INTERNATIONAL GROUP FOR THE
PSYCHOLOGY OF MATHEMATICS EDUCATION

Annual Meeting

FIRST ANNOUNCEMENT

July 13 – 18, 2003

Hawai‘i Convention Center

Honolulu, Hawai‘i

Co-Hosted by the

University of Hawai‘i-Manoa

and

Pacific Resources for Education and Learning
THE INTERNATIONAL GROUP  
FOR THE  
PSYCHOLOGY OF MATHEMATICS EDUCATION (PME)  

Aloha Colleagues,  

It is our pleasure to invite you to participate in the 27th Annual Meeting of the International Group for the Psychology of Mathematics Education (PME27) held jointly with the 25th Annual Meeting of PME North America Chapter (PME25). The theme of the conference is "Navigating Between Theory and Practice.” Co-hosted by the University of Hawai‘i-Manoa (UHM) and Pacific Resources for Education and Learning (PREL), the conference will be held at the Hawai‘i Convention Center, Honolulu, Hawai‘i, from Sunday July 13 to Friday July 18 2003.  

We wish you fond “Aloha” and look forward to welcoming you to Hawai‘i.  

Mahalo and aloha,  

_Sandy Dawson_  
Sandy Dawson on behalf of the  
Local Organizing Committee  

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**Spirit of Aloha**  

A is for Akahai, Hawaiian meaning kindness, to be expressed with a feeling of tenderness;  

L is for Lokahi, Hawaiian meaning unity, to be expressed with a feeling of harmony;  

O is for ‘Olu’olu, Hawaiian meaning agreeable, to be expressed with a feeling of pleasantness;  

H is for Ha‘aha’a, Hawaiian meaning humility, to be expressed with a feeling of modesty;  

A is for Ahonui, Hawaiian meaning patience, to be applied with perseverance.  

“Aloha Spirit” is the coordination of mind and heart...  

It’s within the individual,  

It brings you down to yourself.  

You must think and emote good feelings to others.  

_Pilahi Paki_
VENUE

Six million years in the making, Hawai‘i is a breathtaking masterpiece of nature. For conference attendees, it's inspiring, rejuvenating, revitalizing. The islands of Hawai‘i provide many different backdrops: smoking volcanoes and splashing waterfalls, undersea caverns and alpine streams, black lava deserts and deep green rainforest, botanical gardens where house plants grow into towering trees, and beaches that come in shades of gold and black, even green and red!

Honolulu, the state capital, is located on the island of O‘ahu in the Hawaiian chain of islands, easily accessible by air from the US mainland, Canada, Australia, Japan, Asia, and from Europe and the middle east via connecting flights through the USA.

The picture below shows the Gift of Water, a bronze statue fronting the Hawai‘i Convention Center site of PME27. Symbolically, it acknowledges the Hawaiian people for their generosity and expressions of goodwill to newcomers.

Downtown Honolulu seen, below, only begins to tell the story of what it means to attend a conference in Hawai‘i. Conference attendees may wish to visit one of the other islands in the Hawai‘i chain after the conference is over, or even before it starts! Just be sure not to miss any of the conference because it is going to be exceptional.

For those participants wishing to sample island life in other parts of Hawai‘i before or after the conference, inter-island flights give easy access to the neighboring islands of Maui, Kaua‘i, Moloka‘i, Lana‘i, and Hawai‘i's Big Island.
Hawai‘i is a tapestry of sky and sea, lush mountains and brightly colored flowers. It is a place whose culture. The Hawai‘i Convention Center (seen below) shares all of these things. Open to the outdoors, inviting the scent of flowers inside to mingle with guests. Native Hawaiian plants are in abundance. Landscaped grounds, terraces, lanais and courtyards account for more than six acres of the 10-acre site.

Inside, over US$2 million of original Hawaiian art includes paintings of volcanoes, mountains, ocean, waterfalls, taro, and fishponds displayed alongside images of Hawaiian royalty, gods, and myths. Above, soaring rooftop canopies recall images of Polynesian sailing canoes.

**CONFERENCE SECRETARIAT**

Communication concerning the PME27 Conference should be sent to the Conference Secretariat at the following address:

PME27 Conference Secretariat  
University of Hawai‘i Conference Center  
2530 Dole Street, Sakamaki C-404  
Honolulu, Hawai‘i  
96822  
Tel: + 1-808-956-8204  
Email: pme27@outreach.hawaii.edu  
Fax: + 1-808-956-3364

**WEBSITE OF THE CONFERENCE**

The PME27 conference has a web site [www.hawaii.edu/pme27](http://www.hawaii.edu/pme27) where you can get updated information about the conference. The Second Announcement (including forms) will also be placed on this web site.

**Conference Dates**

Registration Desk: Opens **Sunday July 13 2003, noon to 4:00**, in the main foyer of the Hawai‘i Convention Center. Conference bags, nametags, and Proceedings can be collected from the Registration Desk. The registration desk will be open as well on Monday, July 14, 8:00-4:00.

Accommodation: For those staying on campus, rooms will be available from noon. For those staying in hotels check with your hotel, but the usual check-in time is 3 p.m.

Opening session: **Sunday afternoon July 13th, 2003** at 5 p.m. at Kawaiaha‘o Church with reception to follow on the grounds of the Honolulu Hale.

Maps will be available at the registration desk, hotels and campus accommodations showing the location of the Convention Center, the Church and Honolulu Hale.
GENERAL INFORMATION

PME International Conference Fee

The Registration Fee is expected to be no more than US$460. Depending on the number of participants and external support, the exact amount will be decided in April 2003 just before mailing the Second Announcement. Though the registration fee is higher than in past years, because accommodation in Hawai‘i is inexpensive, the total cost to a participant for registration and accommodation will be approximately the same as for PME25 and PME26.

The registration fee will cover:
1) PME membership fee US$40 for 2003
2) A set of Conference Proceedings, available at the Hawai‘i Convention Center PME registration desk, or by mail
3) Lunch during four days at the Hawai‘i Convention Center
4) Nutrition time-outs each conference day at the Hawai‘i Convention Center
5) Opening reception on the grounds of the Honolulu Hale after the opening plenary (Sunday afternoon/evening)
6) Tuesday afternoon and evening excursion to the Polynesian Cultural Center (PCC) that includes experiences of various Polynesian cultures, a Hawaiian lu‘au (dinner), and evening show of native dancing, as well as an escorted bus ride across O‘ahu to the PCC
7) Thursday evening dinner and dance at the Sheraton Waikiki Hotel (see map on page 20)
8) Costs of venue, administrative work and facilities needed for organization of the conference.

PME North America (PMENA) Registration Fee

PMENA membership is open on an annual basis. Dues are $20 and should be paid with your conference registration. See the conference registration form page 24. If you are unable to attend the conference but want to join or renew your PMENA membership, membership forms are available at http://www.pmena.org/. PMENA Membership Fees for fulltime graduate students are usually $10, but this year the fee for graduate students attending PME27 is waived.

The PME27 ‘Ohana (In Hawaiian ‘Ohana means ‘extended’ family)

The PME27 ‘Ohana includes the accompanying adult partners and children of conference participants. The fee for accompanying adult partners of participants is US$170 per person. This fee will cover items 5, 6, 7 and (part of) 8 listed above. The fee for accompanying children (ages 6 - 16) is US$70. The children’s fee will cover items 5, 6 and (part of) 8 above. Payment for accompanying persons will be required when participants submit their conference pre-payment.

Plans are being made to provide a program of activities for the PME27 ‘Ohana—adults and children. Costs for these activities will be in addition to the accompanying person fees. Details will be issued in the Second Announcement. To take part in these activities the ‘Ohana accompanying persons must make sure to drop their associated conference participant at the Convention Center prior to heading off for a day of fun and excitement on the island of O‘ahu.

Further Information

Detailed information about PME27 is included below. The Second Announcement will be available on the PME27 website by early May 2003. If you wish to receive notification when the Second Announcement is posted on the website, send the Conference Deposit Form with the Conference Deposit of US$100 to the Conference Secretariat (see below) by March 1, 2003. If you submit a Research Report and/or a revised description of a Research Forum, the Conference Deposit has to be paid before January 15, 2003, which is also the deadline for receipt of Research Reports.
THE INTERNATIONAL GROUP
FOR THE
PSYCHOLOGY OF MATHEMATICS EDUCATION (PME)

History and Aims of PME

PME came into existence at the Third International Congress on Mathematics Education (ICME3) held in Karlsruhe, Germany in 1976. Its past presidents have been Efraim Fischbein (Israel), Richard R. Skemp (UK), Gerard Vergnaud (France), Kevin F. Collis (Australia), Pearl Nesher (Israel), Nicolas Balacheff (France), Kathleen Hart (UK), Carolyn Kieran (Canada), Stephen Lerman (UK) and Gilah Leder (Australia).

The major goals of both PME and PMENA are:

• To promote international contacts and the exchange of scientific information in the psychology of mathematics education.
• To promote and stimulate interdisciplinary research in the aforesaid area with the co-operation of psychologists, mathematicians and mathematics educators.
• To further a deeper understanding into the psychological aspects of teaching and learning mathematics and the implications thereof.

PME Membership and Other Information

Membership is open to people involved in active research consistent with the Group’s goals, or professionally interested in the results of such research. Membership is on an annual basis and requires payment of the membership fees (US$40 or the equivalent in local currency) per year (January to December). For participants of PME27 Conference, the membership fee is included in the Conference Deposit. Others are requested to contact their Regional Contact, or the Executive Secretary (see page 6)

Website of PME

For more information about PME as an association see its home page at igpme.tripod.com or contact the Executive Secretary.

