

Report of ERME for ICME 13

(May 2016)

ERME (European Society for Research in Mathematics Education) has been an affiliated association to ICMI since 2010.

This report is organized into three parts: general information on ERME (part 1), specific information on its main activities in the last four years (part 2), information on its other activities in the last four years (part 3).

1. General information

1.1. ERME Board

The ERME has a Board that is currently composed of:

Viviane Durand-Guerrier	France (President)
Susanne Prediger	Germany (Vice-President)
Markku Hannula	Finland (Treasurer)
Carl Winslow	Denmark (Secretary)
Jason Cooper	Israel (Representative of YERME)
Therese Dooley	Ireland
Edyta Nowinska	Poland
Joao Pedro da Ponte	Portugal
Cristina Sabena	Italy
Susanne Schnell	Germany (Representative of YERME)
Konstantinos Tatsis	Greece

1.2. History

ERME came into being at its first congress in Osnabrück, Germany, in 1998. Thereafter, ERME congresses (called CERMEs) have taken place every two years since CERME 2 in 2001. Each Conference has an International Program Committee and a Local Organizing Committee, both nominated by the ERME Board. CERME places great emphasis on promoting participation by all who attend the congress, with a deliberate shift away from the succession of parallel research report presentations that characterise most international scientific conferences. Thus, the vast majority of CERME time is devoted to discussion and debate within Thematic Working Groups (at the last Conference there were 20 TWGs), facilitated by a team of leaders for each TWG. CERME participants must commit themselves to membership of just one such Group, and to 6 or 7 sessions of 90-120 minutes working with the Group. Research paper and poster proposals are submitted to a Group, and are then subject to peer review within the TWG and a decision about acceptance by the TWG leaders. This structure results in significantly devolved and distributed responsibility for the organisation of the congress, and – hopefully – a sense of belonging to their chosen TWG, for all participants. All accepted papers are posted on the CERME website before the congress, and each participant is expected to read all of those related to their TWG – typically 15 or more – in advance of the congress. At the congress itself, it is then possible to devote all of the time allotted to each paper to discussion. In this way, opportunities for interaction and participation are maximised. Following the congress, the authors of the accepted papers have the opportunity to make further revisions in response to the feedback and

discussion within their TWG. The form in which papers appear in the final proceedings reflects this continuous process of improvement, assisted by critical support within the TWG.

1.3. Supporting young researchers

The vision and ethos of ERME is also distinctive in its support for ‘young researchers’ in the field of mathematics education, notably those undertaking doctoral or post-doctoral research. With this aim, young researchers are organised in a specific ERME community called YERME, i.e. Young European Researchers in Mathematics Education, which is ruled by an elected Committee and has official representatives from the different European countries. Two young researchers have seats in the board of ERME to represent the interest of YERME. There are two main events organized every two years:

- (1) Every CERME conference is preceded by two half YERME days with discussion groups and workshops. The organization of this part of CERME in these last years has been chaired by Dina Tirosh and Paolo Boero.
- (2) Every two years ERME organizes also a Summer school for young researchers in math education, called YESS (YERME Summer School). The most significant activity of YESS takes place in Thematic Working Groups led by experts in the field (generally 5-6). The Thematic groups generally are among the following:
 - Teacher knowledge and practice; teacher education and professional development;
 - Teaching and learning advanced mathematics;
 - Information technologies in mathematics teaching and learning (software, Internet, etc.);
 - Cognitive and affective factors in learning and teaching mathematics;
 - Theoretical perspectives, modelling and linguistic and representational aspects of teaching and learning mathematics.

YESS activities are organised in the following way:

- Ten two-hour sessions in the parallel Thematic Working Groups. The Thematic Working Groups meet every day (at least once) and are coached by an expert;
- Six 45-minutes Lectures given by each of the experts (with 30-minutes additional discussions with the lecturer, prepared by small group discussions);
- Two 90 minutes Discussion Group Sessions: they are devoted to transverse topics.
- Two 90 minutes Informal Discussion Group Sessions: they are devoted to issues that are relevant to individual YERME participants’ needs, self-organized by YERME.

1.4. Supporting researchers from non-affluent countries by the Graham Littler Fund

Researchers from non-affluent countries can apply for financial support for participating in CERME and YESS. 40-60 people have been partly or fully supported in the last conferences.

2. Main activities of ERME in the last four years

- YESS 6 in Faro (Portugal) in August 2012
- CERME 8 in Ankara (Turkey) in February 2013
- YESS 7 in Kassel (Germany) in August 2014
- CERME 9 in Prague (Poland) in February 2015.

