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EDUCATION

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CIEAEM 63

**Facilitating access and participation:
Mathematical practices inside and outside
the classroom**

Barcelona , SPAIN, 24-29 July 2011

— 2ND ANNOUNCEMENT —

CONFERENCE WEBPAGE : <http://www.mathforlive.net/CIEAEM63.php>

Conference Venue

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Dear Colleagues,

After one year without any open conference, it's a pleasure to invite you to the CIEAEM 63 meeting. It will be held at Barcelona (Spain), 24th-29th July 2011. The conference will start at 2.00 pm, 24th July and end at 1.00 pm 29th July.

As you might know, CIEAEM conferences use to focus on a particular theme that is relevant for the study and improvement of mathematics education. The thematic focus of the CIEAEM 63 Conference is

**Facilitating access and participation:
Mathematical practices inside and outside the classroom**

The Commission for the Study and Improvement of Mathematics Teaching (CIEAEM) analyses the actual conditions and the possibilities for the development of mathematics education in order to improve the quality of teaching mathematics. Since its foundation in 1950, the annual conferences are the essential means for realizing this goal. These conferences are characterized by exchange and discussion of the research work and its realisation in practice and by the dialogue between researchers and educators in all domains of practice. We hope the conference papers, deliberations and proceedings would provide a framework for better understanding about mathematics education.

IMPORTANT: Participants must book hotel or other accommodation by themselves. We offer a list of proposals. Late July is very high season. Hotels do not offer low rates for this period. Please book in advance your hotel if you wish to have a nice place! Residencia AGORA is very near the University, 15 minutes to the City Center. CSIC Residence is also a good offer. Please use websites to consider.

One day before the Conference, July 23rd 2011, you are invited to participate to the special conference “FAMILIES AND COMMUNITIES IN AND OUT OF THE CLASSROOM: WAYS TO IMPROVE CHILDREN’S ACHIEVEMENT”, strongly related to our Conference theme.

We look forward to a lively and stimulating debate and meeting with you again in Barcelona in July 2011.

On behalf of Local Comitee and International Program Comiteee
Joaquin Giménez (chair) and Javier Díez-Palomar (local co-chair)

PROGRAM OF THE CONFERENCE

The program of the Conference includes several activities: plenaries, working groups, oral presentations and lectures, forum of ideas.

PLENARIES

The program includes plenary sessions where invited speakers will focus on aspects of the conference theme. The plenaries provide a shared input to the conference and form a basis for discussions in the working groups. Invited Plenary speakers of CIEAEM 63 Conference are:

- Ubiratan d'Ambrosio (BRA)
- Paola Valero (DK)
- Leonor Santos (PT)
- Manuel Castells (ES)

WORKING GROUPS

Each participant is invited to be a member of one of the working groups that will meet several times. Working groups will focus on a specific sub-theme or on a number of interrelated themes. This will provide opportunities both for in-depth discussions and for the linking of experiences. These are planned as interactive sessions and are the heart of the conference. Some presentations may be included in these sessions but discussions and exchange of experiences and ideas are the essential aspects of this activity. Each group will be coordinated by two "animators".

ORAL PRESENTATIONS IN THE WORKING GROUPS

Individuals or small groups of participants are encouraged to contribute to the conference through an oral presentation, thus communicating and sharing with others their ideas, research work or experiences. Relevant case studies are particularly welcome. Presentations should be related to the theme of the conference in general or to the sub-themes. There will be 20 minutes available for each presentation followed by approximately 10 minutes for discussion. There will be some invited presentations, as well.

WORKSHOPS

Individuals or small groups of participants are also encouraged to prepare and organise workshops, a more extended type of contribution which should focus on concrete activities and encourage the active involvement of the participants through working on materials, problems or questions relating to the sub-themes. A workshop will last for about 1h 30min.

FORUM OF IDEAS

The Forum of Ideas offers an opportunity to present case studies, learning materials and research projects as well as ideas that are not directly related to the theme. Participants are encouraged to display their work in the exhibition hall. There will be a specific time for contributors to explain and discuss their work with fellow participants.

SPECIAL SESSIONS

There will be some special sessions that will enrich the discussion to be confirmed.