Honorary Members of PME

Hans Freudenthal (The Netherlands, deceased)
Efraim Fischbein (Israel, deceased)

Present Officers of PME

President: Rina Hershkowitz (Israel)
Vice-president: Luciana Bazzini (Italy)
Secretary: Tad Watanabe (USA)
Treasurer: Peter Sullivan (Australia)

Other members of the International Committee

Janete Bolite Frant (Brazil)  Ricardo Nemirovsky (USA)  
Anne Cockburn (UK)  Andrea Peter-Koop (Germany)  
Jorge Tarcisio Da Rocha-Falcao (Brazil)  Catherine Sackur (France)  
Sandy Dawson (Canada)  Haralambos Sakonides (Greece)  
Ruhama Even (Israel)  Ron Tzur (USA)  
Anne Berit Foglesstad (Norway)  
Peter Gates (UK)  
Masataka Koyama (Japan)
Executive Secretary

Joop van Dormolen (Israel)
Rehov Harofeh 48A/10
Haifa 34367, Israel
Phone: +972-4-8246239
Fax: +972-4-8258071
E-mail: joop@tx.technion.ac.il

Present Officers of PMENA

Dr. Denise S. Mewborn, Chair (University of Georgia)
Dr. Joseph Zilliox, Chair-Elect (University of Hawai‘i)
Dr. Robert Speiser, Past Chair (Brigham Young University)
Dr. Doug McDougall, Electronic Secretary (University of Toronto)
Dr. Maria Trigueros, Membership Secretary (Instituto Tecnologico Autonomo de Mexico)
Dr. Anne Teppo, Treasurer (Montana State University)
Dr. Karen Norwood, (North Carolina State University)

PME27/PMENA25 Program Committee

Dr. A. J. (Sandy) Dawson (PREL)
Dr. Barbara Dougherty (University of Hawai‘i)
Dr. Julie Kaomea (University of Hawai‘i)
Dr. Neil Pateman (University of Hawai‘i)
Dr. Mary Pat Sjostrom (University of Hawai‘i)
Dr. Hannah Slovin (University of Hawai‘i)
Dr. Catherine Sophian, (University of Hawai‘i) and four members of the International Committee:
Dr. Judith Sowder (San Diego State University)
Dr. Nancy Whitman (University of Hawai‘i)
Dr. Joseph Zilliox (University of Hawai‘i)

PME27/PMENA25 Local Organizing Committee

Dr. A. J. (Sandy) Dawson (PREL)
Dr. Barbara Dougherty (University of Hawai‘i)
Dr. Neil Pateman (University of Hawai‘i)
Dr. Joseph Zilliox (University of Hawai‘i)

‘Ohana Arrangements

Mr. Glen Schmitt
Ms. Sandra Dawson

Graphic Artist

Mr. Darrell Asato (University of Hawai‘i)
Ms. Liane Sing (PREL)

Technological Support

Mr. Jim Bannan (PREL)

Volunteer Support

Ms. Sharlene Brunell
Ms. Margaret Camacho
Ms. Geri Chee
THE SCIENTIFIC PROGRAM

The scientific program includes the following activities:

**Plenary sessions**
- Plenary addresses
- Plenary panel

**Personal presentations**
- Research Forums (RF)
- Research Reports (RR)
- Short Oral Communications (SO)
- Poster presentations (P)

**Group activities**
- Discussion Groups (DG)
- Workings Sessions (WS)

The working language of the Conference is English. Papers for the proceedings must be written and presented in English. However, colleagues, including the presenter, are welcome to contribute to discussions and questions following the presentation of a Research Report or a Short Oral Communication in their first language, provided that translation is possible by someone present in the session.

**Plenary Sessions**

The theme for the PME27 Conference is “Navigating Between Theory and Practice”. The plenary sessions will represent a variety of perspectives relevant to the PME community. There will be five invited plenary addresses and a plenary panel discussion. The plenary speakers and chair of the plenary panel are noted below:
- Nainoa Thompson, Polynesian Navigator and Educator (Polynesian Voyaging Society), Plenary Speaker
- Dr. Jo Boaler, Stanford University (USA), Plenary Speaker
- Dr. Toshiakira Fujii, Tokyo Gakugei University (Japan), Plenary Speaker
- Dr. Nicolina Malara, University of Modena e Reggio (Italy), Plenary Speaker
- Dr. Barbara Dougherty & Dr. Joseph Zilliox, University of Hawai’i (USA), Joint Plenary Speakers
- Dr. Jarmila Novotná, Charles University in Prague (Czech Republic), Plenary Panel Chair

**Research Forums**

The goal of a Research Forum is to create dialogue and discussion, by offering PME members more elaborated presentations, reactions, and discussions on topics on which substantial research has been undertaken and which continue to hold the active interest of a large subgroup of PME. Two 90-minute slots will be devoted to each Research Forum. A Research Forum is not supposed to be a collection of presentations but to convey an overview of an area of research, its main current questions and perspectives.

A Research Forum should:
- focus on a topic which is of substantial interest within the work of PME
- stimulate critical dialogue around this topic through the consideration of multiple perspectives
- have a coherent structure which encourages intellectual debate
- involve planned input to this critical dialogue from at least five researchers
- include structural opportunities for interaction by the audience, and avoid the need for long presentations through the use of well-advertised prior reading.

For the PME27 Conference, the Program Committee and the International Committee selected the topics and coordinators of the Research Forum. The following Research Forums are being organized for PME27:
- Bodily Activity and Imagination in Mathematics Learning
  Co-ordinators: Ricardo Nemirovsky (USA) & Marcelo Borba (Brazil)
  E-mail: ricardo_nemirovsky@terc.edu
• Inequalities and Equalities: Issues for Research and Teaching  
  Co-ordinators: Luciana Bazzini (Italy) & Pessia Tsamir (Italy)  
  E-mail: luciana.bazzini@unito.it

• Mathematics Learning and Technology: Who Gets a Fair Deal?  
  Co-ordinators: Colleen Vale (Australia), Helen Forgasz (Australia), & Gilah Leder (Australia)  
  E-mail: colleen.vale@vu.edu.au

Co-ordinators must submit a rewritten description of their Research Forum to the Conference Secretariat (page 3) before January 15, 2003 taking into account the comments they received from the IC and the PC after the first description was reviewed at PME 26 Conference. A draft version of the full papers from all contributors should reach the Conference Secretariat before March 15, 2003. The final papers to be included in the Proceedings should be sent to the Conference Secretariat before May 1, 2003. Guidelines for the description and the full papers can be found on page 11 onwards. In order to be included in the Conference Program and in the Conference Proceedings, all contributors of a Research Forum must pay the conference deposit before January 15, 2003, and full Registration Fee before May 31, 2003. If the full payment is not received by the latter date, the Research Forum will not be included in the program, nor in the Proceedings.

Details of making proposals of Research Forums at PME28 in 2004 are provided on page 15.

Research Reports

Each Research Report will be allotted a total time of 40 minutes: 20 minutes for the oral presentation and 20 minutes for discussion. Two types of papers are suitable for Research Reports:

A. Report of studies (observational, ethnographic, experimental, quasi-experimental, and case studies are all suitable). These types of papers should contain at least the following:
   1. a statement about the focus of the paper
   2. an indication of the theoretical framework of the study reported
   3. references to the related literature
   4. an indication of and justification for the methodology used
   5. some sample data and results.

B. Theoretical and philosophical essays. These should include at least the following:
   1. a statement about the focus of the paper
   2. an indication of the theoretical or philosophical framework within which the focus or theme of the paper is developed
   3. reference to related literature
   4. a clearly articulated statement of the author’s position on the focus or theme
   5. the paper’s implications for the existing research on the area.

Proposals for Research Reports will be reviewed by three PME members with experience in the area. Specifically, reviewers will be asked to comment on the following: Theoretical framework and related literature, methodology (if appropriate), statement and discussion of results, clarity, and relevance to PME audience. If a submission is not accepted as a Research Report, the Program Committee may suggest to the author(s) that they resubmit it as a Short Oral Communication or a Poster Presentation. A research group may propose a set of different Research Reports provided that the papers are significantly different and that a different author presents each paper. If the papers are interrelated and accepted, the Program Committee will try to schedule the papers in consecutive time-slots.

Proposals for Research Report presentations must be in the hands of the Conference Secretariat (page 3) by January 15, 2003. Notification of receipt will be mailed in February 2003. Please contact us if you have not received this notification by the end of February. Notification of acceptance of the proposal will be mailed in April 2003, together with the Second Announcement.
In order for the proposal to be considered, the presenting author(s) must pay the Conference Deposit by **January 15, 2003**. If accepted, payment of the full Registration fee by the presenting author(s) must be received before **May 31, 2003**. If the payment is not received by that date, the report will not be included in the Conference Proceedings, nor will it be included in the Conference Program.

*For guidelines for the preparation of Research Report proposals see pages 11–14.*

**Short Oral Communications**

Some research may more appropriately be communicated by means of a Short Oral Communication rather than by means of a full Research Report. Each communication will be allotted a total time of 15 minutes: 10 minutes for the oral presentation and 5 minutes for questions or comments. When possible, the presentations will be grouped by themes, and a discussion period of 15 minutes will complete each group of presentations. The research component of the short orals must be communicated in the proposal. The Program Committee will review proposals for Short Oral Communications.

Proposals of Short Oral Communications must be in the hands of the Conference Secretariat (page 3) **March 1, 2003**. Notification of receipt and acceptance of the proposal or reasons for rejecting a SO proposal will be mailed in April. Please contact us if you have not received this notification by the end of April. In order for a proposal to be considered the presenting author(s) must pay the Conference Deposit by the date of submission (March 1, 2003). If accepted, payment of the full Registration fee by the presenting author(s) must be received before **May 31, 2003**. If the payment is not received by that date, the proposal will not be included in the Conference Proceedings, nor will it be included in the Conference Program.

*For guidelines for preparation of proposals for Short Oral Communications, see pages 11–14.*

**Poster Presentations**

Poster Presentations are available for those whose work is more suitably communicated in a pictorial or graphical format, rather than through an oral presentation. There is no formal oral presentation associated with posters, although there will be a time allotted, after sufficient display time, during which presenters will be available by their posters for informal discussion with conference participants. A poster can present research projects, software developments, curricular innovations, educational programs, etc., related to the Psychology of Mathematics Education. Proposals ought to describe both the contents of the poster and its particular visual characteristics. The Program Committee will review the proposals for Poster presentations.

