



Mathematics Education:  
How to solve it?

**40<sup>th</sup> Annual Meeting of the International Group for the  
Psychology of Mathematics Education (PME 40)**

**Szeged, Hungary, 3-7 August, 2016**

**<http://pme40.hu>**

**First Announcement**



Mathematics Education:  
How to solve it?

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## 1 Welcome

The Local Organizing Committee of the 40<sup>th</sup> Annual Meeting of the International Group for the Psychology of Mathematics Education is pleased to invite you to attend the conference to be held in Szeged, Hungary from August 3 to August 7, 2016.

***Mathematics Education: How to solve it?*** has been chosen as the title of the conference. This title reminds all participants that 70 years ago the Hungarian Pólya György (George Pólya) published his seminal book entitled “How to solve it?”. This book was used by generations of mathematics teachers as their inspiring source of teaching ideas. Besides commemorating Pólya’s oeuvre, the title evokes the everlasting debate on the role of mathematical problem solving in fostering children’s thinking.

Our objective is to make our 2016 meeting scientifically and socially successful. We hope that your stay in Szeged and your visit to Hungary (either for the first or the umpteenth time) will be exciting, informative and inspiring.

We look forward to seeing you in August, 2016.

### 1.1 Your Hosts

PME 40 in 2016 is being hosted by the University of Szeged. You can find more information about the university here <https://www.u-szeged.hu/english>

The University of Szeged is widely recognized as a leading player in the world of science both nationally and internationally. The university traces its origin back to 1581 with the foundation of the Academia in Transylvania, from where the university was relocated to Szeged in 1921. The University Congress Center was opened in 2005 and proved to be a perfect place to more than 1000 business, cultural and scientific events.

The University of Szeged has 12 faculties. The Institute of Education at the Faculty of Arts is responsible for coordinating teacher training courses. Two members of the International Program Committee are from the Department of Educational Assessment and Planning affiliated to the Institute of Education.

### 1.2 About Szeged

Szeged is located in the Southern part of Hungary, on both sides of the River Tisza. Szeged is the third largest city of Hungary with a population around 160,000. Its Latin name, Partiscum, originates in ancient times. Now the town is most famous of its culture, including the University of Szeged which is among the 500 best universities of the world.

PME acknowledges that many conference attendants also participate at the ICME conferences. Therefore, PME does not provide conference excursions in years where an ICME-conference takes places. For more information about Szeged from a tourism point of view, please visit <http://szegedtourism.hu/?lang=2>



### 1.3 About Hungary

For general information and for trip ideas, please visit: <http://gotohungary.com>



## 2 Committees of PME 2016

### 2.1 The International Program Committee (IPC)

Csaba Csíkos	PME/LOC	University of Szeged, Hungary
Barbara Jaworski	PME	Loughborough University, United Kingdom
Berinderjeet Kaur	PME	National Institute of Education, Singapore
Anke Lindmeier	PME	IPN, Kiel, Germany
Judit Szitányi	LOC	ELTE, Budapest, Hungary
Ödön Vancsó	LOC	ELTE, Budapest, Hungary
Wim Van Dooren	PME	KU Leuven, Belgium
Tibor Vidákovich	LOC	University of Szeged, Hungary

### 2.2 The Local Organizing Committee (LOC)

András Ambrus (ELTE, Budapest)  
 Gabriella Ambrus (ELTE, Budapest)  
 Csaba Csíkos (University of Szeged)  
 Eszter Herendiné-Kónya (University of Debrecen)  
 Krisztián Józsa (University of Szeged)  
 József Kosztolányi (University of Szeged)  
 Attila Krajcsi (ELTE, Budapest)  
 Zsolt Lavicza (University of Cambridge, UK)  
 Gyöngyvér Molnár (University of Szeged)  
 Klára Pintér (University of Szeged)  
 Judit Szitányi (ELTE, Budapest)  
 Ödön Vancsó (ELTE, Budapest)  
 Tibor Vidákovich (University of Szeged)



## 3 PME Conference Secretariat

### 3.1 Secretariat Email Addresses

For any questions regarding PME 40, please contact one of the following three conference secretariats:

#### Conference Scientific Secretariat

For matters related to scientific issues of the conference (program, presentations, equipment, etc.), please contact [scientific.pme40@edu.u-szeged.hu](mailto:scientific.pme40@edu.u-szeged.hu)

#### Conference Registration Secretariat

For matters related to registration and payment, please contact [registration.pme40@edu.u-szeged.hu](mailto:registration.pme40@edu.u-szeged.hu)

#### Conference Administrative Secretariat

For matters related to administrative issues of the conference (accommodation, excursions, travel, etc.), please contact [admin.pme40@edu.u-szeged.hu](mailto:admin.pme40@edu.u-szeged.hu)

### 3.2 Conference Website

The conference website is <http://pme40.hu> where you can find up-to-date information on matters contained within this First Announcement.

General information is also available on the website of the International Group for the Psychology of Mathematics Education (IGPME) at <http://www.igpme.org>



## 4 About PME

The International Group for the Psychology of Mathematics Education (PME) is an autonomous body, governed as provided for in its constitution. It is an official subgroup of the International Commission for Mathematical Instruction (ICMI) and came into existence at the Third International Congress on Mathematics Education (ICME3) held in Karlsruhe, Germany in 1976. The conference in 2016 is the 40<sup>th</sup> annual meeting of the International Group for the Psychology of Mathematics Education (PME 40).

### 4.1 The Constitution of PME

The constitution of PME was adopted at the Annual General Meeting (AGM) on August 17, 1980 and changed at the AGM on July 24, 1987, on August 10, 1992, on August 2, 1994, on July 18, 1997, on July 14, 2005 and on July 21, 2012. The major goals of the group are:

- to promote international contact and exchange of scientific information in the field of mathematical education;
- to promote and stimulate interdisciplinary research in the aforesaid area; and
- to further a deeper and more correct understanding of the psychological and other aspects of teaching and learning mathematics and the implications thereof.

All information concerning PME and its constitution can be found at the PME website <http://www.igpme.org>.

### 4.2 Honorary Members of PME

Efraim Fischbein (deceased), Hans Freudenthal (deceased) and Joop Van Dormolen (retired).

### 4.3 International Committee of PME (IC)

Barbara Jaworski (President, UK)  
 Wim Van Dooren (Vice-President, Belgium)  
 Michal Tabach (Secretary, Israel)  
 Olive Chapman (Treasurer, Canada)  
 Kim Beswick (Australia)  
 Marta Civil (USA)  
 Csaba Csíkos (Hungary)  
 Cris Edmonds-Wathen (Sweden)  
 Keith Jones (UK)  
 David Gomez (Chile)  
 Mellony Graven (South Africa)  
 Berinderjeet Kaur (Singapore)  
 Oh Nam Kwon (South Korea)  
 Anke Lindmeier (Germany)  
 Masakazu Okazaki (Japan)  
 Stanislas Schukajlow-Wasjutinski (Germany)  
 Kai-Lin Yang (Taiwan)



## 4.4 PME Administrative Manager

Bettina Rösken-Winter  
Humboldt Universität, Berlin

Postal address: Unter den Linden 6  
D-10099 Berlin  
Tel: +49 (0) 30 2093-5857

Email: info@igpme.org

## 5 The Scientific Program

The theme of the 40<sup>th</sup> PME conference is:  
**Mathematics Education: How to solve it?**

The conference language is English. Papers for the proceedings must be written and presented in English. However, colleagues, including the presenters, are welcome to contribute to discussions and questions in their first languages, following a Research Report or an Oral Communication, if translation is provided by someone in the session. The scientific program includes the following activities that are explained in more detail below. Please note the inclusion of Colloquia for just the second time in 2016.