OFFICIAL LANGUAGES OF THE CONFERENCE

The official languages of the conference are French and English. Everyone is asked to speak slowly and clearly so that all participants can understand and contribute to discussions. All speakers must prepare their transparencies in both languages. We rely on and appreciate the help of those who can translate, to assist their colleagues within each working group. Animators - in most cases - are able to help in both languages.

All Spanish speakers can be helped by animators or other colleagues, if necessary.

CALL FOR PAPERS

We hope that all participants will contribute “actively” to the conference by sharing with others their experiences and views in the various sessions, particularly in the working groups. Moreover, you are encouraged to send a proposal for an oral presentation or a workshop, or to bring a contribution to the Forum of Ideas.

Papers addressing a particular subtheme of the conference are welcome from mathematics teachers, teacher educators and/or researchers from all sectors of formal education: from early learning, through primary/elementary, secondary, and post-compulsory vocational or workplace preparation (i.e., school or industrial workplaces).

Proposals for ORAL PRESENTATIONS AND WORKSHOPS can be made by sending a FOUR PAGE text (about 1800 words or 12000 characters with spaces) , BEFORE JANUARY 31st 2011, including:

- Title, authors' names and affiliations
- Indication of sub-theme
- Aim and main idea of the reported study, methodology and the expected conclusions
- Related essential references

The language of the proposal should be the same as that of the oral presentation (English or French). Once your proposal is accepted you will need to prepare an abstract or summary in the other official language together with overhead projector transparencies or diaporama in both languages. Members of the Commission can assist the participants in translating their transparencies if they ask for help ahead of time (before June 15).

For a contribution to the FORUM OF IDEAS, you must send us a ONE PAGE presentation (about 450 words or 3000 characters, empty spaces included) with a title, authors' names and affiliations and a short description of the content, including information about the type of material to be presented (poster, models, video).

THE DEADLINE FOR CONTRIBUTIONS TO THE FORUM OF IDEAS IS MARCH 15th, 2011.

Accepted papers will be included in the Conference Proceedings to be published in a supplement to the electronic journal Quaderni di Ricerca in Didattica (Matematica).

Please send us a computer file (if possible, by using Microsoft Word saved as .doc or .rtf) with your proposal to the following E-mail address:

cieaem63@gmail.com

1. PRELIMINARY REMARKS

The aim of the discussion paper is to sketch some facets of the theme of the 63rd CIEAEM conference. The discussion paper intends to provide some orientation to those participants not so familiar with the issues. However, it is neither a systematic summary of the state of art in practice or research, nor does it aim at channelling potential contributions into a common framework. Quite the contrary: We are looking forward to a conference that is based on a diversity of practical experience and theoretical frames. If, while reading this paper, you feel uncomfortable for any reason, please proceed directly to Section 6, where descriptions of the five sub-themes that build the skeleton for the organisation of the working groups are given.

For participants less familiar with the thematic focus of the conference, the section entitled References provides a collection of articles and books which we see as closely related to the theme. However, this is not a comprehensive literature review and you might find many other relevant texts which are not included in the references list.

2. INTRODUCTION

Mathematics is an integral part of societies in a technological world. Decisions based upon mathematics and mathematical constructions affect the social interactions and relations in technological societies on many levels: On the level of interpersonal relations, mathematics-based communication technologies have already changed the habits and styles of private conversations. On the level of the national distribution of state salaries, pensions, and social benefits, political decisions often are made and communicated on the basis of formulae and diagrams, which themselves rely on mathematical extrapolations of demographical and economic data provided by experts. On the level of examinations and evaluations, failure in formal mathematics might contribute to social exclusion in a technological society. Of course, the mathematics is often invisible, as in the operation of mobile/cell phones or Internet chat forums; or taken for granted, as in tests and rankings; or it is only recognised at a superficial level as a medium of presentation, such as graphs, tables, charts. [1] [2] [3]

However, for different social groups within technological societies the relations between mathematics, technology and people's actions diverge. For example, making a car, selling a car, and buying a car each require the use of mathematics, although quite differently. Skovsmose [4] [5] introduces the idea of mathematics in action as providing ways of seeing, doing, organising, constructing, processing, deciding, and so forth ([5], p. 8), which enable power to be exercised by the user of mathematics. For the purposes of analysis, he identifies four main social groups who might be involved in or affected by mathematics-in-action in different ways:

- The *constructors* are those who are involved in developing mathematical technology. This group exercises power over *operators* and *consumers* of this technology. Related to those positions of power are issues of ethics and political responsibility and of social and cultural awareness.
- The *operators* are those who work in jobs in which they have to make decisions on the input and then decisions based on the output of this technology. These job situations can be called "rich in implicit mathematics" ([4], p. 142). Operators are not only prepared for their tasks in terms of the content of their mathematical training, but also accustomed to the "habit" of following rules as a

consequence of the hidden curriculum of school mathematics.