Proposals of Poster presentations must be in the hands of the Conference Secretariat (page 3) by **March 1, 2003**. Notification of receipt and acceptance of the proposal will be mailed in April 2003 with the Second Announcement. Please contact us if you have not received this notification by the end of April. In order for a proposal to be considered the presenting author(s) must pay the Conference Deposit by the submission date (March 1, 2003). If accepted, payment of the full Registration fee by the presenting author(s) must be received before **May 31, 2003**. If the payment is not received by that date, the proposal will not be included in the Conference Proceedings, nor will it be included in the Conference Program.

*For guidelines for preparation of proposals for Poster Presentations, see pages 11–14.*

**Group Activities**

The aim of the group activities is to achieve greater exchange of information and ideas related to the Psychology of Mathematics Education. There are two types of activities:

- Discussion Groups (DG)
- Workings Sessions (WS)

Both types of groups will be allotted the same amount of time for sessions during the conference: two 90-minute slots. For more details see below.
Discussion Groups

If approved by the Program Committee or the International Committee, a group that wishes to discuss and share perspectives on a specific topic or domain will be called a Discussion Group. There is no expectation that a Discussion Group produces any published outcome, or extends beyond one year. The objective of a Discussion Group is to provide the opportunity for people to work constructively together. They may begin with short synopses of research work, or five to ten pressing questions, or provocative prompts (such as a short video clip), which aim to elicit engagement on the part of all the participants. The main purpose is critical discussion. As in other years, two 90-minute sessions will be allocated to this activity.

A Discussion Group must have a co-ordinator and an assistant co-ordinator both of whom must be active members of PME. Proposals for a Discussion Group must be in the hands of the Conference Secretariat (page 3) by March 1, 2003. In order for a proposal to be considered, the group co-ordinators must pay the Conference Deposit by the submission date. Notification of receipt and acceptance of the proposal will be mailed in April 2003. Please, contact the Conference Secretariat if you have not received this notification by the end of April. Accepted proposals for a Discussion Group will be included in the conference proceedings, provided payment of the full Registration fee by the presenting author(s) has been received before May 31, 2003. If the payment is not received by that date, the proposal will not be included in the Conference Proceedings and no group activities for the proposed Discussion Group will be included in the Conference Program.

The International Committee approved the following Discussion Groups for PME27. The above proposal procedure also applies to these groups, as well the proviso that acceptance is conditional on the timely receipt of the full Registration Fees for the co-ordinators and the assistant co-ordinators.

The following Discussion Groups have already been accepted:

1. Facilitating conceptual change in mathematics  
   Co-ordinators: Erkki Pehkonen, Kaarina Merenluoto and Marianna Tzekaki  
   (A continuation from PME26)

2. Stochastical thinking, learning and teaching  
   Co-ordinators: Brian Greer and Christine Reading  
   (A continuation from PME26)

3. Examining theses  
   Co-ordinators: Kathleen Hart and Peter Sullivan  
   (A continuation from PME26)

For guidelines for preparation of proposals for a Discussion Group, see pages 11–14.

Working Sessions

This group activity has been introduced to complement the current PME format of presentation. The aim here is to ensure that PME participants engage collaboratively in a joint activity. Therefore, each Working Session should be consistent with the aims of PME and ensure maximum involvement for participants. Applications to run a Working Session in two 90-minute slots should be submitted by at least two individuals—a co-ordinator and an assistant co-ordinator both of whom are members of PME or PMENA—who both undertake to set and co-ordinate a specific task chosen from one of the following types:

1. Data Analysis: e.g., collaborative analysis and interpretation of a videotaped episode, interview protocol, transcript, etc.
2. Doing Mathematics: e.g., collaborative exploration of a mathematical problem from various perspectives, sharing ways of thinking or strategies, etc.
3. Role Playing: e.g., on a specific topic of interest such as supervisory or reviewing practices, history of mathematics, imaginary conversations, etc.
4. Any other activity or format that fulfills the aim of these sessions, that is: maximum involvement of the participants.

A Working Session must have a co-ordinator and an assistant co-ordinator. Proposals for a Working Session must be in the hands of the Conference Secretariat (page 3) by **March 1, 2003**. In order for a proposal to be considered, the co-ordinators must pay the Conference Deposit by the submission date. Notification of receipt and acceptance of the proposal will be mailed in April 2003 with the Second Announcement. Please, contact the Conference Secretariat (page 3) if you have not received this notification by the end of April. Accepted proposals for a Working Session will be included in the Conference Proceedings, provided the full Registration Fee for all the co-ordinators is received before **May 31, 2003**. If the payment is not received by that date, the proposal will not be included in the Conference Proceedings and no group activities for the proposed Working Session will be included in the Conference Program.

**For guidelines for preparation of proposals for a Working Session, see pages 11–14.**

**CALL FOR PAPERS AND GUIDELINES FOR PROPOSALS**

You are invited to propose one or more of the above activities according to the rules and guidelines described below. The following rules apply to all types of proposals (for specific rules see pages 12–14):

1. Proposals should be significantly related to the Psychology of Mathematics Education, and conform to the aims of PME as stated in item 2 of the Constitution. Contributions need not be limited to completed research. Ongoing studies may be submitted, provided that the theoretical framework and preliminary results appear in the text submitted. 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.

2. Authors are requested to refer to related papers that have been presented at previous PME or PMENA conferences. The authors should state what is new in the research and how it builds on past research, or goes in new directions. Proposals 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.

3. Each participant (including co-ordinators and presenters of Research Forums, Working Sessions and Discussion Groups) may propose as a First Author, one of each of the following three different types of personal presentations: Research Report (RR), Short Oral communication (SO), Poster presentation (P). However, the Program Committee will accept at the most one of the first two types (RR or SO) and one Poster presentation (P). A participant or group of participants is allowed to propose a Poster presentation as an alternative for, or in addition to, another personal presentation.

4. In order to have a proposal for personal presentation considered by the Program Committee and sent to reviewers the presenting author(s) of a Research Report must pay the required Conference Deposit of US$100 by the fixed date of **January 15, 2003**. Others must pay the Conference Deposit of US$100 by the fixed date of **March 1, 2003** (although payment by January 15, 2003 would be appreciated as it gives the organization an early indication of the expected number of presentations).

5. An individual cannot be the presenting author of two personal presentations, with the exception of a Poster presentation (as stated in item 3 above).

6. Only the author(s) of the paper can do a presentation.

7. The names and addresses of all co-authors or assistant co-ordinators will be included in an appendix in the proceedings, provided their details are sent together with their proposal.

8. When sending your submissions by email please use the following code in the Subject and name your attached files as follows: for a Research Report by Dufus the file should be named: **RR_dufus_PME27.doc** ( _ is an

9. If your submission includes figures please make sure that you keep the suggested set-up and font templates described below in item 10, and also that your submission is in letter format and NOT in the ‘A4’ format.

10. **Important announcement:**

We are endeavoring to work towards a uniform appearance for all papers in the PME27 conference proceedings. An electronic template and guidelines are available from the PME27 web site at [www.hawaii.edu/pme27](http://www.hawaii.edu/pme27).

Please use the template as the basis for your paper. It should be possible to download it to your computer: instructions on the website will explain how to do this. Alternatively, you can obtain the template as an attachment by emailing <pateman@hawaii.edu> with a note of your version of WORD. Existing files incorporating other styles and formats are best imported into the template via a text processor such as MS Word, the preferred word processor for PME27.

**Specific Guidelines**

**Research Forum Guidelines for PME27**

After receiving preliminary approval of their Research Forum proposal, the co-ordinator must submit a rewritten description to the PC in care of the Conference Secretariat (page 3) by January 15, a draft version of the full papers from all contributors by March 15, and the final paper by May 1. These papers must include:

- the title of the Research Forum
- the name(s) of the co-ordinator(s)
- the names of the contributors
- a description of the goals, key questions, themes and focus, as well as the theoretical and/or philosophical framework within which the focus or theme of the Research Forum is developed
- a detailed description of the proposed format of the Research Forum, including timing division, and plans for audience interaction
- details of pre-readings and how this can be made available
- how the space in the Proceedings will be used (up to 30 pages).

Guidelines for the **full papers** of a Research Forum to be included in the Proceedings:

1. Restrict the total of text to a maximum of **thirty pages**, including references, figures, and appendices. You may bring multiple copies of a longer version for distribution at the conference.
2. Write the papers in English.
3. Type and centre the title (in capitals), author(s) name(s), and affiliation(s) of the author(s), in this order.
4. Underline the name of the presenting author(s).
5. Begin the paper with an abstract of up to ten lines, single-spaced, preferably in italics. Immediately following, a second abstract in a language other than English may be included.
6. Give references in one of the accepted standard forms.
7. Use a 14-point type (Times recommended), a 16-point line space, and 6 points between paragraphs, occupying a frame of 170 by 247 mm. Please use exact dimensions, and fill the entire frame. Remember that the original text will appear in the proceedings reduced to 70%.
8. Use an inkjet or laser printer. Avoid dot matrix print, since it is not satisfactory for photocopying.
9. **Do not number the pages** (please pencil page numbers lightly on the back of each page).
10. **Do not staple the copies of the paper.**
11. Send **three final copies** of the full papers plus a disk with the file (indicating the word processor used, preferably MS Word), to the Conference Secretariat (page 3). Be sure that at least one of the copies is camera-ready (please, identify it). **Fax copies will not be accepted.**

For those who wish to use templates for their submission, please see item 10 on page 11.
Research Report Guidelines

Please note that you can be the presenting author of one Research Report. There is no limitation on the number of times you are listed as a co-author.

When preparing a proposal you are requested to:

1. Restrict your proposal to a maximum of eight pages, including references, figures, and appendices. You may bring multiple copies of a longer version for distribution at the conference.
2. Write the paper in English.
3. Type and centre the title (in capitals), author(s) name(s), and affiliation(s) of the author(s), in this order.
4. Underline the name of the presenting author(s).
5. Begin the paper with an abstract of up to ten lines, single-spaced, preferably in italics. Immediately following, a second abstract in a language other than English may be included.
6. Give references in one of the accepted standard forms.
7. Use a 14-point type (Times recommended), a 16-point line space, and 6 points between paragraphs, occupying a frame of 170 by 247 mm. Please use exact dimensions, and fill the entire frame. Remember that the original text will appear in the proceedings reduced to 70%.
8. Use an inkjet or laser printer. Avoid dot matrix print, since it is not satisfactory for photocopying.
9. Do not number the pages (please pencil page numbers lightly on the back of each page).
10. Do not staple the copies of the paper.
11. Send six copies of the paper to the Conference Secretariat (page 3) including a disk with the file (indicating the word processor used, preferably MS Word). Three of these copies should have the name(s) and affiliation(s) of the author(s) removed for purpose of blind review. Be sure that at least one of the copies with the name(s) and affiliation(s) of the author(s) is camera-ready (please identify it). Fax copies will not be accepted.
12. Enclose a fully completed proposal form (page 31) including information regarding the Research Categories (page 28).
13. Co-authors of a proposal, who are not its presenting author, are requested to fill the Author/Co-ordinator Details Form (page 32). This information is needed in order to include the names of all co-authors in the Proceedings Appendix.