### *Plenary sessions*

- Plenary Lectures
- Plenary Panel

### *Personal presentations*

- Research Reports (RR)
- Oral Communication (OC)
- Poster Presentations (PP)

### *Group activities*

- Research Forums (RF)
- Discussion Groups (DG)
- Working Sessions (WS)
- Colloquia (CO)
- Ad Hoc Meetings (AH)
- National Presentation (NP)
- Seminars (SE)



## 5.1 Plenary Sessions

### 5.1.1 Plenary Lectures

There will be four plenary addresses from invited speakers, each lasting 60 minutes. Each plenary address will respond to the theme of the conference from a different perspective. The plenary speakers for PME 2016 are:

Barbara Jaworski (UK)  
Masataka Koyama (Japan)  
Roza Leikin (Israel)  
Alan Schoenfeld (USA)

### 5.1.2 Plenary Panel

The plenary panel will be held according to the Oxford-Style debate protocol on the topic of mathematical problem solving. Panel members at PME 2016 are:

Helen Chick (Australia, Chair)  
Miriam Amit (Israel)  
Szilárd András (Romania)  
Markku Hannula (Finland)  
Berinderjeet Kaur (Singapore)

## 5.2 Personal Presentations

All presentations (except Research Forums) are submitted for review through ConfTool at [www.conftool.com/pme40](http://www.conftool.com/pme40), the online conference registration system. ConfTool is configured to only accept submissions from presenters who are registered in the ConfTool system (see 8.1 Conference Pre-Registration) and have paid the non-refundable conference deposit (see 8.3.1 Conference Deposit).

The International Program Committee recruits potential reviewers from experienced PME members who have presented either two PME Research Reports in the last five years or presented three PME Research Reports in the last ten years.

### 5.2.1 Research Report (RR)

#### *Concept and main idea*

Research Reports are intended to present empirical or theoretical research results on a topic that relates to the major goals of PME:

- to promote international contacts and exchange of scientific information in the field of mathematical education;

- to promote and stimulate interdisciplinary research in the aforesaid area; and
- to further a deeper and more correct understanding of the psychological and other aspects of teaching and learning mathematics and the implications thereof.

Reports should state what is new in the research, how the study builds on past research, and/or how it has developed new directions and pathways. Some level of critique must exist in all papers.

Contributions need not be limited to completed research. Ongoing studies may be submitted, provided that theoretical framework, preliminary results, and a discussion of these results appear in the text submitted. Proposals which are too similar to papers previously presented cannot be accepted. Proposals that represent new and significant contributions to research in the Psychology of Mathematics Education are especially encouraged.

PME research reports are reviewed in a double-blind peer-review process involving three reviewers.

Two types of papers are suitable for Research Reports:

### 1. Reports of empirical studies

Reports of empirical studies should cover, as a minimum, the following:

- a statement regarding the focus of the submitted paper;
- the study's theoretical framework;
- references to the related literature;
- a description of the research methods used;
- and a sample of the data and the results (additional data can be presented at the conference but some data ought to accompany the proposal).

### 2. Theoretical and philosophical essays

These should cover, as a minimum, the following:

- a statement regarding the focus of the submitted paper;
- a statement about the paper's theoretical or philosophical framework;
- references to related literature;
- a clearly articulated statement regarding the author's position on the paper's focus or theme;
- and implications for existing research in the respective area.

### *Submission procedure and restrictions*

Research Report Proposals papers are to be written in English, with an abstract in English (and one in another language, if desired by the author) of at most 10 lines. The document may be up to 8 pages long and must be in line with the formatting guidelines provided by the conference organizers. More information is available in the conference template file. For the peer review process, authors must submit a second, blinded version of their proposal. Papers that do not conform with the formatting guidelines, exceed the maximum number of pages or which are not accompanied by a properly blinded version may be rejected without further consideration or peer review.

Because of length restrictions, papers should be concise, but should nevertheless contain all information necessary to inform both reviewers and other researchers. Proposals merely stating that results will be presented at the conference cannot be accepted.

Authors are requested to refer to related papers that have been presented at previous PME conferences.

Please consider the following issues before you submit your proposal:

Proposals for Research Reports must be submitted via ConfTool ([www.conftool.com/pme40](http://www.conftool.com/pme40)) by the presenting author no later than 15 January, 2016.

Submissions to ConfTool are only possible if the presenting author is registered in the ConfTool system and has paid the non-refundable conference deposit.

Two files must be submitted for each proposal:

- for publication, a word file that strictly follows the formatting guidelines
- for review, a “blinded version” as a PDF file in which it is not possible for a reviewer to infer the authors’ identities from the text, including the references.

Please note that no revisions are possible after submission. Each contribution is accepted or rejected in the form in which it was submitted.

Every pre-registered person may submit **up to one Research Report**. The proposal should be submitted by the author who will deliver the presentation during the conference.

Each conference participant may present at most one Oral Communication *or* one Research Report, including the Research Reports that are part of Colloquia.

Each conference participant may have his/her name on not more than four conference contributions. *Additionally* each conference participant may act as organizer of at most one Colloquium.

### *Reviewing procedure and criteria*

The submitted proposals for the Research Reports will be double-blind peer-reviewed by three PME members whose areas of expertise match the research categories chosen for the contribution. The International Program Committee (IPC) decides on the acceptance of proposals. Notification of the decision of the International Program Committee will be available after the 2<sup>nd</sup> meeting of the International Program Committee, in April, 2016. The proposal can be accepted or rejected, or the author can be invited to resubmit the contribution in the form of an Oral Communication or Poster Presentation.

The authors receive the reviewers’ evaluations when the decision on acceptance of their paper is communicated.

The authors will be invited to provide feedback to their reviewers via the ConfTool system. If the authors made use of this opportunity, the feedback will be available to the reviewers in the ConfTool system.

Members of the International Program Committee consider each contribution separately during their second meeting in March, 2016. They make a decision on acceptance, rejection or invitation to resubmit as Oral Communication or Poster Presentation. They base this decision on the reviewers’ recommendations, their review comments, the reviewers’ ratings of each aspect, and if necessary they also consider the submitted contribution itself. Usually, papers that are recommended for acceptance by at least two reviewers are accepted by the IPC.

Apart from what has been said above, reviewers will evaluate the contributions – depending on the type of contribution – according to the following criteria:

#### 1. **Reports of empirical studies**

- Rationale of the study and research questions  
e.g.: Is the goal of the study clearly stated and justified?
- Theoretical framework and literature  
e.g.: Is the theoretical and empirical background explained sufficiently? Do the authors explain their main focuses of interest?
- Methodology  
e.g.: Is the methodology of the study adequate regarding the questions and goals stated for the study? Was this methodology implemented reasonably?

- Results and Interpretation  
e.g.: Are the results presented clearly? Are the interpretations adequate to the results and the framework of the study?
  - Clarity  
e.g.: Is the language and style of the paper adequate? Are tables and graphics of good quality?
  - Relevance to a PME audience  
e.g.: Are the study, its goal and results of relevance for the mathematics educators and other scientists who come to a PME conference?
2. ***Theoretical and philosophical essays.***
- Rationale and aim of the analyses  
e.g.: Is the goal of the theoretical analysis clearly stated and justified?
  - Theoretical framework and related literature  
e.g.: Is the theoretical and empirical background explained sufficiently? Do the authors explain the central concepts involved in their analysis and argument?
  - Statement and argument  
e.g.: Do the authors give an articulated statement of their position? Do the authors give sound arguments based on their theoretical framework to support their position?
  - Implications for existing and further research  
e.g.: Do the authors give an outlook on what their position implies for theory and practice in mathematics education?
  - Clarity  
e.g.: Is the language and style of the paper adequate? Are tables and graphics of good quality?
  - Relevance to a PME audience  
e.g.: Is the study, its goal and results of relevance for the mathematics educators and other scientists who come to a PME conference?

For each of these criteria, reviewers are asked to comment on whether the contribution meets the standards and also to give a rating (excellent standard, meets the standard, slightly below standard, below the standard). Based on this evaluation and his or her overall impression, the reviewer makes a justified recommendation on acceptance or rejection to the International Program Committee. A paper should usually be recommended for acceptance if it meets the standard in all aspects. A paper should usually be recommended for rejection, if it is considered to be clearly below the standard in any aspect or slightly below the standard in substantial or multiple aspects. Nevertheless, a reasoned recommendation may of course deviate from these guidelines.

### *Publication and presentation*

Accepted papers will be included in the proceedings only if the full conference registration fee has been paid in time.

Each Research Report presentation will be allotted a total time of 40 minutes: 20 minutes for the oral presentation and 20 minutes for questions and comments. A chairperson will be assigned to each Research Report session. He/she will introduce the presenters, make a comment regarding photographing, audio- and videotaping the session, monitor timing of the session, and moderate the discussion.

