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COMMISSION INTERNATIONALE  
DE L'ENSEIGNEMENT MATHÉMATIQUE  
(THE INTERNATIONAL COMMISSION  
ON MATHEMATICAL INSTRUCTION)

THE 2007 ICMI AWARDS  
FELIX KLEIN AND HANS FREUDENTHAL MEDALS

ICMI is proud to announce the third awardees of the Klein and Freudenthal medals.

- ◇ The *Felix Klein* Medal for 2007 is awarded to Jeremy KILPATRICK, Professor at the University of Georgia, USA. This distinction acknowledges his more than forty years of sustained and distinguished achievement in mathematics education research and development. It recognises Jeremy Kilpatrick's extraordinary ability to reflect on, critically analyse, and unify essential aspects of the field of mathematics education, while always insisting on the need for reconciliation and balance among points of view, approaches and methodologies. It further recognises the fact that he has always embraced a very cosmopolitan perspective on the field which has been of great significance to mathematics education researchers on all continents.
- ◇ The *Hans Freudenthal* Medal for 2007 is awarded to Anna SFARD, Professor at the University of Haifa, Israel, at the University of London, UK, and also affiliated to Michigan State University, USA. This distinction acknowledges Anna Sfard's highly significant and scientifically deep accomplishments within a consistent, long-term research programme focused on objectification and discourse in mathematics education, a research programme which has had a major impact on many strands of research in mathematics education and on numerous young researchers. It also recognises her ability to uncover, in a thorough, original and scholarly manner, tacit or hidden assumptions behind ideas, approaches, and conventional wisdom, so as to generate new fundamental and striking insights into complex issues and *problématiques*.

The ICMI Awards, given in each of the odd-numbered year since 2003, are the two prizes created by ICMI for recognising *outstanding achievement in mathematics education research*. They respectively honour a lifetime achievement (Felix Klein Award, named after the first president of ICMI — 1908–1920) and a major cumulative programme of research (Hans Freudenthal Award, named after the eighth president of ICMI — 1967–1970). By paying tribute to outstanding scholarship in mathematics education, the ICMI Awards serve not only to encourage the efforts of others, but also to contribute to the development of high standards for the field through the public recognition of exemplars. The awards consist of a medal and a certificate, accompanied by a citation.

The ICMI Awards represent the judgement of an (anonymous) jury of distinguished scholars of international stature. The jury for the 2007 Awards was chaired by Professor Mogens Niss, Roskilde University, Denmark.

Citation of the work of the 2007 medallists can be found below. Presentation of the medals, and invited addresses of the medallists, will occur at ICME-11, Monterrey, México, July 2008.

*Recipients of ICMI Awards :*

	<i>Felix Klein medal</i>	<i>Hans Freudenthal medal</i>
2003	Guy BROUSSEAU	Celia HOYLES
2005	Ubiratan D'AMBROSIO	Paul COBB
2007	Jeremy KILPATRICK	Anna SFARD

CITATION FOR ICMI'S 2007 FELIX KLEIN AWARD TO PROFESSOR JEREMY KILPATRICK

It is with great pleasure that the ICMI Awards Committee hereby announces that the Felix Klein Medal for 2007 is given to Professor Jeremy Kilpatrick, University of Georgia, Athens, GA, USA, in recognition of his more than forty years of sustained and distinguished lifetime achievement in mathematics education research and development. Jeremy Kilpatrick's numerous contributions and services to mathematics education as a field of theory and practice, as he prefers to call it, are centred around his extraordinary ability to reflect on, critically analyse, and unify essential aspects of our field as it has developed since the early 20<sup>th</sup> century, while always insisting on the need for reconciliation and balance among the points of view taken, the approaches undertaken, and the methodologies adopted for research. It is a characteristic feature of Jeremy Kilpatrick that he has always embraced a very cosmopolitan perspective on mathematics education. Thus he has worked in Brazil, Colombia, El Salvador, Italy, New Zealand, Singapore, South Africa, Spain, Sweden, and Thailand, in addition to being, of course, extraordinarily knowledgeable about the international literature.

Throughout his academic career, Jeremy Kilpatrick has published groundbreaking papers, book chapters and books – many of which are now standard references in the literature – on problem solving, on the history of research in mathematics education, on teachers' proficiency, on curriculum change and its history, and on assessment.