For those who wish to use templates for their submission, please see item 10 on page 12.

Short Oral Communications and Posters Guidelines

When preparing a proposal you are requested to:

1. Restrict your proposal to one page, including references, figures and appendices. If accepted, this text will be included in the conference proceedings. You may bring multiple copies of a longer version for distribution at the conference.
2. Write the paper in English.
3. Type and centre the title (in capitals), author(s) name(s), and affiliations(s) of the author(s) in this order.
4. Underline the name of the presenting author(s).
5. For posters, the proposal should make clear how the information would be presented in a pictorial or graphical format. (You will be provided with a vertical rectangle of 120x100 cm for your presentation.)
6. In your proposal, give references in one of the accepted standard forms.
7. Use a 14-point type (Times recommended), a 16-point line space, and 6 points between paragraphs, occupying a frame of 170 by 247 mm. Please use exact dimensions, and fill the entire frame. Remember that the original text will appear in the proceedings reduced to 70%.
8. Use an inkjet or laser printer. Avoid dot matrix print, since it is not satisfactory for photocopying.
9. Send three copies of the proposal to the Conference Secretariat (page 3) including a disk with the file (indicating the word processor used, preferably MS Word). Be sure that at least one of the copies is camera-ready (please identify it). Fax copies will not be accepted.
10. Enclose a fully completed Proposal (page 33 or 34) including information regarding the Research Categories (page 28).
11. Co-authors of a proposal, who are not its presenting author, are requested to fill the Author/Co-ordinator Details Form (page 32). This information is needed in order to include the names of all co-authors in the Proceedings Appendix.

For those who wish to use templates for their submission, please see item 10 on page 12.

Discussion Groups and Working Sessions Guidelines

Discussion Group or Working Sessions organizers are requested to:

1. Prepare a one-page text including the name(s) and affiliation(s) of the co-ordinator(s) of the group, description of the aims, and planned activities for the present meeting. For a Working Session, please, describe the nature and topic of the session and the planned activities. If approved, this text will be included in the conference proceedings.
2. Use a 14-point type (Times recommended), a 16-point line space, and 6 points between paragraphs, occupying a frame of 170 by 247 mm. Please use exact dimensions, and fill the entire frame. Remember that the original text will appear in the proceedings reduced to 70%.
3. Use an inkjet or laser printer. Avoid dot matrix print, since it is not satisfactory for photocopying.
4. Send three copies of the proposal to the Conference Secretariat (page 3) including a disk with the file (indicating the word processor used, preferably MS Word). Be sure that at least one of the copies is camera-ready (please identify it). Fax copies will not be accepted.
5. Enclose a fully completed Proposal Form (page 35 or 36).
6. Co-ordinators of a proposal, who are not its principal co-ordinator, are requested to fill the Author/Co-ordinator Details Form (page 32). This information is needed in order to include the names of all co-authors in the Proceedings Appendix.

For those who wish to use templates for their submission, please see item 10 on page 12.

Equipment

Every room will be equipped with an overhead projector. Apart from that, a limited number of LCD projectors, slide projectors, and video equipment may be available. If you need to use these or any other kind of equipment for your presentation and would like the Local Organizers to provide it, please complete the enclosed Equipment Request Form (page 37) and send it together with the Conference Deposit/Membership Details Form (page 24) by January 15, 2003. Please also let us know if you intend to use PowerPoint for your presentation. Confirmation of the availability of your equipment needs will be sent by May 2003. Please note that on-site booking of equipment will not be possible.

Call for Reviewers

In order to have a sufficient number of reviewers of Research Papers the Program Committee calls for PME members who are willing to review papers. This review process should take place in February 2003. You can serve as reviewer if you are currently a PME member and have presented at least two Research Reports at previous PME conferences. If you qualify you are asked to fill in the Reviewer Form (page 29) and send it to the Executive Secretary (page 6) before December 1, 2002. Do NOT send this Review Form to the Conference Secretariat. Those who are already registered as a reviewer and do not want to change the review categories do not need to fill in the form.
Call for Research Forums for PME28 (2004)

Proposals for a Research Forum to be organized at PME28 should be in the hands of the Executive Secretary (page 6) – NOT the conference secretariat – before May 31, 2003. Proposals have to provide a description of the format and the content of the Research Forum. The description must include:

- the title of the Research Forum
- the name(s) of the co-ordinator(s)
- the names of the contributors
- a description of the goals, key questions, themes and focus, as well as the theoretical and/or philosophical framework within which the focus or theme of the Research Forum is developed
- a detailed description of the proposed format of the Research Forum, including timings, plans for audience interaction
- details of prior reading and how this can be made available
- how the space in the Proceedings will be used (up to 30 pages).

More accurate and detailed guidelines will appear in the November Newsletter and also appear in the Second Announcement of the PME27 Conference.

Early Bird Procedure for a Research Report

A few years ago the IC decided to implement a mechanism to encourage and support inexperienced researchers by offering them the possibility of an Early Bird Procedure for submitting a Research Report. Inexperienced researchers who do not have access to appropriate local support and would like to receive guidance from experienced PME researchers can submit their paper to a co-ordinator who is an IC or former IC member. The co-ordinator will assign the paper to an appropriate mentor and make sure that the communication between the inexperienced researcher and the mentor flows satisfactorily. Please note that this procedure is meant to be a feedback to written reports. It is not meant as a support for conducting research.

The papers submitted should be accompanied by a statement in which the authors declare that they are researchers with little previous experience in writing research reports (or journal articles) and have limited access to experienced advice. The mentors will correspond with the authors and will guide them in strengthening their papers. In order to ensure a process, which will be beneficial to authors, proposals should be submitted to the co-ordinator at least six months before the deadline for submission of a Research Report (January of the year of the upcoming conference). The timeframe will allow for the search for an appropriate mentor, and will enable the process to be meaningful. In any case, this mentoring would not guarantee acceptance, as the papers will still undergo the regular PME reviewing procedures. People who wish to have a mentor to submit a Research Report for the PME28 Conference in 2004 should contact the co-ordinator before July 15, 2003.

The Early Bird co-ordinator for the PME27 and PME28 Conference is: Norma Presmeg.

Contact information:

Dr. Norma Presmeg
Illinois State University
Mathematics Department
2811 Polo Road
Bloomington, IL 61704-8158
USA
E-mail: npresmeg@ilstu.edu
Fax: +1 309 438 5866
REGISTRATION AND ACCOMMODATION

Conference Registration for those submitting Papers or Proposals

If you plan to submit a proposal and participate in the PME27 Conference, you are requested to complete the Conference Deposit/ Membership Details Form (page 24) and to return it to the Conference Secretariat (page 3) together with a (non-refundable) Conference Deposit of US$100. For proposers of Research Papers and coordinators of research forums, the Conference Deposit with the appropriate form must be in the hands of the Conference Secretariat by January 15, 2003 For proposers of short orals, posters, discussion groups, and working groups the deadline is March 1, 2003 (although payment by January 15, 2003 would be appreciated as it gives the organization an early indication of the expected number of presentations). The Conference Deposit will ensure that your proposal is considered and that you will receive notice of the posting to the conference website of the Second (Final) Announcement including the Registration Form. The Conference Deposit is non-refundable even if your proposal is unsuccessful or if you withdraw your proposal. The Second Announcement will be available on the website in April 2003. Please contact us, if you have not received it by the middle of May.

Payment Form

For payments the Payment Form (page 25) must be used. Payments must be made in US dollars. Payment may be made by credit card (MasterCard, Visa), check, or money order. If none of these methods is possible, please contact the Conference Secretariat (page 3).

Conference Deposit for participants who are NOT submitting a proposal

Please submit the Conference Deposit with the appropriate form to the Conference Secretariat (page 3) by March 1, 2003. The Conference Deposit of US$100 deposit is essential for the organization and planning of the conference. Payment of this fee will ensure that you will receive the Second (Final) Announcement including the Registration Form.

The Conference Deposit

The Conference Deposit is non-refundable. For those who pay the Conference Deposit, but do not attend the conference, the deposit covers PME membership for the current year, one set of the PME27 Proceedings, and the mailing of these proceedings to the given postal address. For those who will attend the conference, the Conference Deposit will be deducted from the full Conference Registration Fee.

Payment of Balance of the Registration Fee

The remaining balance of the Conference Fee must be received before May 31, 2003. The US$100 Conference Deposit will be applied to the full conference fees.

Late Registration

Participants of the Conference who have not sent the full Conference Registration Fee by May 31, 2003 will be charged an additional US$50.

Cancellation Policy

All cancellations and changes regarding the Conference Registration, Campus and Hotel Accommodation must be done in writing (email, fax, or regular mail) to the Conference Secretariat (page 3).

Cancellation of Registration

If a cancellation is made after the full Registration Fee has been paid, but before June 15, 2003, the refund will be the amount paid minus both the Conference Deposit and a Bank Handling Fee (US$125 in total). If the cancellation is done after June 15, 2003, then only 50% of the full Registration Fee will be refunded.
Accommodation Information for All Participants

The PME27 conference will be held at the Hawai‘i Convention Center. University campus accommodation is on several bus routes to the Convention Center, about a twenty-minute bus ride from the Convention Center. The hotels are closer to the Convention Center. Most participants staying in hotels could walk to the Convention Center. Very favourable rates have been negotiated for both campus and hotel accommodations.