- The *consumers* of mathematics are those who are reading or listening to a range of offers, opinions, statements and reports containing graphical figures and numbers. Consumers are confronted with justifications of decisions based on complex, computer-based models.
- There is still another group of people called, following Castells [6], the '*disposable*', those who are marginalised and who live in "modern ghettos" which "can be considered a dumping ground for people who have no role to play in the informational society" ([4], p. 35). Although they are not considered to have a need for education, Skovsmose [5] argues that it is a fundamental human right.

Not all of these categories are characterized by strong boundaries. For instance, some people may be constructors or operators in their professional lives and consumers of mathematisations at other times.

However, there is a threat to democracy because of a widening gap in the mathematical knowledge of constructors and consumers. The constructors not only provide the technical knowledge for developing solutions but also have the power to define the problems and to initiate new questions. The forming of opinions and political decisions become more and more dependent on their expertise. [3]

One of the essential problems of democracy in a highly technological society is the development of a critical competence to match the actual social and technological development. Decisions made on the basis of mathematical models may be inaccessible to de-mathematised consumers. According to Skovsmose [7], technological knowledge itself is insufficient for predicting and analysing the results and consequences of its own production; reflections building upon different competencies are needed. For example, the competence in constructing a car is not adequate for the evaluation of the social consequences of car production such as air, soil and water pollution, and energy requirements for oil and gas.

Following the work of Michael Apple, Skovsmose [5] defines functional literacy (including mathematical literacy) as the competencies needed in order to fulfil a particular job function. By contrast, critical literacy might challenge the working conditions and address political issues. Whereas functional mathematics enables people to read and to act, critical mathematics enables people to 'talk back' if they feel that power is being used unfairly.

With respect to those groups of people who are deprived of any kind of formal education (the '*disposable*'), the tension between functional and critical education is exacerbated. We might ask in which ways mathematics, which might be conceived as important for their future lives by some students — but not necessarily by those who are already marginalised — could offer new opportunities. Mathematics education needs to relate to the students' foregrounds — that is, the opportunities provided by their particular social, political and cultural situations as perceived by the student [4]. These foregrounds qualify students from marginalised groups to regard themselves as active participants and not as victims of the social conditions into which they are born [8]. The personal, social, political, etc. power students may gain by acting mathematically, and reflecting on the use of mathematics, inside and outside of the classroom may necessitate different forms of mathematical knowledge and different mathematical pedagogies for different cultural and social groups.

The goal of facilitating access to more powerful positions through mathematical practices can be discussed from two perspectives, which we separate for analytical reasons only: on one hand from the perspective of the formal education curriculum and, on the other hand, from the perspective of extra-curricular, and out-of-school activities where people engage with mathematics-in-action over the course of their lives.

3. CURRICULAR PERSPECTIVES

As with any publicly funded education, curriculum conceptions for mathematics education are the product of social processes. Such policy decisions are usually contested, advantaging particular social and cultural groups, while disadvantaging others. They often represent ideological hybrids, and the consequences of mathematical curricula for different student groups in terms of their access to valued forms of mathematical knowledge and to positions of power in the 'knowledge society' are rarely directly visible. As an illustration, four conceptions for mathematics education which have arisen in recent decades (inquiry-based mathematics education, ethnomathematics, emergent mathematical modelling, critical mathematics education) have all been launched as non-mainstream conceptions aiming at empowering students, although for different purposes and in different contexts [9]. The question is: Do they actually enable students to gain power?