Jeremy Kilpatrick graduated in 1954 with an A.A. from a two-year college (Chaffey) in California before transferring to the University of California at Berkeley where he

earned an A.B. degree (1956) in mathematics and then an M.A. degree (1960) in education, while teaching mathematics in a junior high school. He then went to Stanford University to work with Ed Begle and George Pólya, during the years 1962–1967, as a Research Assistant in the School Mathematics Study Group. At Stanford he earned first an M.S. in mathematics (1962) and then a PhD degree in mathematics education (1967). His dissertation, which was supervised by Begle, was on eighth graders' problem-solving heuristics, and problem solving was the focus of his research during the first several years of his career.

After having taught for a number of years (1967–1975) at Teachers College, Columbia University, in New York, as an Assistant and – later – as an Associate Professor, Jeremy Kilpatrick joined the University of Georgia, in Athens, as a Professor of Mathematics Education, in 1975, where he has remained ever since. In 1993 he was appointed a Regents Professor at Georgia. He also holds an honorary doctorate (1995) from the University of Gothenburg, Sweden. Over the years he has taught courses at several European and Latin American universities. He is currently a principal investigator in the Center for Proficiency in Teaching Mathematics, a collaborative research centre organised jointly by the University of Georgia and the University of Michigan and funded by the National Science Foundation.

A significant aspect of Jeremy Kilpatrick's achievements is the immense amount of service that he has done for the international mathematics education community. Among his numerous accomplishments as an editor, he co-edited the very influential series of translations *Soviet Studies in the Psychology and Teaching of Mathematics*, 1969–1975, and was the editor of the *Journal for Research in Mathematics Education*, 1982–1988. He was a co-editor of the *Proceedings of the Fourth International Congress on Mathematical Education* (1983), the *International Handbook of Mathematics Education* (1996) and the *Second International Handbook of Mathematics Education* (2003), the ICMI Study *Mathematics Education as a Research Domain* (1998), *Adding It Up* (2001), *A Research Companion to Principles and Standards for School Mathematics* (2003), *A History of School Mathematics* (2003), and *Meaning in Mathematics Education* (2005).

Jeremy Kilpatrick served three terms on the Executive Committee of the International Commission on Mathematical Instruction, ICMI (1987–1998), 1991–1998 as one of its two Vice Presidents. He was a charter member of the US Mathematical Sciences Education Board 1985–1986, and 2004–present. He also served on a large number of commissions, committees, boards, and panels in the US: AERA, the College Board, Educational Testing Service, MAA, NCTM, NAEP, National Academy of Education, National Research Council, National Science Foundation, to mention just a few.

Jeremy Kilpatrick's lists of publications and presentations at national and international meetings are equally impressive. Both have to be counted in the hundreds. He has supervised a large number of Master's and PhD students, quite a few of whom have gained international renown. Throughout his entire career, he has won a large number of awards and honours, including the NCTM Lifetime Achievement Award for Distinguished Service to Mathematics Education in 2003.

In summary, Jeremy Kilpatrick is an eminently worthy recipient of the Felix Klein Medal for 2007.

## CITATION FOR ICMI'S 2007 HANS FREUDENTHAL AWARD TO PROFESSOR ANNA SFARD

It is with great pleasure that the ICMI Awards Committee hereby announces that the Hans Freudenthal Medal for 2007 is given to Professor Anna Sfard, University of Haifa, Israel, and the University of London, UK, in recognition of her highly significant and scientifically deep accomplishments within a consistent, long-term research programme focused on objectification and discourse in mathematics education, which has had a major impact on many strands of research in mathematics education and on numerous young researchers.

In addition to publications related to the above-mentioned research programme, Anna Sfard has published numerous other papers and book chapters within a broad range of topics. It is a characteristic feature of Anna Sfard's scientific achievements that they are always very thorough, original and intellectually sharp. She often uncovers the tacit if not hidden assumptions behind notions, approaches, and conventional wisdom, and by turning things upside-down she usually succeeds in generating new fundamental and striking insights into complex issues and *problématiques*.