**Participants must select either campus accommodation OR hotel accommodation. If campus accommodation is fully booked by the time you submit your request, you will be notified that you are being placed in the least expensive hotel accommodation available.**

In order to secure your reservation for accommodation a completed Campus (page 26) OR Hotel (page 27) Accommodation Reservation Form with full payment or credit card guarantee (in case of hotels) should be sent to the Conference Secretariat as soon as possible but **no later than January 15, 2003**. Rooms will be reserved in the order of receipt of the t either the Campus or the Hotel Accommodation Reservation Form. Confirmation of the reservation will be sent the same time as the Second Announcement is posted on the website.

**Campus Accommodation**

Campus accommodation is a complete package that includes

- five nights accommodation (July 13–17)
- five breakfasts (July 14–18 inclusive) inclusive
- a four-day bus pass (July 14–17 inclusive)
- shared bedrooms with twin beds
- shared bathroom facilities

There is NO air conditioning in any campus accommodations. Currently there is no Internet connection in rooms. The University of Hawai‘i is a non-smoking environment and smoking is not allowed in campus accommodations.

**The cost of the above package is US$200 per person and includes all applicable taxes. The single supplement for those not wishing to share a room is US$150; i.e., the package would cost US$350 for a single person in a double room. For campus accommodation the full amount of the accommodation package must be paid no later than January 15, 2003.**

If you would like to share a room with someone in particular, please state your roommate’s name on your Campus Accommodation Reservation Form (page 26) and return the forms together. If you do not have a roommate, but wish to share a room, please indicate that on the form (page 27), and a roommate will be assigned to you.

**There are only 75 two person shared rooms available; that is, space for 150 participants in shared campus accommodations.**

The rooms will be assigned according to the order of receipt of both the Conference Deposit (US$100) and full payment of the accommodation package (US$200), a total of US$300 (US$450 for single accommodation). Prices may increase slightly in 2003.

See the map on page 19 for the location of campus accommodations.

**Campus Accommodation Cancellation Policy**

If campus accommodation is cancelled before May 31, 2003, the package payment of US$200 (US$350 if single) will be refunded. Cancellations that are made after May 31, 2003 but before July 1, 2003 will be refunded US$150 (US$300 if single). Cancellations that are made later than July 1, 2003 will be refunded US$100 (US$150 if single).

**In all instances the Conference Deposit fee of US$100 will not be refunded**
Hotel Accommodation

The four Outrigger ‘Ohana Hotels are located in the renowned Waikiki area of Honolulu. The ‘Ohana Maile Sky Court Hotel is the hotel closest to the Convention Center, a short ten-minute walk away. The other three hotels are each approximately a 20-minute walk from the Convention Center. Many rooms in the ‘Ohana West Hotel have kitchenettes. All hotel rooms are air-conditioned and come complete with

- ensuite bathroom
- TV set
- mini-refrigerator
- telephone, many with data port connections
- coffeemakers

Breakfast is NOT included.

Rooms are single or double occupancy. For more than two adults (18 years or older) in a room, there will be an additional charge of US$25, plus tax. Children under 18 may stay free in their parent’s room when using existing bedding. The maximum number of persons per room is three (3) adults, or two (2) adults and two (2) children.

If you would like to share a hotel room with someone, please state your roommate’s name on your Hotel Accommodation Reservation Form (page 27). If possible, submit your own and your roommates forms together.

If you do not have a roommate, but wish to share a room, please indicate that on the form (page 27), and a roommate will be assigned to you.

A credit card guarantee of two nights’ deposit is required. No accommodation requests will be processed without this deposit.

Room tax (11.416%) is included in the listed price for hotel accommodations.

<table>
<thead>
<tr>
<th>Hotels (Single/double accommodation)</th>
<th># on map on page 20</th>
<th># of rooms</th>
<th>Cost per room per night including taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Ohana West Hotel</td>
<td>#43</td>
<td>125</td>
<td>US$72.42 66.85</td>
</tr>
<tr>
<td>‘Ohana Maile Sky Court Hotel</td>
<td>Near #4</td>
<td>75</td>
<td>US$72.42 66.85</td>
</tr>
<tr>
<td>‘Ohana East Hotel</td>
<td>#44</td>
<td>75</td>
<td>US$410.39 90.25</td>
</tr>
<tr>
<td>Outrigger Waikiki on the Beach Hotel</td>
<td>#47</td>
<td>25</td>
<td>US$497.29 191.55</td>
</tr>
</tbody>
</table>

Check-in time is 3:00 p.m.

Guests arriving prior to check-in shall be accommodated as rooms become available. The Hotel shall accommodate late checkouts, subject to availability.

Checkout time is 12:00 noon.

See the map on page 20 for the locations of the hotels.

Participants must select either campus accommodation OR hotel accommodation. If campus accommodation is fully booked by the time you submit your request, you will be notified that you are being placed in the least expensive hotel accommodation available.
Maps of Honolulu

Hawai‘i Convention Center is located on the lower left corner of the map at the intersection of Kapi‘olani Blvd. and Kalakaua Avenue next to the Ala Wai Canal. The UH campus accommodations are east of University Avenue along Dole Street.

A map showing the locations of the Waikiki hotels relative to the Convention Center is provided on the following page.

Express Bus “A” runs every 15 minutes from the University to the Convention Center. Waikiki hotels are within walking distance of the Convention Center, or at most a short, five minute Express Bus “B” ride.
#37 is the site of the dinner dance to be held on the Thursday evening.
TRAVEL GUIDE

Travel to Hawai‘i
More than six million visitors come to Hawai‘i every year, and nearly 15 million pass through Honolulu on their way to points in Asia and the U.S. Few cities can match Honolulu's transportation infrastructure. When it comes to moving people, the city's ground transportation capability is second to none. Sixteen international airlines service Honolulu International Airport. Two domestic airlines also serve regular scheduled inter-island flights between the neighboring islands with more than 3,000 flights per week. American Airlines is the official conference airline. All bookings made for travel from July 6 to July 25 made through the official American Airlines booking code (A0473AA) will receive 10% discount on applicable fares. If the reservation is made at least 30 days before departure, an additional discount of 5% will be applied.

Arrival in Hawai‘i
From the airport to Waikiki Hotels or the University of Hawai‘i takes approximately 20-30 minutes. Shuttle service to Waikiki and the University is US$14. Abundant taxi service is available around the clock for approximately US$25. Oahu's TheBus (US$1.50 to Waikiki or the University) is rated as one of the best public bus transportation systems in the United States.

Visas
You may need a visa to enter the USA. To determine whether you need a visa, we advise you to contact the United States Embassy or diplomatic representative in your country. For prospective participants who live in countries that do not have diplomatic relations with the USA, there may be a way to issue a special entrance visa, separated from your passport, for attending a scientific conference in the USA. For instructions on how to obtain such a visa, please contact the Conference Secretariat (page 3) at once as this procedure may take some time.

Insurance
The organizers cannot be held responsible for any losses, damages or injuries. It is recommended that participants arrange insurance against medical expenses, loss and accidents occurring during the conference.

Pre- and Post-Conference Tours
Information regarding travelling in the USA before or after the conference will appear on the PME27 website and also in the Second Announcement. Roberts Hawai‘i www.robertshawaii.com is the local travel agent that can arrange pre- and post-conference trips on O‘ahu and neighbour islands. Participants should identify themselves as PME27 attendees when contacting Roberts.

Child Care Facilities
There are no childcare facilities at the University. Hotels do provide children’s programs. Contact your hotel for the cost of these.

Weather
Weather on all of the Hawaiian islands is very consistent, with only moderate changes in temperature throughout the year. In practical terms, there are only two seasons here: the summer months (called Kau in Hawaiian) that extend from May to October and the winter months (Ho‘oiolo) that run from November to April. The average daytime summer temperature at sea level is 85 Fº (29.4 Cº). Nighttime temperatures are approximately 10 Fº lower.

Beach-goers will be happy to learn that the temperature of Hawai‘i’s near-shore waters stay comfortable throughout the year. The average year round water temperature is 74 Fº (23.3 Cº), with a summer high of 80 Fº (26.7 Cº). Wave action varies a great deal between winter and summer, and between island coasts. Generally, summer waters are very gentle on all beaches.

Dress
Casual is the name of the dress code for Hawai‘i. Formal Hawaiian dress for men is an aloha shirt and slacks. For women it is a comfortable top and skirt or wrap around. Sandals are the shoes of choice.

Electrical Voltage
The electric voltage in the USA is 120V. For those participants not from continental North America it is strongly recommended that they bring electrical plug adapters and transformers with them.

11/15/2002  21  PME27
OTHER IMPORTANT INFORMATION

Information Sources for PME27

In order to allow faster and safer communication between the conference participants and the organizers, email is the preferred way of communication whenever possible (see the Conference Secretariat's address on page 3. PME27 Conference has a website (www.hawaii.edu/pme27) where you can updated relevant information, like the first and second announcements, a list of accepted proposals, the schedule of the conference, etc. You can get this information at

Extra Copies of the Conference Proceedings

PME members (in 2003) may purchase (extra) copies of the Conference Proceedings at a special price of US$45 provided they order and pay for them before May 31, 2003. This may be done by participants wishing to have additional copies or by PME members who cannot attend the PME27 Conference. The regular price for a copy of the Conference Proceedings for non-members is US$65. Those wishing to receive the proceedings by mail should add US$35 postage cost to the above price of the proceedings. The proceedings will be mailed after the end of the PME27 Conference. Please note that the surface mail to destinations other than the US mainland might take several weeks, or even months. We strongly encourage you to pick your extra copies up at the conference either personally or by asking a colleague to do it.

Letters of Invitation

Participants who need a personal invitation for funding purposes should mark the appropriate box in the Payment Form (page 25), or write to the Conference Secretariat (page 3), requesting a letter of invitation and stating their intended contribution to the scientific Program of the PME27 Conference.

Richard Skemp Memorial Support Fund

A limited amount of financial support is available to researchers who experience difficulty in obtaining financial support to attend PME conference for racial, political or philosophical reasons, or because of economic circumstances.

If you face such constraints or know someone who does and who would like to participate in the PME27 Conference, it is possible to apply for financial support. Applications for a grant to attend the PME27 Conference should be sent by March 1, 2003 to the PME Executive Secretary (see page 6).

