundamentals to applications. The purposes of ERCOM are:

- to constitute a forum for communication and exchange of information between the centres themselves and EMS
- to foster collaboration and coordination between the centres and EMS
- to foster advanced research training at the 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
- to cultivate contacts with similar research centres within and outside Europe

**Meeting 2018**

In the report period ERCOM held its annual meeting at MPIM in Bonn (April 27-28). The meeting was attended by the President of the EMS, 26 directors or their representatives and their administrators.

An important aspect of the annual meetings is the mutual contact between the directors and the administrators of the ERCOM centres and the exchange of information between them. Recurring items on the agenda of these meetings are the following:

- News from the ERCOM institutes
- Report on EMS Business by Pavel Exner.
- Administrators meeting: Chair Sofie Holm
- "German Academies, Mathematics, DEAL, and the Excellence Initiative" - Prof. Dr. Martin Grötschel, President, Berlin-Brandenburg Academy of Sciences and Humanities.
- "The challenges of Multi-Scale Multi-Physics modelling – the case for a European Open Source Ecosystem" - Cor van Kruijsdijk, Sr. Principal Physicist at Shell Innovation R&D
- Mathematical Talk: "Knotted 2-spheres in 4-space" by Prof. Peter Teichner.

**New ERCOM members:****CIMPA**

ERCOM received an application from CIMPA to become its member. After some discussion it has been suggested that CIMPA gets a status as a ERCOM Partner with a

possibility to be presented at ERCOM meetings and to be involved in all ERCOM discussions.

**Next ERCOM meeting:**

The next ERCOM meeting is scheduled to take place at the Euler Institute in St Petersburg on March 29-30, 2019.

Ari Laptev  
ERCOM Chair  
Director of Institut Mittag-Leffler