(A) Inquiry-based mathematics education

Inquiry-based mathematics education construes mathematics learners as miniature scholar-specialists whose mathematical activity is not qualitatively different from that of a professional mathematician. Academic mathematics, sometimes described as the "science of patterns" is mirrored in the students' engagement in discovering and exploring regularities and identifying mathematical relationships. An inquiry-based mathematics curriculum can be regarded as an attempt to find challenging mathematics in order to develop the students' knowledge both about how to identify and problematize mathematical patterns and relations and about the intended mathematical generalizations. However, the construction of mathematical meaning through generalization of idiosyncratic inquiries is a crucial component of this curriculum conception, and two conditions (at least) need to be fulfilled. Firstly, students need to have a sufficiently elaborated level of mathematical skills and tacit knowledge about what to strive for within open investigative problems. Secondly, only highly qualified teachers will be able to develop mathematical generalizations from the students' investigations, which are often not fully developed. However, in many parts of the world these conditions are not met, and the effects of importing inquiry-based mathematics curricula from countries, which have succeeded in international comparisons (such as Singapore), do not match the expectations of those who import them.

(B) Ethnomathematics

Ethnomathematics is concerned with the mathematical practices of "identifiable cultural groups, such as national-tribal societies, labor groups, children of certain age brackets, professional classes" ([10], p. 45). Developing an ethnomathematical curriculum consists of uncovering and describing the mathematics that is more implicit in culturally relevant practices or artefacts of subordinated people and marginalised groups. The overcoming of cultural alienation and the demystification of mathematics as being final, permanent, absolute and unique are amongst the aims of an ethnomathematics curriculum. Others, however, argue that if the pedagogical process of ethnomathematics were limited solely to the recovery of local knowledge captured in practices and artefacts, this would restrict access to useful and valued forms of knowledge and as a consequence reinforce social inequalities [11]. The problem of reconciling and transforming out-of-school mathematics with formal mathematics curricula remains. In school, socially underprivileged groups are well aware of the power differential between home and school mathematical practices [12].

(C) Emergent mathematical modelling

Mathematical modelling is a rather vaguely defined term that comprises many different classroom practices. In *Realistic Mathematics Education*, for instance, models are

understood as representations of problem situations, which serve as a means for learning mathematical concepts and structures [13]. In contrast, in a perspective that is sometimes referred to as *emergent* modelling, there is the “desire to develop skills appropriate to obtaining a mathematically productive outcome for a problem with genuine real-world connections. ... Here the solution to a problem must take seriously the context outside the mathematics classroom, within which the problem is located, in evaluating its appropriateness and value” ([14], p. 237). Emergent mathematical modelling is characterized by not subordinating the modelling process to the principles of school mathematics. However, emergent mathematical modelling is not a uniform practice, but an amalgam of interrelated practices in different knowledge domains. Consequently, emergent mathematical modelling as a curriculum conception leaves an open space for promoting diverse agendas, such as educating critical consumers, rethinking cultural identity, or preparation of human capital. The supposedly neutral skills of generic modelling may be used to serve quite different ideological purposes.

(D) Critical mathematics education

The aims of a critical mathematics education curriculum are to identify and analyse critical mathematical features of social realities and to contribute to the development of social justice [15]. The particular hidden injustice students face because of their race, social class, or cultural origin is one of the targets of critical mathematics education. Critical mathematics education scrutinizes the mechanisms by which race and social class structures are reinforced. Another target is mathematics itself because of its function as part of technology, including social technology. Critical mathematics education intends to counteract the de-mathematizing effects of all kind of technologies. There is a tension inherent in critical mathematics education between a pedagogy of access and a pedagogy of dissent. Access includes access to higher education, to rewarding professional employment, to civic life and to social services – although advanced mathematical literacy does not necessarily translate into power. In a pedagogy of dissent [16], students learn a language of critique of systems of social reproduction and of inequitable power relations in society. The question is: Are these two pedagogies of access and dissent simultaneously possible?

4. EXTRA-CURRICULAR PERSPECTIVES

As a volume edited by Greer, Mukhopadhyay, Powell, and Nelson-Barber [17] illustrates, community resources may be integrated into regular school and college education in many ways. Several chapters of the volume document how knowing and responding to the students’ diverse social, cultural, language minority, and other backgrounds in specific classrooms or post-compulsory studies can enhance student participation. Indigenous ‘elders’ may contribute valuable knowledge through alternative conceptions of mathematical concepts and different worldviews to support the ‘non-traditional’ learners found in the USA, for example. Other examples include addressing the foregrounds of African-American children, Latino parents, teacher education students, and college level learners.