In allocating the funds the following factors will be taken into account and should be referred to in the application:

- The nature of the applicant’s participation in the conference
- The extent of the difficulty of obtaining funds and reasons for it.

Applicants should note that:

- In general only part of the total costs (travel, registration and accommodation) of attending the conference can be covered by the Fund.
- Active participation in the form of an accepted Research Report, Short Oral communication, Poster, or being named coordinator of a Working Session or Discussion Group is a prerequisite for support from the Fund.

For more information see the PME web site: http://igpme.tripod.com

Call for Donations to Skemp Fund

The International Committee calls on members to make donations, however small, to the Skemp Fund to enable PME to support more people to attend PME27 Conference. Donations may go together with the Conference Deposit/Membership Details Form (see page 24).
IMPORTANT REMINDERS FOR PME27

**Registration:** Sunday afternoon July 13, 2003, noon to 4 p.m., Hawai‘i Convention Center. Monday, July 14, 8 a.m. to 4 p.m.

**Opening session:** Sunday afternoon July 13, 2003 at 5 p.m. at the Kawaiahaʻo Church

**Closing session:** Friday afternoon, July 18, 2003 at approximately 1 p.m.

<table>
<thead>
<tr>
<th>Deadlines</th>
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<tr>
<td>Membership Details</td>
<td>Form, page 24</td>
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<tr>
<td>Accompanying person registration</td>
<td>Full payment, page 24</td>
</tr>
<tr>
<td>Campus Accommodation Package</td>
<td>Full payment, page 26</td>
</tr>
<tr>
<td>Hotel Accommodation Booking</td>
<td>Form, page 27</td>
</tr>
<tr>
<td>Hotel deposit</td>
<td>Credit card for two nights</td>
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<td>Conference Registration Fee</td>
<td>TBA April 2003</td>
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<td>Late Registration Fee</td>
<td>Additional US$50</td>
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<td>Balance of Hotel Costs</td>
<td>Hotels</td>
</tr>
<tr>
<td>Research Forum</td>
<td>Description</td>
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<tr>
<td>Research Reports</td>
<td>Proposals</td>
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<td>Early Bird Proposals</td>
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<tr>
<td>Short Oral Communication</td>
<td>Proposals</td>
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<tr>
<td>Poster Presentation</td>
<td>Proposals</td>
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<tr>
<td>Discussion Group</td>
<td>Proposals</td>
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<tr>
<td>Working Session</td>
<td>Proposals</td>
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<tr>
<td>Reviewer Information</td>
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<td>Author/Co-ordinator Details</td>
<td>Form</td>
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<td>Equipment Request</td>
<td>Form</td>
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<tr>
<td>PME28 Research Forum</td>
<td>Proposals</td>
</tr>
</tbody>
</table>

**Other Reminders**

- All proposals for Personal Presentations and for Group Activities must be accompanied by the appropriate Proposal Forms (see pages 31-36).

- *Proposals will be considered only if all presenting authors or co-ordinators have paid their Conference Deposits on time.*

- Accepted proposals will be included in the Conference Program and Proceedings only if payment of the full Registration fee by the presenting author(s) is received **before May 31, 2003**.

- Requests to book accommodation will be processed only if the Campus Accommodation is paid in full, and Hotel Accommodation is guaranteed with a credit card. The cost of the accommodation is not included in the Conference Deposit fee.

- The rooms for accommodation will be assigned according to the order of receipt of both the Conference Deposit and the Accommodation Deposit.
CONFERENCE DEPOSIT/MEMBERSHIP DETAILS FORM
For PME27 Conference, July 13 – 18, 2003

PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS

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<thead>
<tr>
<th>Family Name:</th>
<th>First Name:</th>
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<tr>
<th>Female: _____</th>
<th>Male: _____</th>
<th>Country of Citizenship: ______________________________</th>
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<tr>
<th>University/ Institute:</th>
<th>Department/ Faculty:</th>
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<th>Home/ Office address:</th>
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<td>Street and number:</td>
<td>City:</td>
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<tr>
<td>Postal or ZIP code:</td>
<td>Country:</td>
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<th>Office Telephone no. (including country and area code):</th>
<th>Home Telephone no. (including country and area code):</th>
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</thead>
<tbody>
<tr>
<td>Fax no. (including country and area code):</td>
<td>Email:</td>
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</table>

Name(s) of accompanying person(s) (An accompanying person is a member of the PME27 ‘Ohana who will take part in some (children) or all (adults) of the social events of the conference):
1.  
2.  
3.  
4.  

Please check the applicable boxes and fill in the appropriate amounts

| ☐ | I Plan to attend the PME27 CONFERENCE, and I am sending a (non-refundable) Deposit of US$100, that will be applied to my final registration fee for the PME27 Conference. | US$ |
| ☐ | I wish to continue/apply for membership in PMENA and enclose the US$20 membership fee. If you are a graduate student attending PME27, your PMENA fee is waived. | |
| ☐ | I plan to stay in the CAMPUS ACCOMMODATION and enclose the package fee of US$200 (double occupancy) or US$350 if single occupancy (complete and submit page 26 along with this form). | |
| ☐ | I plan to stay in a CONFERENCE HOTEL (complete and submit page 27 along with this form). | |
| ☐ | I will make my own accommodation arrangements. | |
| ☐ | I wish to register _____ accompanying adults @ US$ 170. | |
| ☐ | I wish to register _____ accompanying children @ US$ 70. | |
| ☐ | I will not attend the PME27 CONFERENCE, but I include the 2003 PME membership fee of US$40. | |

| ☐ | I am a 2003 PME member, but not a conference participant, and wish to receive the PME27 proceedings at the special price of US$45 (available only if paid before May 31, 2003) delivered in the following way: [Provide name of who will pick up proceedings if that is option chosen] | |
| ☐ | Picked up at the conference by (________________________) [____ copies] x US$45 | |
| ☐ | By mail: [____ copies] x US$80 (US$45 plus postage US$35) | |

| ☐ | I am not a 2003 PME member, but I wish to receive the proceedings at the regular price of US$65, in the following way: [Provide name of who will pick up proceedings if that is option chosen] | |
| ☐ | Picked up at the conference by (________________________) [____ copies] x US$65 | |
| ☐ | By mail: [____ copies] x US$100 (US$65 plus postage US$35) | |

| ☐ | Donation for Richard Skemp Support Fund (you may want to change this amount according to your preference) | US$15 |

TOTAL US$
PAYMENT FORM

PME27 Conference, July 13 – 18, 2003

For Membership, Conference Deposit, Campus Accommodation, and if applicable, Hotel Deposit

PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS

Family name: 

First name: 

Payment by Credit Cards (MasterCard, Visa Card):

I authorize UHCC to charge my credit card (one of the following only)

☐ MasterCard, ☐ Visa Card

My credit card number is: ________________________________

Name (exactly as it appears on the card): __________________________

Expiration date (Month/Year): __________________________

Amount US$: __________________________

Signature: __________________________

Date: __________________________

Payment by Checks or Money Order (in US dollars)

Checks payable to UNIVERSITY of HAWAI’I are acceptable.

Enclosed please find check #_____________ in the amount of US$______________

If writing a check for the hotel guarantee, WRITE A SEPARATE CHECK IN THAT AMOUNT payable to OUTRIGGER HOTELS INC.

Please contact the Conference Secretariat (page 3) if you cannot pay by credit card or by check.

DEADLINE: This Payment Form, the Conference Deposit/Membership Details Form (see previous page), and the payment itself (whatever form of payment you decide to use) must be in the hands of the Conference Secretariat (page 3) no later than JANUARY 15, 2003.

☐ Check this box if you wish to receive an invitation letter for your funding purposes, with the understanding that it does not imply any obligation of PME nor of the Local Organizing Committee.
CAMPUS ACCOMMODATION RESERVATION FORM
For PME27 Conference, July 13 – 18, 2003

PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS

<table>
<thead>
<tr>
<th>Family name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>First name:</td>
</tr>
</tbody>
</table>

Gender (Please check applicable box)  □ Male  □ Female
Dietary Preference:  □ None  □ Vegetarian  □ Kosher

Please, remember that the cost of the accommodation is **not included** in the Conference Deposit or Registration Fee.

The rooms will be assigned according to the order of receipt of both the Conference Deposit (US$100) and full payment of the campus accommodation package fee of US$200 (double occupancy), or US$350 if single occupancy. The package dates are for July 13-17 inclusive. Prices may increase slightly in 2003.

Check-in will be after noon on July 13, 2003 and checkout is noon on July 18.

I would like to share a double room with:...........................................................................................................
Please assign me a roommate □ check box)

**Conference organizers are not responsible for finding roommates for pre and post conference accommodations.** If you wish to arrive early or to stay late, the room cost per night will be $70 including breakfast. If you can locate your own roommate for the extra days, then each person would pay $40 including breakfast. Please indicate below the extra dates you wish to book for campus accommodation.

Please indicate EXTRA NIGHTS BELOW by checking the selected dates

| July 10 | July 11 | July 12 | July 18 | July 19 | July 20 |

<table>
<thead>
<tr>
<th>Summary of Payments Enclosed</th>
<th>US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wish to register for one campus accommodation package based on double occupancy</td>
<td>200</td>
</tr>
<tr>
<td>I wish to register for one campus accommodation package based on single occupancy</td>
<td>350</td>
</tr>
<tr>
<td>I wish to book _____ extra nights @ US$ 70 per night</td>
<td></td>
</tr>
</tbody>
</table>

(Please transfer this total to the appropriate location on page 24) **Total to be submitted**

Please note that rooms will be allocated in order of receipt of payment.