## 5.2.2 Oral Communication (OC)

### *Concept and main idea*

Oral Communications are intended to present smaller studies and research that is best communicated by means of a shorter oral presentation instead of a full Research Report. They should present empirical or theoretical research studies on a topic that relates to the major goals of PME:

- to promote international contacts and exchange of scientific information in the field of mathematical education;
- to promote and stimulate interdisciplinary research in the aforesaid area; and
- to further a deeper and more correct understanding of the psychological and other aspects of teaching and learning mathematics and the implications thereof.

A report should describe which past research the study is built on; give a concise overview of the new results attained, and what the main implications of these results are.

Contributions need not be limited to completed research. Ongoing studies may be submitted, provided that theoretical framework, preliminary results, and a discussion of these results appear in the text submitted. Proposals which are too similar to papers previously presented cannot be accepted. Proposals that represent new and significant contributions to research in the Psychology of Mathematics Education are especially encouraged.

PME Oral Communications are reviewed in a double-blind peer review process by at least two members of the International Program Committee.

### *Submission procedure and restrictions*

Proposals for Oral presentations are to be written in English. The document may be up to one page long and must be in line with the formatting guidelines provided by the conference organizers. More information is available in the conference template file. For the peer review process, authors must submit a second, blinded version of their proposal. Papers that do not conform with the formatting guidelines, exceed the maximum number of pages or which are not accompanied by a properly blinded version may be rejected without further consideration or peer review.

The preparation of a proposal for an Oral Presentation is a challenging enterprise since the space is limited to one page only. Note that no abstract is necessary for an Oral Presentation paper.

Please consider the following issues before you submit your proposal:

Proposals for Oral Presentations must be submitted via ConfTool ([www.conftool.com/pme40](http://www.conftool.com/pme40)) no later than March 6, 2016

Submissions to ConfTool are only possible if the presenting author is registered in the ConfTool system and has paid the non-refundable conference deposit.

Two files must be submitted for each proposal:

- for publication, the word file that strictly follows the formatting guidelines
- for review, a “blinded version” as a PDF file in which it is not possible for a reviewer to infer the authors’ identities from the text, including the references.

Please note that no revisions are possible after submission. Each contribution is accepted or rejected in the form in which it was submitted.

Every pre-registered person may submit **up to one Oral Communication**. The proposal should be submitted by the author who will deliver the presentation during the conference.

Each conference participant may present at most one Oral Communication *or* one Research Report, including the Research Reports that are part of Colloquia.

Each conference participant may have his/her name on not more than four conference contributions. *Additionally* each conference participant may act as organizer of at most one Colloquium.

### *Reviewing procedure and criteria*

Proposals for Oral Communications will be double-blind peer-reviewed by at least two members of the IPC (International Program Committee). Notification of the decision of the International Program Committee to accept or reject the Oral Communication proposal will be available after the 2nd meeting of the International Program Committee in April.

Apart from what has been said above, the review process is guided by certain criteria.

1. The proposal must satisfy the formatting guidelines.
2. The proposal should give a description of the research that has been conducted or that is being conducted. It is the basis for the review process which decides whether the OC can be presented at the conference. The text part should contain the following essential aspects:
  - a short description of the theoretical background or framework
  - research goals, questions or hypotheses
  - the methods used for the study
  - the (most important) results obtained by the study; if the proposal presents a planned study, then expected results must be described (with reasons why these results are expected)
  - finally, a short discussion or conclusions should be mentioned, giving an idea how the research question or goals are satisfied.
3. The proposal should contain a reference section providing the references cited in the text part. Due to space limitation, to cite one or two papers would be preferable so that people get an idea in which paradigm or perspective the study is located.

It is obvious that for each of these aspects only a small number of sentences can be used, since the space is limited to one page. To prepare the proposal in such a compact way is challenging but every year many PME members are successful. Please be aware that proposals with more than one page will be rejected without further consideration.

Advice for authors on how to prepare an Oral Communication paper can be found on the PME website.

### *Publication and presentation*

Accepted papers will be included in the proceedings only if the full conference registration fee has been paid in time.

The IPC will group three Oral Communications according to the distinctive themes in order to provide the opportunity for a common discussion period at the end of each group of OC session. In OC sessions, 10 minutes are allowed for each presentation which include the time it takes for changing presenter, getting ready, etc. However, the remaining 30 minutes of discussion time can be organized in different ways. For OC sessions, the IC recommends one

of two timing options. Some sessions may contain presentations that are closely related, while for other sessions, this may be less the case. Based on the chair's reading of the OC summaries, and after consultation of the three presenters before the start of the session, he/she can select the appropriate option.

Option 1: Joint discussion at the end for presentations with related themes:

After each presentation, there is the opportunity to clarify immediate questions for at most 5 minutes. 15 additional minutes of discussion are at the end of the session.

Option 2: Separate discussions for presentations with separate themes:

The chairperson starts 10 minutes of questions and discussion directly after each 10-minute presentation.

A chairperson will be assigned to each Oral Communication session. He/she will introduce the presenters, make a comment regarding photographing, audio- and videotaping the session, monitor timing of the session, and moderate the discussion according to one of the previously mentioned options.

### 5.2.3 Poster Presentation (PP)

#### *Concept and main idea*

Poster Presentations are intended for information/research that is best communicated in a visual form rather than an oral presentation. There is no formal oral presentation associated with Poster Presentations, although there is time allotted during which presenters will be available by their posters for discussion with conference participants.

Posters should present empirical or theoretical research studies on a topic that relates to the major goals of PME:

- to promote international contacts and exchange of scientific information in the field of mathematical education;
- to promote and stimulate interdisciplinary research in the aforesaid area; and
- to further a deeper and more correct understanding of the psychological and other aspects of teaching and learning mathematics and the implications thereof.

Reports should describe the research context of the study presented, the study itself, and its implications, with a particular focus on the visual aspects of the presentation.

Contributions need not be limited to completed research. Ongoing studies may be submitted, provided that theoretical framework, preliminary results, and a discussion of these results appear in the text submitted. Proposals which are too similar to papers previously presented cannot be accepted. Proposals that represent new and significant contributions to research in the Psychology of Mathematics Education are especially encouraged.

PME Poster Presentations are reviewed in a double-blind peer review process by at least two members of the International Program Committee.

#### *Submission procedure and restrictions*

Proposals for Poster presentations are to be written in English. The document may be up to one page long and must be in line with the formatting guidelines provided by the conference organizers. More information is available in the conference template file. For the peer review process, authors must submit a second, blinded version of their proposal. Papers that do not conform with the formatting guidelines, exceed the maximum number of pages or which are

not accompanied by a properly blinded version may be rejected without further consideration or peer review.

The preparation of a proposal for a Poster Presentation is a challenging enterprise since the space is limited to one page only. Note that no abstract is necessary for a Poster Presentation. Advice on how to prepare a Poster paper can be found on the PME website.

Please consider the following issues before you submit your proposal:

Proposals for Poster Presentations must be submitted via ConfTool ([www.conftool.com/pme40](http://www.conftool.com/pme40)) no later than March 6, 2016.

Submissions to ConfTool are only possible if the presenting author is registered in the ConfTool system and has paid the non-refundable conference deposit.

Two files must be submitted for each proposal:

- for publication, the word file that strictly follows the formatting guidelines
- for review, a “blinded version” as PDF file in which it is not possible for a reviewer to infer the authors’ identities from the text.

Please note that no revisions are possible after submission. Each contribution is accepted or rejected in the form in which it was submitted.

Every pre-registered person may submit **up to one Poster Presentation**. The proposal should be submitted by the author who will deliver the presentation during the conference.

Each conference participant may deliver at most one Poster Presentation.

Each conference participant may have his/her name on not more than four conference contributions. *Additionally* each conference participant may act as organizer of at most one Colloquium.

### *Reviewing procedure and criteria*

Proposals for Poster Presentations will be double-blind peer-reviewed by at least two members of the IPC (International Program Committee). Notification of the decision of the International Program Committee to accept or reject the Poster Presentation proposal will be available after the 2<sup>nd</sup> meeting of the International Program Committee in April.

The review process is guided by certain criteria.

1. The proposal must satisfy the formatting guidelines.
2. The proposal should give a description of the research that has been conducted or that is being conducted. It is the basis for the review process which decides whether the PP can be presented at the conference. The text part should contain the following essential aspects (in an order that makes sense):
  - a short description of the theoretical background or framework
  - research goals, questions or hypotheses
  - the methods used for the study
  - the (most important) results obtained by the study; if the proposal presents a planned study, then expected results must be described (with reasons why these results are expected)
  - finally, a short discussion or conclusions should be mentioned, giving an idea how the research question or goals are satisfied.
3. The proposal should contain a reference section providing the references cited in the text part. Due to space limitation, to cite one or two papers would be preferable so that people get an idea in which paradigm or perspective the study is located.