Hana et al. [18] identify three different learning spaces in a school-industry partnership where school pupils cross boundaries to act as industry consultants, supported by student teachers, who are themselves crossing boundaries between the school, the university, and the workplace. The research project focuses on learning conversations and involves three different layers:

1. the *school development* initiative, where the research focus is on pupils’ ability to communicate and learn mathematics;
2. the *professional development* of student teachers engaging in the school development initiative, where the research focus is on the students’ communication related to their professional development as mathematics teachers;

3. the *collaboration* between didacticians, schoolteachers and students, where the research focus is on the communicative learning processes that develop between members of the learning community.

The first of two examples illustrates how an assignment made possible by an authentic industrial context, altering the regular conditions of learning and teaching, influences the intentionality, functionality and empowerment of pupils and student teachers. The second example is concerned with mathematical modelling of regression equations relevant to an industrial context, especially with regard to the development of critical democratic competence in the pupils. The authors believe that these connections with the world outside of school mathematics may support engagement by pupils and teacher education students in developing mathematical literacy.

Borba and Villarreal [19] believe that access to technology is a right of, and necessary for, citizenship. Drawing on over a decade of work in their research collective, and firmly grounded in their qualitative research, they illustrate a broad spectrum of possibilities for humans to work with technological media in mathematics education. In addressing the problems of distance and limited financial support available for education in Brazil, the book illustrates what might be achieved under less than ideal economic and geographic circumstances. They observe that second-wave ICTs, marked by browsing the Internet, are more in line with the video-clip culture of today — that is, among younger people in more developed countries of the world. One of the case studies involves the use of the internet in supplying data for a project on BSE — commonly known as ‘mad cow disease’.

Hoyles et al. [20] consolidate several years of research into workplace mathematics and use of statistics. The authors go beyond ethnographic observations and draw upon what they call Technology Enhanced Boundary Objects that are familiar to workers in their everyday practices (e.g., quality control charts) to make interventions to improve their mathematical abilities. Although the book is not written specifically for school education, the principle of using familiar real objects as the basis for mathematics education that is meaningful to learners has the potential to be politically empowering.

5. WAYS OF FACILITATING ACCESS AND PARTICIPATION: THROUGH EVOKING REAL AND RELEVANT LIFE PRACTICES OR THROUGH A RADICALLY VISIBLE PEDAGOGY OF MATHEMATICS?

It is a disputed question how to best facilitate access to valued forms of mathematical knowledge in order to facilitate participation in diverse social situations. Some argue that it is most important to involve the learners in activities that link school mathematics to authentic out-of-school problems, situations and activities [21] [22]. This is explicitly realised through, for instance, a modelling curriculum or through a focus on ethnomathematics. As a matter of fact, the out-of-school problems, the ethnomathematics, and the foregrounds of different groups of learners diverge. Those, whose position towards mathematics-in-action is that of a constructor, face a different ‘mathematical reality’ from the operators, consumers or the ‘disposable’. The link between mathematics and out-of-school problems might be different in different social settings.

Others argue that the power of mathematics is grounded in its abstractness and its self-reference. The main argument, here, is that mathematical knowledge that is most abstract, rigorous and esoteric has most exchange value in our society. This argument is reflected in countries where students in the upper secondary grades must choose between (or be directed to) the subjects of mathematics (e.g. pre-calculus) or mathematical literacy; the first being the only pathway to academic studies in science and engineering. In order to facilitate access to esoteric and rigorous mathematical knowledge for all students, some argue that it is necessary to develop abstract mathematics from the early grades on [23] [24]. This is particularly relevant in the case

of students living at the margin, as their 'real life' is precisely what they want to leave behind by formal education. The call is for a radically visible pedagogy [25] of mathematics, the motto of which might be formulated as a *mathematics for all*.

6. SUBTHEMES OF THE 63RD CIEAEM CONFERENCE (OVERVIEW)

Subtheme 1: Ways of bringing mathematical practices (implicit or explicit) outside of the classroom into the foreground of students' learning.