**Cancellation policy**

All cancellations and changes must be done in **writing** (email, fax, or regular mail). For more information see pages 16 & 17.
**HOTEL ACCOMMODATION RESERVATION FORM**

For PME27 Conference, July 13 – 18, 2003

PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS

<table>
<thead>
<tr>
<th>Family Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Female: _____ Male: _____ Country of Citizenship:</td>
</tr>
<tr>
<td>University/ Institute:</td>
</tr>
<tr>
<td>Department/ Faculty:</td>
</tr>
<tr>
<td>Postal Address:</td>
</tr>
<tr>
<td>Street and number:</td>
</tr>
<tr>
<td>City:</td>
</tr>
<tr>
<td>Postal or ZIP code:</td>
</tr>
<tr>
<td>Country:</td>
</tr>
<tr>
<td>Office Telephone no. (including country and area code):</td>
</tr>
<tr>
<td>Fax no. (including country and area code):</td>
</tr>
<tr>
<td>Email:</td>
</tr>
</tbody>
</table>

Please, remember that the cost of the accommodation is **not included** in the Conference Deposit or Registration Fee. The rooms will be assigned according to the order of receipt of both the Conference Deposit (US$100) and a credit card guarantee equivalent to two nights accommodation. Please indicate in the table below your preferences (1, 2, & 3) for the hotels indicated.

<table>
<thead>
<tr>
<th>Hotels (Single/double accommodation)</th>
<th># on map on page 20</th>
<th># of rooms</th>
<th>Cost per room per night</th>
<th>Preference (1, 2, 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>'Ohana West Hotel</td>
<td>#43</td>
<td>125</td>
<td>US$72.42 66.85</td>
<td></td>
</tr>
<tr>
<td>'Ohana Maile Sky Court Hotel</td>
<td>Near #4</td>
<td>75</td>
<td>US$72.42 66.85</td>
<td></td>
</tr>
<tr>
<td>'Ohana East Hotel</td>
<td>#44</td>
<td>75</td>
<td>US$110.90 90.25</td>
<td></td>
</tr>
<tr>
<td>Outrigger Waikiki on the Beach Hotel</td>
<td>#47</td>
<td>25</td>
<td>US$197.20 191.55</td>
<td></td>
</tr>
</tbody>
</table>

I would like to share a room with: ..........................................................……………………………
Please assign me a roommate ...................................................................................................................
I want a non-smoking room  [ ] Yes  [ ] No
I prefer a room with a kitchenette  [ ] Yes  [ ] No

Conference organizers are not responsible for finding roommates for pre and post conference accommodations. If you wish to arrive early or to stay late, please indicate below the extra dates you wish to book in your hotel. Please indicate EXTRA NIGHTS BELOW by checking the selected dates


**Summary of Payments Enclosed**

I wish to register in the hotel of my choice indicated and understand that my credit card will be charged the following amount (2 x rate at hotel chosen). If paying by check, make the check payable to Outrigger Hotel Inc. in the amount indicated.

<table>
<thead>
<tr>
<th>Hotel name(s)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US$</td>
</tr>
</tbody>
</table>

**I authorize Outrigger Hotels to charge my credit card (one of the following only)**

- [ ] MasterCard,  [ ] Visa Card,
- [ ] American Express,  [ ] Diners,  [ ] Discover

My credit card number is:

<table>
<thead>
<tr>
<th>Amount US$</th>
<th>Expiration date (Month/Year):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (exactly as it appears on the card):</td>
<td>Signature:</td>
</tr>
</tbody>
</table>

**Cancellation policy**

All cancellations and changes must be done in **writing** (email, fax, or regular mail). For more information see pages 16 & 17.
**TABLE OF RESEARCH CATEGORIES**  
For PME27 Conference, July 13 – 18, 2003

This page is for your reference when completing the Reviewer Form or the Proposal Forms for personal presentations. Reviewers will receive proposals for review according to the research categories that they mark in their Reviewer Form. The proposals will be sent to reviewers according to the research categories that are marked by the author(s) in their Proposal Form.

**RESEARCH DOMAINS**

<table>
<thead>
<tr>
<th>1. Advanced mathematical thinking</th>
<th>15. Mathematical modelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Algebraic thinking</td>
<td>17. Mental models</td>
</tr>
<tr>
<td>4. Assessment and evaluation</td>
<td>18. Metacognition</td>
</tr>
<tr>
<td>5. Beliefs</td>
<td>19. Methods of proof</td>
</tr>
<tr>
<td>7. Adult learning</td>
<td>21. Problem solving</td>
</tr>
<tr>
<td>8. Early number sense</td>
<td>22. Rational numbers and proportion</td>
</tr>
<tr>
<td>10. Functions and graphs</td>
<td>24. Non-elementary numerical reasoning</td>
</tr>
<tr>
<td>11. Gender issues</td>
<td>25. Teacher education and professional development</td>
</tr>
<tr>
<td>12. Geometrical and spatial thinking</td>
<td>26. Theories of learning</td>
</tr>
<tr>
<td>13. Imagery and visualization</td>
<td>27. Data handling (statistics)</td>
</tr>
<tr>
<td>14. Language and mathematics</td>
<td>28. Other (indicate)</td>
</tr>
</tbody>
</table>

**EDUCATIONAL LEVELS**

| 31. Pre-school (ages under 7)    | 33. Secondary (ages 10-18)  |
| 32. Elementary (ages 5-12)      | 34. Post-secondary (ages 16+) |

**TYPES OF RESEARCH**

| 41. Empirical / Experimental     | 44. Ethnographic / Interpretative |
| 42. Statistical                  | 45. Theoretical / Philosophical   |
| 43. Case study                   |   |
REVIEWER FORM
For PME27 Conference, July 13 – 18, 2003

This form should be filled in by:

• PME members who served as reviewers for a previous PME conference, and want to change their preferred Research Categories. By sending this form, their previous choice of categories will be changed to this new one and they can disregard the letter about reviewing that they will receive from the PME Executive Secretary.

• If you did not serve as a reviewer for the PME26 conference in 2002, but are willing to serve as reviewer of proposals for future PME conferences, particularly for PME27, then you can serve as a reviewer if you are currently a PME member and have presented at least two Research Reports at previous PME conferences.

This form must be in the hands of the PME Executive Secretary (see page 6) by December 1, 2002 (email or fax submissions are possible). Do NOT send this form to the Conference Secretariat.

PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS

Please complete the following to assist the Program Committee in matching you to appropriate submissions.

Please choose at most four Research Domains (numbers 1 to 28 in the Table of Research Categories):

Please choose your preferred Educational Levels (numbers 31 to 34 in the Table of Research Categories):

Please choose your preferred Types of Research (numbers 41 to 45 in the Table of Research Categories):

First name:

Family name:

University/Institute:

Department/Faculty:

Postal Address (please indicate whether it is your home or office address):

The following is the Home/Office address: (circle the chosen address)

Street and number:

City:

Postal or ZIP Code:

Country:

Office Telephone no. (including country and area code):

Home Telephone no. (including country and area code):

Fax no. (including country and area code):

Email:

☐ Check this box if you do NOT want to review papers from your own country.
### RESEARCH FORUM PROPOSAL FORM

**For PME28 Conference, July 2004**

**DEADLINE:** May 31, 2003  
(submit to PME Executive Secretary)

**PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS**

<table>
<thead>
<tr>
<th>TITLE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE <em>(circle)</em>: 1. Data Analysis; 2. Doing Mathematics; 3. Role Play; 4. Other*</td>
</tr>
</tbody>
</table>

**FIRST PRESENTING COORDINATOR (the one with whom the Conference Secretariat communicates):**

**OTHER COORDINATOR(S) (In order to include all the coordinators’ names in the Proceedings' Appendix please write their names here and fill an Author/Coordinator Details Form, one for each of the coordinators):**

**THE TASK (please describe the nature of the task in which the participants will engage):**

**GENERAL STRUCTURE (please describe the way you plan to structure the sessions):**

**MATERIALS (please indicate the kinds of materials you will use in the sessions):**

---

The following information should be filled **only for the First Coordinator (the one with whom the Conference Secretariat communicates).**

- University/Institute/…:
- Department/Faculty:
- Postal Address (please indicate whether it is your home or office address):
- The following is the Home/Office address: (circle one)
- Street and number:
- City:
- Postal or ZIP Code:
- Country:
- Office Telephone no. (including country and area code):
- Home Telephone no. (including country and area code):
- Fax no. (including country and area code):
- Email:

*If you wish to propose another type of research forum, please attach a one page detailed description for consideration. Please, follow the guidelines on pages 12–13, and send this form with THREE copies of the proposal including a disk with the file to the PME Executive Secretary (page 6). At least ONE of the copies must be *camera-ready*; (please identify it), and must include the name(s) and affiliation(s) of the author(s). **Fax is not accepted.**

**Note** The Program Committee will not consider proposals if the coordinators have not paid the Conference Deposit by the submission date.
### RESEARCH REPORT PROPOSAL FORM
For PME27 Conference, July 13 – 18, 2003
DEADLINE: January 15, 2003

**PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS**

<table>
<thead>
<tr>
<th><strong>TITLE:</strong></th>
</tr>
</thead>
</table>

**PRESENTING AUTHOR (S):** *In order to include all the authors' names in the Proceedings' Appendix please write their names here and fill an Author/Coordinator Details Form, one for each of the authors*

**OTHER AUTHOR (S):** *In order to include all the authors' names in the Proceedings' Appendix please write their names here and fill an Author/Coordinator Details Form, one for each of the authors*

The following information should be filled only for the First Presenting Author (the one with whom the Conference Secretariat communicates).

- **University/ Institute/ …:**
- **Department/ Faculty:**
- **Postal Address** (please indicate whether it is your home or office address):
  - **The following is the Home/ Office address:** (circle one)
  - **Street and number:**
  - **City:**
  - **Postal or ZIP Code:**
  - **Country:**
- **Office Telephone no.** (including country and area code):
- **Home Telephone no.** (including country and area code):
- **Fax no.** (including country and area code):
- **Email:**

*Please complete the following to assist the Program Committee in finding you an appropriate reviewer.*

**RESEARCH CATEGORIES** (choose numbers from the Table on page 24 that are relevant to your proposal):

- **Research Domain(s) (mark at most three numbers from 1 to 28):**
  - ______
  - ______
  - ______

- **Educational Level** (from 31 to 34):
  - ______

- **Type of Research** (from 41 to 45):
  - ______

Please, follow the guidelines on pages 11-14, and prepare SIX copies of the paper: THREE of them must not include the name(s) and affiliation(s) of the author(s), to allow blind review. At least ONE of the copies must be camera-ready (please identify it) and must include the name(s) and affiliation(s) of the author(s). Send this form with the SIX copies of the paper including a disk with the file of the camera-ready copy to the Conference Secretariat (page 4). **Fax is not accepted.**

**Note:** The Conference Deposit Form(s) with the payment(s) for all of the presenting author(s) must be in the hands of the Conference Secretariat by **January 15, 2003**. Proposals will not be considered by the Program Committee if the presenting author(s) has (have) not paid the Conference Deposit by the specified deadline.
AUTHOR/COORDINATOR DETAILS FORM
For PME27 Conference, July 13 – 18, 2003

If you are a co-author/coordinator of a proposal, or are not its first presenting author/coordinator, please fill this form. This information is needed in order to include the names of all authors and co-authors in the Proceedings’ Appendix.