It is obvious that for each of these aspects only a small number of sentences can be used, since the space is limited to one page. To prepare the proposal in such a compact way is challenging but every year many PME members are successful. Please be aware that proposals with more than one page will be rejected without further consideration.

Advice for authors on how to prepare a Poster Presentation paper can be found on the PME website.

### *Publication and presentation*

Accepted proposals will be included in the proceedings only if the full conference registration fee has been paid in time. The deadline for this payment is published in the 2<sup>nd</sup> announcement. 60 minutes will be allocated to Poster Presentation sessions during the conference. Authors should be available at their poster in this session for discussion with conference participants.

The authors should bring their posters printed in the format prescribed by the conference organizers in the 2<sup>nd</sup> announcement.

## **5.3 Group Activities**

Group activities are intended to provide attendees with the opportunity to exchange information and ideas related to the PME. Conference participants will need to select which sessions they would prefer to attend and indicate this in their registration. Group activities will take place during parallel time allotments, and will have limited space.

All group activities (except RF proposals) are submitted for review through ConfTool ([www.conftool.com/pme40](http://www.conftool.com/pme40)), the online conference registration system. ConfTool is configured to only accept submissions from presenters who are registered in the ConfTool system (see 8.1 Conference Pre-Registration) and have paid the non-refundable conference deposit (see 8.3.1 Conference Deposit).

### **5.3.1 Research Forum (RF)**

#### *Content*

The goal of a Research Forum is to create dialogue and discussion by offering PME members more elaborate presentations, reactions, and discussions on topics on which substantial research has been undertaken in the last 5-10 years and which continue to hold the active interest of a large subgroup of PME. A Research Forum is not supposed to be a collection of presentations but instead is meant to convey an overview of an area of research and its main current questions, thus highlighting contemporary debates and perspectives in the field.

A Research Forum:

- focuses on a topic that is of substantial interest within the work of PME;
- stimulates critical dialogue about this topic through the consideration of multiple perspectives;
- has a coherent structure that encourages intellectual debate;
- involves planned input to this critical dialogue from at least five researchers; and
- includes structural opportunities for interaction by the audience, and avoids the need for long presentations through the use of well-advertised prior reading.

### *Submission and review process*

The deadline for Research Forum proposals is November 1 in the year before the conference (for PME 2016 it has been extended to December 1, 2015). A **five-page** proposal should be sent to the PME Administrative Manager (info@igpme.org) and must include:

- the title and focus of the Research Forum;
- the name of the coordinator and assistant coordinator (if desired);
- key question(s) that the Research Forum will address; and
- a detailed description of the proposed format of the Research Forum, including
  - timing, contributors, how they will be chosen, plans for audience interaction;
  - details of prior reading and how this can be made available; and
  - how the space within the proceedings will be used (up to 30 pages).

The International Program Committee will review the proposals and provide feedback to the coordinators. If a proposal is provisionally accepted, the coordinators will be required to provide the final version of their proposal by January 15, 2016. The International Program Committee makes the final decision during its first meeting in January 2016. If a proposal is given final acceptance at this time, the coordinators of the Research Forum will be required to submit the text for the proceedings no later than May 1, 2016.

The total length of a final Research Forum paper for the proceedings is **30 pages**. It should follow the same specifications as given for Research Reports (see section 6 General Guidelines for Proposals) and must be submitted via ConfTool. Accepted proposals will be included in the conference proceedings provided the full conference fees for all coordinators and contributors are paid in time (see 8.3.2 Total Registration Fee).

### *Presentation*

Two **90-minute** slots will be devoted to each Research Forum. For more information, please contact the conference scientific secretariat at scientific.pme40@edu.u-szeged.hu.

## 5.3.2 Discussion Group (DG)

### *Content*

The objective of a Discussion Group is to provide attendees with the opportunity to discuss a specific research topic of shared interest. The idea for a Discussion Group may be the result of an Ad Hoc Meeting or an intensive discussion of a Research Report during the previous conference. Discussion Groups may begin with short synopses of research work, or a set of pressing questions. A Discussion Group is exploratory in nature, and is especially suitable for topics which are not appropriate for collaborative work in a Working Session because they are not yet elaborate enough or because a coherent research strategy has not been identified. A successful Discussion Group may result in an application for a Working Session one year later.

### *Submission and review process*

A proposal for a Discussion Group is a **two-page** summary (see 6 General Guidelines for Proposals) submitted via ConfTool no later than March 6, 2016. Submissions to ConfTool are only allowed if the presenting author/s is/are registered in the ConfTool system (see 8.1

Conference Pre-Registration) and has/have paid the non-refundable conference deposit (see 8.3.1 Conference Deposit).

The two-page proposal for a Discussion Group application must include:

- names of a coordinator and an assistant coordinator, both of whom must be active members of PME;
- information about the theoretical background of the topic of the Discussion Group as well as questions or goals that guide the work in the Discussion Group;
- a short outline about the goals and/or activities planned for each of the two 90-minute sessions; and
- a plan for how the attendees can participate actively in the discussion (a Discussion Group must not consist solely of presentations).

The International Program Committee reviews and selects the Discussion Group proposals. Notification of the decision of the International Program Committee to accept or reject the proposal will be emailed in April, 2016. Accepted proposals will be included in the conference proceedings provided the full conference fees for the coordinators are paid in time (see 8.3.2 Total Registration Fee).

### *Presentation*

Two 90-minute sessions will be allocated to Discussion Groups. After the conference, coordinators of each Discussion Group are required to send a report of its activities to the PME Administrative Manager ([info@igpme.org](mailto:info@igpme.org)). This report may be included in the PME newsletter. This report is due by the end of September 2016. For more information, please contact the conference scientific secretariat at [scientific.pme40@edu.u-szeged.hu](mailto:scientific.pme40@edu.u-szeged.hu).

## 5.3.3 Working Session (WS)

### *Content*

The aim of Working Sessions is that PME participants collaborate in joint activities on a research topic. For this research topic, there must be a clear research framework or research strategy and precise goals so that a coherent collaborative activity is ensured. Ideas for a Working Session can result from Discussion Group sessions of previous conferences where a topic was elaborated upon and a research framework or strategy was developed. Each Working Session should be complementary to the aims of PME and ensure maximum involvement of each participant.

### *Submission and review process*

A proposal for a Working Session is a **two-page** proposal (see 6 General Guidelines for Proposals) submitted via ConfTool no later than March 6, 2016. Submissions to ConfTool are only allowed if the presenting author is registered in the ConfTool system (see 8.1 Conference Pre-Registration) and has paid the non-refundable conference deposit (see 8.3.1 Conference Deposit).

The two-page proposal for a Working Session application must include:

- names of a coordinator and an assistant coordinator, both of whom must be active members of PME;

- information about the theoretical background of the topic of the Working Session as well as descriptions of specific tasks or activities to be carried out in the sessions; and
- a short outline of the goals and/or activities planned for each of the two 90-minute sessions.

The International Program Committee reviews and selects the Working Session proposals. Notification of the decision of the International Program Committee to accept or reject the proposal will be emailed in late March 2016. Accepted proposals will be included in the conference proceedings, provided the full conference fees for the coordinators are paid in time (see 8.3.2 Total Registration Fee).

### *Presentation*

Two 90-minute sessions will be allocated to Working Sessions. After the conference, coordinators of each Working Session are required to send a report of its activities to the PME Administrative Manager ([info@igpme.org](mailto:info@igpme.org)). This report may be included in the PME newsletter. This report is due by the end of September 2016. For more information, please contact the conference scientific secretariat at [scientific.pme40@edu.u-szeged.hu](mailto:scientific.pme40@edu.u-szeged.hu).

## 5.3.4 Colloquium (CO)

### *Content*

The goal of a Colloquium is to provide the opportunity to present a set of three Research Reports that are interrelated in a particular way (e.g. they are connected through related or contrasting theoretical stances, use identical instruments or methods, or focus on closely related research questions), and to initiate a discussion with the audience on the interrelated set. A Colloquium proposal:

- consists of a set of exactly three research reports, to be presented by members from at least two different countries;
- includes, in addition, a one page summary by an organizer (one person), indicating a specific pre-determined focus that is common to each research report; and
- involves a presentation of the three research reports, and a discussion with the audience that is initiated by the contribution of a discussant (one person, indicated in the author line of the one-page summary) who is appointed at submission.