Influenced greatly by her interest in communicational philosophy and psychology (e.g. Wittgenstein, Piaget and Vygotsky) as well as in history and languages, Anna Sfard's research programme took off in a series of papers published in the early 1990's that studied process-object duality and reification in mathematics – in particular in algebra – from both theoretical and empirical perspectives. These papers include “On the dual nature of mathematical conceptions: reflections on processes and objects as different sides of the same coin” [*ESM* 22 (1991), 1–36], “The gains and pitfalls of reifications: The case of algebra” (with Liora Linchevski) [*ESM* 26 (1994), 191–228], “Reification as a birth of a metaphor” [*FLM* 14 (1994), 44–55], and “The development of algebra: Confronting historical and psychological perspectives” [*JMB* 14 (1995), 15–39] which have already become classics within their domain. Gradually, Anna Sfard's research programme developed into a somewhat broader one dealing with aspects of communication and discourse. First, she went on to study the nature and roles of metaphors in mathematics education, for instance in “On two metaphors for learning and the dangers of choosing just one” [*ER* 27 (1998), 4–13], and in “Steering (dis)course between metaphor and rigor. Using focal analysis to investigate the emergence of mathematical objects” [*JRME* 31 (2000), 296–327].

From the early years of this century, she paid increasing attention to the relationship between mathematical learning (cognition) and discourse. This is reflected in a series of impressive high-quality publications, among others “There is More to Discourse than Meets the Ears: Learning from mathematical communication things that we have not known before” [*ESM* 46 (2001), 13–57], “Learning discourse: Socio-cultural approaches to research in mathematics education” (with Ellice Forman and Carolyn Kieran) [*ESM* 46 (2001), 1–12], “Why cannot children see as the same what grownups cannot see as different? – early numerical thinking revisited” [*CI* 23 (2005), 237–309], and “What changes when learning goes to school: The communicational version, the case of mathematics” [*EJSP* 3 (2005), 301–326]. Today, Anna Sfard's research programme might be condensed by making use of the term she has coined to dissolve the classical dichotomy between communication and cognition, *commognition*. In 2008 Cambridge University Press published her monograph *Thinking as Communicating: Human Development, the Growth of Discourses, and Mathematizing*, which provides an organised and systematic account of her research programme and its results.

Anna Sfard began her studies in physics at the University of Warsaw, Poland, in 1967, obtained a B.Sc. in Mathematics and Physics (1972) and an M.Sc. in mathematics (1977) both at the Hebrew University, Jerusalem, Israel, where she also got her PhD in mathematics education in 1989 (with a dissertation on the teaching of algorithms in high school), while having held various positions at her university since 1972. After having had post-doctoral positions and visiting scholar positions in the USA, UK, and Canada, she was appointed assistant professor (1995) at the University of Haifa, Israel, where she is now – since 2001 – professor in the Faculty of Education. From 2003 to 2007 Anna Sfard also held a chair (as the Lappan-Phillips-Fitzgerald Professor) at the Division of Science and Mathematics Education, Michigan State University, USA, with which she is still affiliated. In 2007 she was appointed to a chair of mathematics education, at the Institute of Education, University of London, UK, jointly with her position in Haifa.

She has been invited to give key-note addresses and plenary presentations in an impressive number of international conferences, including the ICMEs, in addition to having served as a member of several scientific committees, editorial boards, PhD committees, etc. on several continents. Anna Sfard has also supervised numerous master's and PhD students in Israel and abroad.

In summary, Anna Sfard is an eminently worthy recipient of the Hans Freudenthal Medal for 2007.

*Journals cited:*

- [CI]      *Cognition and Instruction*
- [EJSP]   *European Journal of School Psychology*
- [ER]      *Educational Researcher*
- [ESM]    *Educational Studies in Mathematics*
- [FLM]    *For the Learning of Mathematics*
- [JMB]    *Journal of Mathematical Behavior*
- [JRME]   *Journal for Research in Mathematics Education*

COMMISSION INTERNATIONALE  
DE L'ENSEIGNEMENT MATHÉMATIQUE  
(THE INTERNATIONAL COMMISSION  
ON MATHEMATICAL INSTRUCTION)

1908 – 2008

CENTENARIO DELLA COMMISSIONE INTERNAZIONALE  
DELL'INSEGNAMENTO MATEMATICO

SIMPOSIO IN ROMA: 5–8 MARZO 2008

Nel 1908, durante il IV Congresso Internazionale dei Matematici, che si tenne a Roma dal 6 all'11 aprile, fu creata la Commissione Internazionale dell'insegnamento matematico (International Commission on the Teaching of Mathematics, Commission Internationale de l'Enseignement Mathématique, Internationale mathematische Unterrichtskommission). A formulare per primo la proposta di istituire un organismo internazionale di questo tipo era stato David Eugene Smith, docente al Teachers College di New York, con profondi interessi per l'educazione e per la storia delle matematiche, e il suo primo presidente fu Felix Klein, matematico eminente e promotore di una importante riforma dell'insegnamento della matematica in Germania.