Subtheme 2: Where access is denied: Issues of social injustice in mathematics (education) practices.

Subtheme 3: Instructional strategies to facilitate access and participation.

Subtheme 4: Students discovering the power of mathematics.

Subtheme 5: Mathematical activities that bridge education & life-work boundaries.

7. CALL FOR PAPERS

The overarching theme of the conference relates to **access** and **participation** in mathematics education as a means of participating fully in the world beyond the classroom or other learning space. So, not only are we interested in providing opportunities to engage with learning powerful mathematics through curriculum, assessment, and teaching appropriate to particular learners' needs, we are also interested in having learners actually take up those opportunities. This means acknowledging their foregrounds as well as their backgrounds from educational as well as other social, cultural, historical, geographical, economic, political etc. contextual perspectives. One particular context that currently affects us all is the environment, locally and globally.

Papers addressing a particular subtheme of the conference are welcome from mathematics teachers, teacher educators and/or researchers from all sectors of formal education: from early learning, through primary/elementary, secondary, and post-compulsory vocational or workplace preparation (i.e., school or industrial workplaces).

Questions that might be addressed in your paper: (these are not mutually exclusive!)

Subtheme 1: Ways of bringing mathematical practices (implicit or explicit) outside of the classroom into the foreground of students' learning

- What are some of your learners' aspirations and hopes in life?
- How can they be supported and/or extended mathematically?
- How can mathematics education, in research and practice, contribute to the development of active 'consumers of mathematics'?
- How can it draw on implicit or explicit mathematics practices in the broader community to qualify students for active participation as citizens?

Subtheme 2: Where access is denied: Issues of social injustice in mathematics (education) practices

- At the level of mathematics education policy in your setting, how are learning problems defined? Is the focus on remediation of individual learners? On compensatory education for specific target groups? Both of these ignore context. How might the taking into account of learners' contextual factors change the approach for the better?
- Are the curriculum, assessment, and teaching practices oriented towards the needs of particular groups of learners at the expense of others? How might

these be changed for the better?

- Are there adequate and/or equitable resources for all learners in terms of teacher education, teacher supply, access to available technologies and other resources? Are there strategic ways to improve the situation?

Subtheme 3: Instructional strategies to facilitate access and participation

- How can mathematics education, in research and practice, enable students from marginal groups to access basic welfare, health services, and qualified jobs?
- How can the learners be encouraged to feel valued for the personal qualities and life experience they bring to the learning situation?
- How could learners be encouraged to see their mathematics learning as socially, politically, ethically, etc. important?

Subtheme 4: Students discovering the power of mathematics

- How can mathematics education, in research and practice, prepare those who operate in situations structured by implicit mathematics to act responsibly and be sensitive to the particularities of social contexts?
- How can it prepare students to reflect upon the social, ethical, environmental and ecological, etc. consequences of decisions based upon mathematics?
- How can mathematics education, in research and practice, establish possibilities for those students who will actively be involved in the (re-)production of knowledge and social structure, and prepare them to act responsibly?

Subtheme 5: Mathematical activities that bridge education & life-work boundaries

- Can you give documented examples that actively involve the broader community or important community issues in your learners' mathematics education?

e.g., partnerships between school and industry; exchanges with family members or local cultural/special interest groups; having mathematicians 'in-residence'; having learners researching issues of environmental, social, political, or other significance, locally or globally; collaborating electronically in mathematical projects with other learners from different geographical locations, locally or globally, ...

- Can you draw upon the paid or unpaid work or other public activities that your learners are involved in beyond the classroom or learning space?

***Papers should be no longer than 4 pages in total, including references, single-spaced, formatted as follows:**

1. Subtheme: Please identify the major subtheme that you are addressing.
2. Title
3. Author/s
4. Email contact
5. Main text: Briefly outline the learning/teaching contexts on which you are basing your discussion before the main discussion. Theoretical research papers should include practical implications.
6. References

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ACCOMPANYING PERSONS

Accompanying persons are invited to participate in all social events of the Conference, alongside the participants. In addition, some special tourist activities will be organized for them.