The three Research Reports should be formatted and submitted via ConfTool using the guidelines provided for that presentation format. Here, further information is provided only for the one page summary which accompanies the three Research Reports.

The additional one-page summary is created using the same template or formatting guidelines as for Poster Presentations and Oral Communications, and is submitted by the Colloquium organizer via ConfTool. It provides the Colloquium title and the name of the organizer (preceded by “Organizer:”) and discussant (preceded by: “Discussant:”) in the author fields. Then, the text containing the focus and/or rationale for the Colloquium is provided. Note that no abstract is necessary for the Colloquium summary. Proposals that do not follow the formatting guidelines will not be included in the peer review process.

In the comments field in ConfTool, the authors and titles of the three research reports that comprise the Colloquium must be indicated.

Submissions to ConfTool are only allowed if the presenting author is registered in the ConfTool system and has paid the non-refundable conference deposit. Every pre-registered person may submit **up to one Colloquium** as organizer.

For submitting via ConfTool, the Submission Check Lists for Colloquia have to be confirmed. A Research Report in a Colloquium is counted identically to an individual Research Report for the existing restrictions on the number of contributions for a participant.

According to them, each conference participant may present at most one Oral Communication *or* one Research Report, including the Research Reports that are part of Colloquia.

Each conference participant may have his/her name on not more than four conference contributions. *Additionally* each conference participant may act as organizer of at most one Colloquium. Acting as a discussant of a Colloquium will also not count as a contribution for the existing restrictions on conference contributions. Nevertheless, each participant can take the roles of organizer or discussant in a Colloquium no more than once during one conference. The organizer cannot be involved as (co)author in more than one of the research reports in the Colloquium.

### *Submission and review process*

Proposals for Colloquium presentations must be submitted no later than January 15, 2016 (also the deadline for Research Report proposals). The Research Reports that comprise a Colloquium proposal are reviewed in the usual way, using the same criteria. The IPC may, however, assign the set of three research reports to the same reviewers, who are then informed that the Research Reports are part of a Colloquium proposal. If all three Research Reports are considered acceptable during the review process, the International Program Committee reviews the Colloquium proposal during the second meeting of the International Program Committee, and decides upon its acceptance. If not all of the three Research Reports are accepted or if the framing proposal to group them in a Colloquium is rejected by the IPC, those Research Reports which were accepted in the usual review process will enter the conference program as usual Research Reports. In case of rejection, encouragement for resubmission in a different format is possible for the single Research Reports.

### *Presentation*

A 90-minute timeslot will be devoted to each Colloquium. The organizer takes care of the chairing. The organizer first briefly introduces the Colloquium topic and then each Research Report is presented in turn. The presentation time for each report can be agreed with the organizer beforehand, but will be between 15 and 20 minutes (depending on how much the papers have in common; some presentations can be shorter). Afterwards, the discussant initiates the discussion for approximately 10 minutes, which is followed by discussion with the audience.

## **5.3.5 Ad Hoc Meeting (AH)**

Ad Hoc Meetings are a form of conference activity approved in 2010. During the conference, PME provides time slots and rooms for meetings of ‘ad hoc’ groups. The idea is that researchers can meet and discuss research topics that spontaneously came up during discussions of previous presentations at the conference. The Ad Hoc Meetings are reserved only for discussions; presentations or a continuation of a Research Report or Oral Communication are not allowed. To organize an Ad Hoc Meeting, at least two persons should

prepare an announcement with a short and precise description of the topic, the names of the organizers, and the preferred time slot, and deliver it to the PME Administrative Manager [info@igpme.org](mailto:info@igpme.org). The Administrative Manager will then assign times and rooms. Since there are only a few time slots and rooms, proposals will be accepted on a first-come, first-served basis.

### 5.3.6 National Presentation (NP)

The country hosting the PME conference can include a National Presentation in the scientific program of the PME conference. Next year the NP will be organized and chaired by Tibor Vidákovich. The goal of a National Presentation is to present to PME members of other countries the specific history, traditions and perspectives, as well as the most important results, of a national mathematics education community. Accordingly, the National Presentation has to be organized as a combination of giving information about the national situation and relating/contrasting this information with international mathematics educational research. The conference chair informs the International Program Committee about the National Presentation during the International Program Committee meeting in late March and announces the National Presentation in the program. One 90-minute session will be allocated to the National Presentation.

### 5.3.7 Seminars (SE)

The goal of a Seminar is the professional development of PME participants, especially new researchers and/or first comers, in different topics related to scientific PME activities. This encompasses, for example, aspects like research methods, academic writing or reviewing. A Seminar is not intended to be only a presentation but should involve the participants actively. PME can give a certificate of attendance to participants of the Seminar. Providing a seminar will not count as a contribution for the existing restrictions on conference contributions.

#### *Submission and review process*

A SE application must include

- name of a coordinator
- information about the topic and the goals of the SE as well as descriptions of specific tasks or activities to be carried out in the sessions
- a short outline about the goals and/or activities planned for each of the two 90 minutes sessions

Two page proposals for a SE must be submitted not later than March 6, 2016. The International Program Committee reviews and selects the SE during the second IPC meeting. Notification of the decision of the IPC to accept or reject the proposal will be emailed in April.

#### *Presentation and Proceedings*



The two page proposals of accepted Seminars will be included in the Conference Proceedings. Two 90-minute sessions will be allocated to Seminars. After presentation, the coordinators of each SE are required to send a report of its activities to the PME Administrative Manager [info@igpme.org](mailto:info@igpme.org). This report may be included in the PME newsletter. This report is due by the end of September 2016.

## 5.4 Early Researchers' Day

For the third time, PME is pleased to offer a special day (ERD) for early career researchers who are also attending the PME conference. The Early Researchers' Day will directly precede the main PME conference and will consist of presentations, working groups and other kinds of sessions planned to be of value to those new to research in mathematics education. Based on the experiences with the ERDs of PME 38 and PME 39, the ERD proved to be of interest and value and therefore such an event may become a permanent feature of PME activity.

The aim of the ERD is to provide early career researchers with opportunities to develop their research skills in various fields, establish new contacts, build networks among themselves and with respect to future PME conferences, and meet and work with international experts in the field.

The 2016 ERD will be held on the afternoon of August 2 and the morning of August 3, 2016 at the main building of the conference venue. The day is being organized by Krisztián Józsa (LOC member) and Stefan Ufer (PME representative). It will also include a social program to provide opportunities for informal exchanges and further networking. Updated information will be posted on the conference website.

The recommended maximum number of participants for this ERD is 50. Registration fees and meals for August 2 are complimentary (no cost). Applications will be accepted through ConfTool.

Although there is no additional charge for ERD, ConfTool is configured to only accept submissions from people who are registered in the ConfTool system (see 8.1 Conference Pre-Registration) and have paid the non-refundable conference deposit (see 8.3.1 Conference Deposit). The deadline for application is March 6, 2016.

Priority will be given to applicants in the final year of their doctoral studies. Special consideration will be given to applicants from underrepresented countries.

## 6 General Guidelines for Proposals

### 6.1 Submitting a proposal

All proposals (except for Research Forums, see 5.3.1) must be submitted online via ConfTool ([www.conftool.com/pme40](http://www.conftool.com/pme40)). Make sure that your proposal is formatted correctly using the conference template (<http://pme40.hu>) and that you have named and saved it as directed below. **Proposals that do not follow the formatting guidelines will not be accepted.**

The submissions should also include all required information related to research categories (see 6.2 Tables of Research Categories). You will select these categories when you submit your proposal through ConfTool.

All files for PME 2016 should be submitted in .doc format via the online system by the dates stated for each type of presentation. If required, a blind version of the paper without authors'

names or identifying information should be submitted in PDF format. Instructions for submitting the blind version will be given in ConfTool if such a version is required.

The following rules apply to all types of proposals. All proposals should be concerned with mathematics education and conform to the major aims of PME (see section 4).