Names of authors will appear in the appendix only if their Authors/Coordinator Details Form is filled out and in the hands of the Conference Secretariat (page 3) by MARCH 1, 2003.

PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS

<table>
<thead>
<tr>
<th>Family name :</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>First name:</td>
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</table>

<table>
<thead>
<tr>
<th>TITLE (S) ACCORDING TO TYPES OF THE PROPOSALS THAT YOU HAVE SUBMITTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF:</td>
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<tr>
<td>RR:</td>
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<td>SO:</td>
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<tr>
<td>P:</td>
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<tr>
<td>DG:</td>
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<td>WS:</td>
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<tr>
<th>University/ Institute/ …:</th>
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<tbody>
<tr>
<td>Department/ Faculty:</td>
</tr>
<tr>
<td>Postal Address (please indicate whether it is your home or office address):</td>
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<tr>
<td>The following is the Home/ Office address: (Circle one)</td>
</tr>
<tr>
<td>Street and number:</td>
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<tr>
<td>City:</td>
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<tr>
<td>Postal or ZIP Code:</td>
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<td>Country:</td>
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<tr>
<td>Office Telephone no. (including country and area code):</td>
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<tr>
<td>Home Telephone no. (including country and area code):</td>
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<tr>
<td>Fax no. (including country and area code):</td>
</tr>
<tr>
<td>Email:</td>
</tr>
</tbody>
</table>
SHORT ORAL COMMUNICATION PROPOSAL FORM
For PME27 Conference, July 13 – 18, 2003
DEADLINE: March 1, 2003

PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS

TITLE: ____________________________

PRESENTING AUTHOR (S): (In order to include all the authors' names in the Proceedings' Appendix please write their names here and fill an Author/Coordinator Details Form, one for each of the authors)

OTHER AUTHOR (S): (In order to include all the authors' names in the Proceedings' Appendix please write their names here and fill an Author/Coordinator Details Form, one for each of the authors)

The following information should be filled only for the First Presenting Author (the one with whom the Conference Secretariat communicates).

University/ Institute/ …: ____________________________
Department/ Faculty: ____________________________
Postal Address (please indicate whether it is your home or office address):
Street and number: ____________________________
City: ____________________________
Postal or ZIP Code: ____________________________
Country: ____________________________
Office Telephone no. (including country and area code): ____________________________
Home Telephone no. (including country and area code): ____________________________
Fax no. (including country and area code): ____________________________
Email: ____________________________

Please complete the following to assist the Program Committee in finding you an appropriate reviewer.
RESEARCH CATEGORIES (choose numbers from the Table on page 24 that are relevant to your proposal):

Research Domain(s) (indicate at most three numbers from 1 to 28): _______ _______ _______
Educational Level (from 31 to 34): _______ Type of Research (from 41 to 45): _______

Please, follow the guidelines on pages 11–14, and send this form with THREE copies of the proposed paper including a disk with the file to the Conference Secretariat (page 4). At least ONE of the copies must be camera-ready (please identify it), and must include the name(s) and affiliation(s) of the author(s). Fax is not accepted.

Note: Proposals will not be considered by the Program Committee if the presenting author(s) has (have) not paid the Conference Deposit by submission date.
POSTER PRESENTATION FORM
For PME27 Conference, July 13 – 18, 2003
DEADLINE: MARCH 1, 2003

PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS

TITLE:

FIRST PRESENTING AUTHOR (the one with whom the Conference Secretariat communicates):

OTHER AUTHORS (S) (In order to include all the authors’ names in the Proceedings’ Appendix please write their names here and fill an Author/Coordinator Details Form, one for each of the authors):

The following information should be filled only for the First Author (the one with whom the Conference Secretariat communicates).

University/ Institute/ …:

Department/ Faculty:

Postal Address (please indicate whether it is your home or office address):

The following is the Home/ Office address: (Circle One)

Street and number:

City:

Postal or ZIP Code:

Country:

Office Telephone no. (including country and area code):

Home Telephone no. (including country and area code):

Fax no. (including country and area code):

Email:

Please complete the following to assist the Program Committee in finding you an appropriate reviewer.

RESEARCH CATEGORIES (choose numbers from the Table on page 24 that are relevant to your proposal):

Research Domain(s) (indicate at most three numbers from 1 to 28):

Educational Level (from 31 to 34): Type of Research (from 41 to 45):

Please, follow the guidelines on pages 11–14, and send this form with THREE copies of the proposed paper including a disk with a file to the Conference Secretariat (page 4). At least ONE of the copies must be camera-ready (please identify it), and must include the name(s) and affiliation(s) of the author(s). Fax is not accepted.

Note: Proposals will not be considered by the Program Committee if the presenting author(s) has (have) not paid the Conference Deposit by the date of submission.
**DISCUSSION GROUP PROPOSAL FORM**  
For PME27 Conference, July 13 – 18, 2003  
**DEADLINE: MARCH 1, 2003**

**PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS**

<table>
<thead>
<tr>
<th>TOPIC/THEME:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>FIRST PRESENTING COORDINATOR (the one with whom the Conference Secretariat communicates):</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>OTHER COORDINATOR (S) (In order to include all the coordinators’ names in the Proceedings' Appendix please write their names here and fill an Author/Coordinator Details Form, one for each of the coordinators):</th>
</tr>
</thead>
</table>

The following information should be filled **only for the First Coordinator** (the one with whom the Conference Secretariat communicates).

<table>
<thead>
<tr>
<th>University/ Institute/ …:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department/ Faculty:</td>
</tr>
<tr>
<td>Postal Address (please indicate whether it is your home or office address):</td>
</tr>
<tr>
<td>The following is the Home/ Office address: (Circle one)</td>
</tr>
<tr>
<td>Street and number:</td>
</tr>
<tr>
<td>City:</td>
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<td>Postal or ZIP Code:</td>
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<td>Country:</td>
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<tr>
<td>Office Telephone no. (including country and area code):</td>
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<tr>
<td>Fax no. (including country and area code):</td>
</tr>
<tr>
<td>Email:</td>
</tr>
</tbody>
</table>

Please, follow the guidelines on pages 11–14, and send this form with THREE copies of the proposal including a disk with the file to the Conference Secretariat (page 4). At least ONE of the copies must be **camera-ready**; (please identify it), and must include the name(s) and affiliation(s) of the author(s). **Fax is not accepted.**

**Note:** The Program Committee will not consider proposals if the coordinators have not paid the Conference Deposit by the submission date.
WORKING SESSION PROPOSAL FORM  
For PME27 Conference, July 13 – 18, 2003  
DEADLINE: MARCH 1, 2003

PLEASE TYPE OR HAND-WRITE USING ONLY CAPITAL LETTERS

| TITLE: |  
| FIRST PRESENTING COORDINATOR (the one with whom the Conference Secretariat communicates): |  
| OTHER COORDINATOR (S) (In order to include all the coordinator(s) name(s) in the Proceedings Appendix please write their names here and fill an Author/Coordinator Details Form, one for each of the coordinators): |  
| THE TASK (please describe the nature of the task in which the participants will engage): |  
| GENERAL STRUCTURE (please describe the way you plan to structures the session): |  
| MATERIALS (please indicate the kinds of material you will use in the session): |  

The following information should be filled only for the First Coordinator (the one with whom the Conference Secretariat communicates).

University/ Institute/ …:  
Department/ Faculty:  
Postal Address (please indicate whether it is your home or office address):  
The following is the Home/ Office address: (Circle one)  
Street and number:  
City:  
Postal or ZIP Code:  
Country:  
Office Telephone no. (including country and area code):  
Home Telephone no. (including country and area code):  
Fax no. (including country and area code):  
Email:  

*If you wish to propose another type of working session, please attach a one page detailed description for consideration.

Please follow the guidelines on pages 11–14, and send this form with THREE copies of the proposal including a disk with the file to the Conference Secretariat (page 3). At least ONE of the copies must be camera-ready (please identify it) and must include the name(s) and affiliation(s) of the author(s). Fax is not accepted.

Note: The Program Committee will not consider proposals if the coordinators have not paid the Conference Deposit by the submission date.
Every conference room will be equipped with an overhead projector. If you plan to use video equipment, please note that in the USA the North American NTSC system is used. VHS playback via the American NTSC and PAL systems is also available but you need to identify the format of your tape and complete the necessary details below.

The operating voltage in the USA is 120 volts.

It is the responsibility of the presenting author(s) to request the needed equipment by the submission date of the proposal. Please send this form together with your Proposal Form. You will be notified, as soon as possible, if we can provide the equipment you requested. It might be impossible for the Organizing Committee to be able to provide equipment that is requested at a later date.

Please type or hand-write using only capital letters

Title of the Presentation:

First Presenting Author or Coordinator (the one with whom the Conference Secretariat communicates):

Type of Presentation (RF, RR, SO, P, DG, WS)

Please mark the requested equipment and fill in the required specifications:

<table>
<thead>
<tr>
<th>Mark if needed</th>
<th>Equipment</th>
<th>Remarks and/or specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Slide Projector (35 mm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VHS Video player (with TV-set)</td>
<td>PAL □ NTSC □</td>
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<tr>
<td></td>
<td>LCD Data projector (for display of a computer screen image on a large projection screen)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other equipment</td>
<td></td>
</tr>
</tbody>
</table>

Note: It may be difficult and/or costly to supply requested equipment. If at a later date you realize that you no longer need the equipment you requested, please, notify the Conference Secretariat (page 3) right away. Mahalo!