2.1. The CERME Conferences

CERME 8 took place at [Starlight Convention Center, Thalasso & Spa Hotel](#) in Manavgat-Side, Antalya, Turkey from 6th to 10th February, 2013. The local chair was Behiye Ubuz (Turkey), the program Chair was Maria Alessandra Mariotti (Italy). 520 participants attended the conference from 45 countries within and beyond Europe. The conference had 3 plenaries by Paolo Boero (Italy), Alan Kuzniak (France), Candia Morgan (United Kingdom) and 17 working groups¹. The Proceedings are available in electronic format at the ERME website: <http://www.mathematik.uni-dortmund.de/~erme/>

CERME 9 took place in Prague, Czech Republic from 4th to 8th February 2015. The local chair and co-chair were (resp.) Nada Vondrova and Jarmila Novotna (Czech Republic); the program chair and co-chair were (resp.) Konrad Krainer (Austria) with co-chair Uffe Thomas Jankvist (Denmark). CERME9 was attended by 672 people from 49 countries from all over the world. With these figures, CERME9 was the largest CERME ever. The program comprised a Plenary panel on “What do we mean by cultural contexts in European Research in Mathematics Education?”, organized by Barbara Jaworski, Mariolina Bartolini Bussi, and Susanne Prediger and 2 plenary lectures by Jarmila Novotná (Czech Republic) and Carmen Batanero (Spain) and 20 Thematic Working Groups². From 2016 on, the Proceedings of CERME are published in the free publication database HAL archive. The HAL archive allows a greater visibility in search engines and the search for individual papers or thematic working groups: <https://hal.archives-ouvertes.fr/CERME9>

CERME 10 will take place in Dublin, Ireland in February, 1-5, 2017. The local chair will be Therese Dooley, with her co-chair Maurice O'Reilly. The program chair will be Ghislaine Gueudet (France), with her co-chair Andreas Eichler (Germany)..

Paper submission and application for funding takes place until September, 15, 2016. All information are at : <http://cerme10.org/>

2.2. The YESS summer schools

YESS 6 took place in Faro, Portugal from August, 22 to 29, 2012. There were 123 applicants, showing the interest raised by this ERME activity, and 73 were finally selected from Germany (18), Portugal (15), France, Italy and Norway (5), Turkey and UK (3), Cyprus, Greece, Israel and Sweden (2) and Algeria, Brazil, Canada, Czech Republic, Denmark, Ghana, Iceland, Libanon, Lybia, Spain and USA (1). The scientific staff was composed of six leading experts in mathematics education: Ferdinando Arzarello, Markku Hannula, Barbara Jaworski, Maria Alessandra Mariotti, João Pedro da Ponte and Heinz Steinbring, and contributed to the Summer School by giving lectures and coordinating the working groups. Moreover, discussion groups were led by Paolo Boero and Rita Borromeo Ferri and there was a discussion devoted to issues that are relevant to the YERME organisation³.

¹ A detailed report is presented in Ubuz, B. and Mariotti M.A. (2013) CERME8, Side-Manavgat Antalya, Turkey, 6-10 February 2013, in EMS Newsletter, 89, 53-55.

² A detailed report is presented in Krainer K. and Vondrova N. (2015) CERME 9 in Prague, in EMS Newsletter, 96, 59-61

³ For more details see Da Ponte J. (2012) ERME Column : Report of the Sixth YERME Summer School (YESS-6), Faro (Portugal), 23–28 August 2012, in EMS Newsletter, 86, 48-49

YESS 7 took place in Kassel (Germany) from August, 4 to 11, 2014. There were 67 participants from 21 countries from all over the world. The organizing committee included six people: Viviane Durand-Gerrier, João Pedro da Ponte, Paolo Boero, Susanne Schnell, C. Miguel Ribeiro, and Rita Borromeo-Ferri. The role of scientific coordinator was assumed by Paolo Boero. The local organizing committee consisted of Rita Borromeo Ferri (Chair), Werner Blum, and Maïke Hagena (all University of Kassel). Six international experts gave lectures and coordinated the working groups: João Pedro da Ponte - Maria Alessandra Mariotti – Tim Rowland - Mariolina Bartolini Bussi – Markku Hannula – John Mason. In addition, Werner Blum was invited as plenary speaker, and discussion groups were led by Paolo Boero and Gabriel Kaiser. The evaluation showed a high level of satisfaction among the participants.