### 6.1.1 Content

- Completed research as well as ongoing studies may be submitted, provided that the theoretical framework, preliminary results and related literature appear in the proposal. The authors should state what is new in their research, how it builds on past research, and/or develops into new directions.
- Papers should be concise but should also contain the necessary information to inform both the reviewers and other researchers.
- Proposals too similar to papers previously presented will not be accepted.
- You must use a template for the final version of the submitted paper. The template can be downloaded from the website of the conference.

### 6.1.2 General Regulations

**Each applicant can be the presenting author on only one Research Report or one Oral Communication presentation.** Each RR or OC applicant may also present a poster, as well as be a plenary speaker or plenary panellist, or a coordinator/presenter of a Research Forum, Working Session, or Discussion Group, if he or she wishes. **No author's name should appear in the program more than four times**, including Research Reports (RR), Oral Communications (OC), Poster Presentations (PP), Research Forums (RF), Working Sessions (WS), Colloquia (CO), and Discussion Groups (DG).

In the case of personal presentations, **only the person designated as presenting author of the paper can present the paper.** In the case of group activities, **only the coordinator(s) and announced authors can be the presenters during the group sessions.** The names and addresses of presenting authors and first coordinators (i.e., those designated as the author/coordinator) will be included in an appendix of the proceedings.

In order to have a proposal for a RR (including as part of a Colloquium) or RF considered by the International Program Committee and sent to reviewers, the presenting author(s) **MUST** be pre-registered as participant(s), and have paid the non-refundable conference deposit by **January 15, 2016.**

In order to have a proposal for an OC, PP, WS, DG, or CO considered by the International Program Committee, the presenting author(s) must be pre-registered as participant(s), and have paid the non-refundable conference deposit by **March 6, 2016.**

By submitting, you attest that the submitted work is owned by yourself or owned by someone else from whom you have permission to provide the work to PME as a contribution to the Proceedings of the International Group for the Psychology of Mathematics Education (PME 40). In the case that your contribution is accepted, you agree to provide this work to PME for publication in the Proceedings of PME 40 without charge. This also includes online publication on the PME website and publication via a print-on-demand service.

### 6.1.3 Format of Papers

**IT IS STRONGLY RECOMMENDED THAT ALL SUBMISSIONS ARE PRODUCED USING THE PME TEMPLATE WHICH HAS THE REQUIRED STYLES AND DOCUMENT FEATURES**

**Maximum number of pages:** The page limit is dependent on the type of proposal: RR: 8 pages; OC, PP: 1 page; DG, WS: 2 pages; CO: 1 page (in addition to the 3 Research Reports).

**The specified limit includes references, figures, and appendices.**

**Titles:** The title should be capitalized and centered. The author's (and co-authors') name(s) and affiliation(s), in this order, must be included. The name(s) of the presenting author(s) must be underlined.

**References:** These should be presented in the standard style of the American Psychological Association (APA) – see the template for examples.

**Files and Filenames:** Files should be saved in **DOC format** (not DOCX, not ODT, not RTF, not PDF), and filenames should indicate the type of proposal as well as the name of the presenting author, as detailed below.

Use RR, OC, PP, DG, RF, WS, and CO for Research Report (RR), Oral Communication (OC), Poster Presentation (PP), Discussion Group (DG), Research Forum (RF), Working Session (WS), and Colloquium (CO), respectively.

For example, a proposal for an Oral Communication, by FirstName LastName (e.g., John Smith) for publication in the Proceedings, should be saved as OC\_LastName.doc (e.g., OC\_Smith.doc).

**Paper Format:** All proposals are to use A4 paper format with a frame of 170 by 247 mm. The font should be 14 point, *Times New Roman* is recommended, with a 16-point line space and 6 points between paragraphs. This is pre-set in the template.

**DO NOT** number the pages.

- Use exact dimensions, and fill the entire frame.
- The original text will be reduced to 70% for inclusion in the proceedings; changes in style will incur difficulties in the printing of the proceedings and are not permitted.
- Please be sure that files do not exceed 2 MB.

**IT IS STRONGLY RECOMMENDED THAT ALL SUBMISSIONS ARE PRODUCED USING THE PME TEMPLATE. NOTE, THAT THE SUBMISSIONS WILL BE INCLUDED – IN CASE OF ACCEPTANCE – IN THE PROCEEDING WITHOUT ANY FURTHER CHANGES.**

## 6.2 Tables of Research Categories

This section is for your reference when completing the reviewer information or the proposal information for personal presentations. Reviewers will receive proposals for reviewing according to the research categories they mark when registering as a reviewer. The proposals will be sent to reviewers according to the research categories that are marked by the submitting author. All proposals must be concerned with mathematics education.

### 6.2.1 Research Domains in Mathematics Education

- |                                       |  |
|---------------------------------------|--|
| 01 Algebra and algebraic structures   | 13 Pre-service teacher preparation         |
| 02 Arithmetic, numbers and operations | 14 Classroom assessment                    |
| 03 Calculus and functions             | 15 Educational evaluation and policy       |
| 04 Geometry, space and shape          | 16 Classroom interaction and discourse     |
| 05 Probability and statistics         | 17 Conceptual change and development       |
| 06 Imagery and visualization          | 18 Curriculum development and task design  |
| 07 Problem solving and problem posing | 19 Teaching and learning with technologies |
| 08 Proof, argumentation and reasoning | 20 Tools, semiotics and gestures           |
| 09 Representations and modelling      | 21 Affect, emotions and attitudes          |
| 10 Teacher beliefs                    | 22 Culture, language and multilingualism   |
| 11 Teacher knowledge and practice     | 23 Equity and gender issues                |
| 12 Teacher professional development   | 24 Special needs education                 |

### 6.2.2 Grade Levels

- 01 Pre-School (age under 7, and teachers of this grade level)
- 02 Elementary (age 5-12, and teachers of this grade level)
- 03 Secondary (age 10-18, and teachers of this grade level)
- 04 Post secondary (age 16+, and teachers of this grade level)
- 05 Vocational education (and teachers in these contexts)
- 06 Adult education and out-of-school mathematics (and teachers in these contexts)

### 6.2.3 Types of Research

- 01 Qualitative/interpretative methods
- 02 Quantitative methods
- 03 Mixed methods
- 04 Theoretical/philosophical analysis

## 6.3 Equipment for presentation

For efficient organization of the conference, we need information about the equipment presenters want to use. On-site booking of equipment will not be possible and hence booking has to be done in advance. Computers and data projectors will be available in each room. Your own laptop can also be used for your presentation. For any other kind of equipment, please email the scientific secretariat at [scientific.pme40@edu.u-szeged.hu](mailto:scientific.pme40@edu.u-szeged.hu).

## 7 PME Pre-Submission Support

The PME pre-submission support for Research Reports and Oral Communications is intended for novice or inexperienced researchers who have limited access to expert advice and who

would like to receive guidance from more experienced PME researchers. Applicants should submit their paper to the coordinator who is appointed by the International Committee.

The coordinator will then assign the paper to an appropriate mentor and ensure that the communication between the mentor and novice researcher proceeds smoothly.

The PME pre-submission support coordinator is Nathalie Sinclair (nathsinc@sfu.ca).

The PME pre-submission support deadline is November 21, 2016.

The pre-submission support papers should be accompanied by a statement in which the authors describe:

- their limited experience in writing research reports (or journal articles); and
- their limited access to expert advice.

Mentors will correspond with the applicants and help strengthen their submitted papers.

Please note that this procedure is meant to provide feedback on written reports. It is not meant as support for conducting research. This mentoring does not guarantee acceptance, as all submitted papers will still undergo the regular PME reviewing procedures.

## 8 Registration and Payment

### 8.1 Conference Pre-Registration

Pre-registration for PME 40 will be carried out online using the ConfTool conference registration system, at [www.conftool.com/pme40](http://www.conftool.com/pme40). Before registering for the conference or paying the membership fee, you need to register in the PME ConfTool system.

1. a) If you are a **new user** for the PME ConfTool system:

- Please create a new account and register in the system.
- You will need to provide your personal information and account information in order to build your own data base in the system.
- After filling in these details and submitting all information needed, you will be able to continue with your conference pre-registration.

b) If you already **have been a user** of the PME ConfTool system:

- Please enter your username and password to log in and select the option “*Pre-Register for this Event or Join PME as a member.*” If you have forgotten your password, ConfTool will help you to retrieve it.