Conference fee

Before April 30, 2011.....	Euro 310
Accompanying person(s).....	Euro 250 (each)
After April 30, 2011.....	Euro 350
Accompanying person(s).....	Euro 290 (each)

*The fee includes, contribution to CIEAEM 63 site, all documents for the Conference, coffee breaks, social activities , starting dinner, 3 lunches, excursion and conference dinner

**You may offer extra 10 euro (or more) for the Braithwaite Fund (In order to support participants in difficult circumstances).

Please register at:

<http://www.mathforlive.net/CIEAEM63.php>

Important deadlines

January 31 st 2011	Deadline for proposals
March 15 th 2011	Deadline for Forum of ideas proposals
March 31 st , 2011	End of reviewing process. Reply from the IPC with acceptance of presentations or suggested modifications
April 30 th , 2011	Last day for payment of fees (reduced rate)
May 15 th , 2011	Authors send back the revised text of their presentations
May 15 th 2011	Third Announcement
June 1 st 2011	Reply from IPC with acceptance of presentations
June 15 th , 2011	Deadline for cancellation with refund
June 15 th , 2011	All texts will be placed at the CIEAEM 63 web site
June 15 th , 2011	Deadline for people asking for ppt translation help in order to have ppt presentation in both languages during the Conference

Accommodation

IMPORTANT: Participants must book hotel or other accommodation by themselves. We offer a list of proposals. Late July is very high season. Hotels do not offer low rates for this period. Please book in advance your hotel if you wish to have a nice place! Residencia AGORA is very near to the University, 15 minutes to the city centre. CSIC Residence is also a good offer. Please use websites to consider.

In the web site you will find details of a Students/teachers Residences with good rates and facilities and a list of suggested hotels.

- **AGORA (approx. EUR 45 individual; EUR 58 double, including breakfast)**
http://www.agoda.com/europe/spain/barcelona/agora_student_residence_hotel.html
- **RESA Residences. (various places) Information headquarters +34 902 444 447**
<http://www.resa.es/eng/> (approx. EUR 63,5 individual; EUR 95 double)
- **CSIC Residence. (downtown) Tel. +34 93 443 86 10; investigadors@resa.es**
http://www.residencia-investigadors.es/cont/home_eng.php (Eur 68,5 (single) Eur 95,5 (twin))
- **S Raimon de Penyafort.** Colegio Mayor **Penyafort**- Monserrat | Direccion: Avenida Diagonal nº 643 www.penyafort.ub.es
- Albergue Pere Tarrés en Barcelona **Direccion:** Calle Numancia nº 149-151
- Residencia Universitaria Campus del mar en Barcelona
Nombre: Residencia Universitaria Campus del mar | **Direccion:** Paseo Salvat Papasseit nº 4 - 8003 Barcelona (Barcelona) | **Tipo de alojamiento:** residencia universitaria | **Clasificación:** mixta...
- Residencia Universitaria Francesc Giralt I Serrà en Barcelona
Nombre: Residencia Universitaria Francesc Giralt I Serrà | **Direccion:** Calle Ramón y Cajal nº 44 - 8222 Tarrasa ([Barcelona](#)) | **Tipo de alojamiento:** [residencia universitaria](#) | **Clasificación:** [mixta](#)...
- Residencia Universitaria la Ciutadella en Barcelona
Nombre: Residencia Universitaria la Ciutadella | **Direccion:** Paseo Pujades nº 33-37 - 8018 Barcelona (Barcelona) | **Tipo de alojamiento:** residencia universitaria | **Clasificación:** mixta...
- Residencia Universitaria Lesseps en Barcelona
Nombre: Residencia Universitaria Lesseps | **Direccion:** Plaza Lesseps nº 12 - 8023 Barcelona (Barcelona) | **Tipo de alojamiento:** residencia universitaria | **Clasificación:** mixta...

- Residencia Universitaria Pere Felip Monlau en Barcelona

Nombre: Residencia Universitaria Pere Felip Monlau | **Dirección:** Calle Sant Oleguer nº 20-22 - 8001 Barcelona (Barcelona) | **Tipo de alojamiento:** residencia universitaria | **Clasificación:** mixta...

Usually, Credit Card details will be required at the time of booking. Please note reservations will not be accepted without a Credit Card Guarantee.

A search of Barcelona hotels will direct you to more accommodation in the area.

Barcelona tourist Information: www.diba.cat/turisme / www.turismeindustrial.org