In the meanwhile the ERME community has worked and is working to organize the Society's future events, namely:

YESS 8 will be held in Pödebrady (Czech Republic) from August, 13 to 20, 2016. More information under <http://ocs.pedf.cuni.cz/index.php/YESS/YESS8>

3. Other activities

3.1. ERME Topic Conferences

In February 2015, a call for ERME Topic conferences has been disseminated among the ARME community. ERME Topic⁴ Conferences are organized on a specific research theme or themes related to the work of ERME as presented in associated working groups in specific directions with clear value to the mathematics education research community. Three ERME Topic Conferences have been accepted by the ERME board:

- ETC 1 in 2016: CITADS - First ERME Topic Conference on Anthropological Theory of the Didactic in Castro - Urdiales (Spain), January, 26-30, 2016. The trilingual (Spanish-French-English) conference CITADS 5 was held in Castro - Urdiales (Spain) from 26 to 30 January 2016. The program committee involved Marianna Bosch, F. Javier García, John Monaghan, and Carl Winsløw.
- ETC 2 in 2016: INDRUM - Second ERME Topic Conference on University Mathematics Education in Montpellier, March 31 - April 2, 2016. The second ERME Topic Conference on University Mathematics Education was organized by the International Network for Didactic Research in University Mathematics (INDRUM) on March 31– April 2, 2016, in Montpellier (France). The local committee was led by Viviane Durand-Guerrier (Montpellier, France), the scientific committee by Elena Nardi (UK) and Carl Winslow (Denmark). The conference website contains more detailed information.
- ETC 3 in 2016: Third ERME Topic Conference on Mathematics Teacher Education in Berlin, October 5-7, 2016. The third ERME Topic Conference will deal with "Researching mathematics teaching and mathematics teacher professional development". It will take place in Berlin in October, 5-7., 2016 and will be led by Stefan Zehetmeier (Austria), Miguel Ribeiro (Norway / Portugal), Despina Potari (Greece), and Bettina Rösken-Winter (Germany).

3.2. ERME Column in EMS Newsletter

⁴ The call for application is available on the ERME website.

The EMS-Newsletter has a responsible editor for Education in the Editorial Board who represents the ICMI, publishes the ICMI Column, and is in charge of the papers concerning Mathematics education.

Till 2013, the responsible was Mariolina Bartolini Bussi (Universita di Modena, Italy).

Since January 2014, the responsible is Jean-Luc Dorier (Université de Genève, Switzerland).

In each issue of the EMS- Newsletter, ERME has the possibility to publish an ERME column (4 issues: March, June, September, December). From December 2012 to June 2016, 9 ERME Column have been published:

EMS Newsletter 86, December 2012 –Report on YESS-6 (J. Da Ponte)

EMS Newsletter 88, June 2013 Presentation of ERME (V. Durand-Guerrier and S. Prediger)

EMS Newsletter 89, September 2013 – Report on CERME 8 (B. Ubuz and M.A. Mariotti)

EMS Newsletter 90, December 2013 - report on YERME and YESS-7 (S. Schnell)

EMS Newsletter 92, June 2014 - CERME 8 Proceedings, News on CERME 9 (V. Durand-Guerrier)

EMS Newsletter 96, June 2015, Report on CERME 9, K. Krainer and N. Vondrova N.

EMS Newsletter 97, September 2015, ETC – INDRUM 2016, (C. Winslow)

EMS Newsletter 99, March 2016, ERME at ICME 13 (C. Sabena and S. Schnell)

EMS Newsletter 100, June 2016 – News from CERME 10 (T. Dooley and G. Gueudet)

3.3. Collaboration with the EMS Committee for Education

In 2011, the Education Committee of the European Mathematical Society (EMS – EC), together with the Executive Committee of the European Society for Research in Mathematics Education (ERME) and supported by the International Commission for Mathematical Instruction (ICMI), decided to organise a consultation in order to propose a grading of research journals in mathematics education based on expert judgment. A working group, bringing together members of the ERME board and members of the EMS educational committee, was formed to take charge of the whole process. A detailed report Günter Törner (Chair of EMS Committee for Education) and Ferdinando Arzarello (President of the European Society for Research in Mathematics Education, ERME) can be found in:

Toener, G, Arzarello, F. (2012) Grading Mathematics Education Research Journals, in EMS Newsletter, 86, .52-54

The joint team is composed of Ghislaine Gueudet, Mogens Niss for EMS, Kenneth Ruthven, Maria Alessandra Mariotti for ERME, with the support of Guenter Törner, and Tommy Dreyfus, for EMS.

This report was presented in CERME 8 in a joint session EMS- EC / ERME, also in CERME 9, a joint session EMS- EC / ERME has been organized.

Viviane Durand-Guerrier, and Susanne Prediger
ERME President ERME vice President