2. Select your status as PME participant by clicking on the appropriate option. Step by step, the system will take you to the payment form where you can find additional information on payment options for the conference deposit.

3. If you choose online payment, the system will connect you with a secure page for you to complete your payment (see 8.4 Payment Options).

If you have any problems with your conference pre-registration, please contact the conference registration secretariat at [registration.pme40@edu.u-szeged.hu](mailto:registration.pme40@edu.u-szeged.hu)

### 8.2 PME Membership Only

If you have been a PME member in the past, but will not be attending PME 40, or you want to become a new PME member who will not attend PME 40, pay the annual membership fee for PME through ConfTool. This is necessary for maintaining or getting membership.

1. a) As a **new member** of PME:

- Please create a new account and register in the system.
- You will need to provide your personal information and account information in order to build your own data base in the system.
- After filling in these details and submitting all information needed, you are able to select the option “*Pre-Register for this Event or Join PME as a member.*”

b) As a **member** of PME who wants to renew membership:

- Please log in by entering your username and password and select the option “*Pre-Register for this Event or Join PME as a member.*”

2. After checking your personal details and choosing “*Pay PME membership fee ONLY*” in the following step, the system will automatically take you to the payment form where you can get information on payment options for the membership fee.

3. If you choose online payment, the system will connect you with a secure page for you to complete your payment (see 8.4 Payment Options). If you have any problems with payment of the membership fee, please contact the conference registration secretariat at [registration.pme40@edu.u-szeged.hu](mailto:registration.pme40@edu.u-szeged.hu)

## 8.3 Registration Fees

The upper limit for the total registration fee will be €450 according to PME regulations, depending on the anticipated number of participants and external financial support. Our current estimations foresee an amount around €350. The exact amount will be decided by the International Program Committee in late March 2016, just prior to the publication of the Second Announcement.

### 8.3.1 Conference Deposit

The **non-refundable** conference deposit is €130. For those who attend the conference, the conference deposit will be deducted from the total conference registration fee.

**The balance of the conference fee must be paid no later than May 27, 2016.**

The conference deposit covers:

- PME membership for the year 2016 of €40 with €10 compulsory Skemp Fund donation;
- access to electronic conference proceedings; and
- administrative costs related to the handling of the proposals.

### 8.3.2 Total Registration Fee

The total registration fee covers:

- PME membership fee of €40 for the year 2016 with a €10 compulsory Skemp Fund donation (as covered in the deposit);
- a set of printed conference proceedings (see below) and access to an electronic version of the proceedings;
- 4 lunches and 8 coffee breaks;
- opening reception (Wednesday, August 3, 2016);

- conference dinner;
- one-week travel ticket valid for all branches of local public transportation in Szeged;
- the costs of venue, administrative work, and facilities needed for the organization of the conference.

**You have the option to choose if you want to receive printed proceedings or not.** As with previous conferences, the default option includes both printed and electronic proceedings. During the final registration process via the ConfTool system, participants can choose the alternative option that includes only electronic proceedings. If you choose only electronic proceedings, the registration fee will be reduced.

The reduction depends on the price of printed proceedings (i.e., on the number of pages and volumes) and will be announced on the conference website and in the Second Announcement in April 2016.

### 8.3.3 Accompanying Person Fee

We welcome accompanying persons. Accompanying persons participate in the social program but **not in the scientific program** of the conference. The fee for accompanying persons is expected to be around €150 per person depending on the anticipated number of participants and external financial support. The exact amount will be decided by the International Program Committee in late March 2016, just prior to the publication of the Second Announcement.

The fee covers:

- opening reception (Wednesday, August 3, 2016);
- conference dinner;
- some of the administrative work involved outside of the scientific program.

There is no fee for accompanying children under 14 years of age. If you have any questions, please contact the administrative secretary at [admin.pme40@edu.u-szeged.hu](mailto:admin.pme40@edu.u-szeged.hu)

### 8.3.4 Late Registration Fees

An additional charge of €50 will be applied for registrations made after May 27, 2016.

## 8.4 Payment Options

All participants can make their payment by credit card, or wire transfer. If you use a **credit card**, the process will be carried out online. The ConfTool system will connect you to a secure payment site within the accounting system. There you will enter your credit card information and will receive a receipt for your transaction.

If you choose to pay by **bank wire transfer** you will need to transfer the funds to the account designated on the website. **Make sure that the bank transfer fees are not charged to the recipient.** To finish the payment process, please print the confirmation of bank transfer and send it by email with your full name to [registration.pme40@edu.u-szeged.hu](mailto:registration.pme40@edu.u-szeged.hu)

Your pre-registration will only be finalized when the payment process is complete.

If you have any questions regarding your payment, please contact [registration.pme40@edu.u-szeged.hu](mailto:registration.pme40@edu.u-szeged.hu)

## 8.5 Donations to Skemp Fund

The Richard Skemp Memorial Support Fund is a fund that was established to support academics from under-represented or economically weak countries in attending the annual conference (see 8.7). The spirit of the fund is to help academics who normally would not have access to the PME conference. As such, where applicants are from, where they are living, where they are working, where they are currently studying, as well as the conditions of their employment and studies are important factors when adjudicating the applications.

The Skemp Fund plays an increasingly important role in making the PME annual conference more accessible to mathematics educators who would not otherwise be able to attend the conference. The extent to which we can give this financial assistance depends to a large degree on the generosity of the PME community. For this reason, a compulsory donation of €10 is included in the pre-registration fee for the conference. In addition, the International Committee calls on members to make an additional donation, however small, to the Skemp Fund when paying membership fees or registering for annual conferences.

## 8.6 Cancellation Policy

### 8.6.1 For Registered Participants

Participation in the conference is conditional upon registration and payment of all fees. All cancellations and changes regarding the conference registration must be made in written form to the conference registration secretariat by sending an email to [registration.pme40@edu.u-szeged.hu](mailto:registration.pme40@edu.u-szeged.hu). In all cases, **the conference deposit will not be refunded**; however, the deposit will cover one year of membership as well as access to the electronic conference proceedings (see 8.3.1 Conference Deposit).

If a cancellation for conference participation is made after the full registration fee has been paid:

**Before June 15, 2016**, the refund will be the amount of the full registration fee minus the conference deposit and the fees that the bank charges for transferring the refund.  
 Refund = (registration fee – conference deposit) – bank fees

**After June 15, 2016**, the refund will be 50% of the full registration fee minus the conference deposit, and then subtracting the fees that the bank charges for transferring the refund.  
 Refund = 50% of (registration fee – conference deposit) – bank fees

### 8.6.2 For Accompanying Persons

**Before June 15, 2016**, the amount paid minus the fees that the bank charges for transferring the refund will be refunded. Refund = registration fee – bank fees

**After June 15, 2016**, the refund will be 50% of the full registration fee, subtracting the fees that the bank charges for transferring the refund. Refund = 50% of registration fee – bank fees

### 8.6.3 General Information



- Participation is not guaranteed until full payment of the registration fee is received.
- The conference program may be subject to changes (based on decisions by the International Program Committee).
- In the case of unforeseeable events, it is up to the International Program Committee and the International Committee of PME to decide on changes or even the cancellation of the conference and the amount of refund of payments. If the conference is cancelled, the remaining funds will be paid back to the participants and no further liability of the local organizers or PME will be accepted towards the client.

### ***8.7 Richard Skemp Memorial Support Fund and Application for Support***

The Richard Skemp Memorial Support Fund is a fund that was established to support academics from under-represented or economically weak countries in attending the annual conference. The spirit of the fund is to help academics who normally would not have access to the PME conference.

A limited amount of financial support is available to researchers who experience difficulty in obtaining financial support to attend a PME conference. **Applicants for a grant from the Fund must submit an individual contribution (RR, OC, PP) and pay the non-refundable conference deposit, prior to the applicant's proposal being reviewed.** A grantee must have at least one proposal (RR, OC, PP) accepted.

In general:

- only one of the authors of a particular proposal will be eligible to apply for a grant;
- those who have already received a grant on two prior occasions will not receive an additional grant; and
- for applicants who have already received a grant in a previous year, priority will go to those who have an accepted Research Report rather than an Oral Communication or Poster Presentation.

The number and size of grants each year depends on the amount available as well as the number of applicants and the relative merits of each application. The Richard Skemp Memorial Support Fund Committee will meet during the second International Program Committee meeting, in late March, 2016, and will make its recommendations once decisions on the acceptance or rejection of proposals have been completed. The PME Administration Manager will contact applicants to inform them of the decision on their application for a Richard Skemp Memorial Support Fund grant. This will usually take place before the end of April each year. Please note that grants cannot be carried over to the next year's conference. Grants will be paid at the conference and are not available in advance.

Applicants for a Skemp Fund **grant** should fill in the application form available from the conference website or from the PME website (<http://igpme.org/index.php/annual-conference/skemp-fund-support>). The application should be sent by **March 6, 2016** to:

**Bettina Rösken-Winter**  
Humboldt Universität, Berlin

Postal address: Unter den Linden 6  
D-10099 Berlin  
Tel: +49 (0) 30 2093-5857

Email: [info@igpme.org](mailto:info@igpme.org)

## 9 Important Dates for PME 2016

### 9.1 Scientific Program

For all accepted proposals the deadline of final registration is May 27, 2016. Contributions will not be included into the proceedings, if final registration including the payment of the total registration fee is not completed by that date.

#### 9.1.1 Personal Presentations

Research Report	Pre-Registration & Proposals & Payment of Conference Deposit	January 15, 2016
Oral Communication	Pre-Registration & Proposals & Payment of Conference Deposit	March 6, 2016
Poster Presentation	Pre-Registration & Proposals & Payment of Conference Deposit	March 6, 2016



### 9.1.2 Group Activities

Research Forum	Submission	December 1, 2015
	Pre-Registration & Proposals & Payment of Conference Deposit	January 15, 2016
	Full papers	May 1, 2016
Discussion Group	Pre-Registration & Proposals & Payment of Conference Deposit	March 6, 2016
Working Session	Pre-Registration & Proposals & Payment of Conference Deposit	March 6, 2016
Seminar	Pre-Registration & Proposals & Payment of Conference Deposit	March 6, 2016
Colloquium	Pre-Registration & Proposals & Payment of Conference Deposit	January 15, 2016

### 9.2 Registration

Pre-registration (completed with payments)	Necessary for proposals to be reviewed	Starting on December 1
Full registration (completed with payments)	Necessary for inclusion in the PME Proceedings	<b>May 27, 2016</b>

### 9.3 Deadlines for PME 2017

Research Forums for PME 41 to be held in Singapore should be submitted before November 1, 2016, to the Administrative Manager ([info@igpme.org](mailto:info@igpme.org)).

The PME Pre-Submission Support for contributions to PME 41 is November 1, 2016. Please refer to [www.igpme.org/index.php/annual-conference/pre-submission-support](http://www.igpme.org/index.php/annual-conference/pre-submission-support) for further information.

## 10 Travel Information

### 10.1 Travelling to Szeged

Unfortunately, Szeged does not have an international airport. Most visitors come to the town by train or by car. We have InterCity trains to and from Budapest every hour (except late night and early morning).

#### 10.1.1 Travelling from Hamburg

We anticipate that many PME conference attendants will also participate at the ICME-13 conference in Hamburg. That conference ends on July 31, so you have two days for traveling to Szeged. Consider the following options:

- Direct flight from Hamburg to Budapest (see 10.1.2)
- There are direct trains from Hamburg to Budapest (13-14 hours) and then from Budapest to Szeged (a further 2 hours).
- There are direct buses twice a week (20 hours) from Hamburg to Budapest, and then from Budapest to Szeged a further two hours are needed either by bus or by train.
- The Hamburg-Szeged distance can be covered in 12 hours by car.

#### 10.1.2 Travelling from Budapest

Most visitors are expected to arrive at Liszt Ferenc International Airport, Budapest (<http://www.bud.hu/english>). From there, the easiest and cheapest way to travel to Szeged is (1) taking the airport bus to Ferihegy railway station (bus number: 200E, bus tickets can be bought from the driver), and (2) taking the InterCity train to Szeged (travel time: two hours).

#### 10.1.3 Getting to the Conference Venue

The GPS coordinates of the main building of the conference:  
N46.247339, E20.141838 (Link to Google Maps: <https://goo.gl/maps/ThtSnL6hdq42>)

All conference participants and accompanying persons will receive a one-week ticket valid for all branches of the local public transportation system. The conference venue is well within walking distance from several hotels. Nevertheless, Szeged is a cultural, gastronomical and spa event itself worth being discovered by means of the highly developed public transportation system.

## 10.2 About Hungary

### 10.2.1 Language

Hungary's official language is Hungarian. How to pronounce Szeged? Visit <http://hu.forvo.com/user/roxmorts/>

A significant proportion of the population, especially the younger generations understand and speak English. The official language of the conference is English. There will be no simultaneous translations.

### 10.2.2 Passport and visa

Hungary is a member of the Schengen Area. Citizens of the EU and EEA states as well as citizens of the following countries may travel to Hungary without a visa: Albania, Andorra, Antigua and Barbuda, Argentina, Australia, The Bahamas, Barbados, Bosnia and Herzegovina, Brazil, Brunei, Canada, Chile, Costa Rica, Croatia, Commonwealth of Dominica, East Timor, Grenada, Guatemala, Honduras, Hong Kong, Israel, Japan, Macao, Macedonia, Malaysia, Mauritius, Mexico, Monaco, Montenegro, New Zealand, Nicaragua, Panama, Paraguay, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Salvador, Samoa, San Marino, Serbia, Seychelles, Singapore, South Korea, Switzerland, Taiwan, Trinidad and Tobago, United Arab Emirates, United States of America, Uruguay, Vanuatu, Vatican, Venezuela.

Participants from other countries should submit their visa application at the representation of the country which is the main destination of their visit. In the case of trips covering several Schengen Member States (e.g., Germany, Austria and Hungary) the appropriate representation (embassy or consulate) is where you will be staying for the maximum number of days.

Please note that the information provided in this section is accurate at the time of publishing the First Announcement, therefore you may wish to consult appropriate authorized information sources later.

### 10.2.3 Letter of Invitation

Delegates requiring a letter of invitation in order to attend the conference may write to the administrative secretariat [admin.pme40@edu.u-szeged.hu](mailto:admin.pme40@edu.u-szeged.hu) specifying the necessary details. Please note that this procedure aims explicitly at assisting delegates who need to obtain a visa or permission to attend the conference. It is not an official invitation covering fees or other expenses and does not imply any financial support from the conference organisers.

### 10.2.4 Currency

The currency in Hungary is Forint (HUF). For exchange rates please check the official homepage of the Magyar Nemzeti Bank (the central bank of Hungary). [www.mnb.hu/en](http://www.mnb.hu/en)

### 10.2.5 Electrical Appliances

Mains voltage in Hungary is 230V/50Hz. Travellers from most nations in Asia, Africa and Europe should have appliances that work on the same mains voltage as Hungary, therefore you will not need a voltage converter. Notable exceptions to this are Japan, USA and Canada which use 100/120V 50/60Hz.

We use the type F power sockets that also work with plug C and E.



### 10.2.6 Time zone

During the summer, we are two hours ahead of GMT.

### 10.2.7 Telephone Codes

Hungary's country code is 36. Hungarian telephone numbers are dialled after +36 and the area codes. For mobile phones the area codes are 20, 30, or 70. Szeged has the area code 62.

## 10.3 Weather

August is usually a dry and hot month in Szeged. The climate statistics of the town:

Mean maximum temperature: 27.6 °C

Mean minimum temperature: 14.0 °C

Mean precipitation: 56 mm

Mean sunshine hours/day: 8.5

## 10.4 Liability and Insurance

Please check the validity of your insurance before you travel. The Local Organising Committee does not accept any liability for personal injuries, or for the loss or damage to property belonging to conference participants (or their accompanying persons) either during or as a result of the conference.

## 10.5 Accommodation

There are a variety of accommodation options available in Szeged. Accommodation should be arranged by participants with the accommodation providers; the PME 40 conference is not arranging accommodation. Our partner will provide an ample number of choices for accommodations through the conference website.

## 11 Credits

### 11.1 Logo Design

The conference logo was designed by Lóránt Ragó.

### 11.2 Photo Credits

Page 5, Interior of the Szeged Synagogue, Gabi Agu; Móra Ferenc Museum, Lennert B

Page 6, The University Congress Center at night, Daniel Gil

Page 32, The University Congress Center, Fiskális

Page 37, The Cathedral and Votive Church of Our Lady of Hungary, mpeterke