Scopo iniziale della commissione era quello di “promuovere un'inchiesta e pubblicare un rapporto generale sulle tendenze correnti dell'insegnamento della matematica nei vari paesi”. Da allora la Commissione, che dal 1954 è denominata International Commission on Mathematical Instruction (ICMI), è passata attraverso periodi di stasi e di successiva ripresa (connessi con i drammatici eventi della prima metà del secolo XX) per arrivare, alla fine degli anni sessanta, ad una vera e propria rinascita sulla base di nuove finalità e metodologie di lavoro. Nell'ultimo quarto di secolo le sue attività e i filoni di ricerca si sono ampliati e diversificati e hanno contribuito alla costruzione di una nuova disciplina, la “ricerca in didattica della matematica”.

Per celebrare il Centenario della fondazione dell'ICMI si è tenuto a Roma nei giorni 5–8 marzo il simposio internazionale *The First Century of the International Commission on Mathematical Instruction: Reflecting and Shaping the World of Mathematics Education* (<http://www.unige.ch/math/EnsMath/Rome2008/>). Il Comitato scientifico internazionale (CSI), composto di 16 membri, era presieduto da Ferdinando Arzarello, mentre Marta Menghini rappresentava il Comitato organizzatore all'interno del CSI. Palazzo Corsini, sede dell'Accademia Nazionale dei Lincei, e Palazzo Mattei di Paganica, sede della Enciclopedia Italiana, hanno costituito la splendida cornice dei lavori.

Partendo dall'analisi dei principali temi connessi con l'attività dell'ICMI nei suoi cento anni di storia (riforme nell'insegnamento delle scienze, formazione degli insegnanti, rapporti fra i matematici e i ricercatori in didattica, ...), il simposio ha cercato di individuare le future direzioni di ricerca in didattica e le possibili iniziative da intraprendere per migliorare il livello della cultura matematica nei vari paesi.

I lavori si sono articolati in 10 conferenze plenarie, 8 conferenze in parallelo, 5 gruppi di lavoro e un pomeriggio riservato agli insegnanti italiani, con interventi di studiosi italiani e stranieri. Le conferenze di tale pomeriggio sono state trasmesse in videoconferenza in 50 scuole sul territorio italiano.

Gli interventi hanno toccato svariati temi: le origini dell'ICMI e il ruolo svolto da Klein e da Smith, la sua rinascita alla fine degli anni sessanta e l'emergere di un nuovo campo di ricerca; la dialettica tra rigore e intuizione nell'insegnamento della matematica; i rapporti tra matematica pura e applicata e il rilievo da dare alla modellizzazione nell'insegnamento e nell'apprendimento di questa disciplina; le interazioni fra ricerca e pratica; il confronto fra centri e periferie del mondo; i rapporti fra matematica e didattica della matematica, la formazione degli insegnanti, il rapporto dell'educazione matematica con la tecnologia, con la società e con le altre discipline.

Hanno preso parte al congresso quasi 200 partecipanti provenienti da 43 paesi di tutto il mondo. I lavori si sono conclusi con un'escursione che, come cento anni fa, ha portato i congressisti a Tivoli, con la visita di Villa d'Este e di Villa Adriana, luoghi pieni di suggestioni storiche.

In occasione del congresso è anche stato realizzato un sito sulla storia dell'ICMI a cura di Fulvia Furinghetti e Livia Giacardi (<http://www.icmihistory.unito.it/>) allo scopo di delinearne gli eventi più significativi e le figure chiave attraverso documenti, immagini e interviste. Il sito si articola in sei sezioni: Timeline; Portrait Gallery; Documents; The Affiliated Study Groups; The International Congresses on Mathematical Education; Interviews and Film Clips. La Timeline presenta i momenti più significativi della storia dell'ICMI e ogni fatto è documentato con riferimenti alle fonti originali. La Portrait Gallery offre invece la lista dei membri dei vari comitati esecutivi con i loro profili biografici, allo scopo di mostrare il ruolo di ciascuno all'interno dell'ICMI, i loro contributi allo studio dei problemi inerenti all'insegnamento della matematica e le pubblicazioni ad esso espressamente dedicate.

Gli Atti del simposio saranno pubblicati dalla *Enciclopedia Italiana*, nella collana *Scienze e Filosofia*. (Contenuti e modulo per l'ordine si trovano su <http://www.unige.ch/math/EnsMath/Rome2008/AnnProc08.pdf>.) Le conferenze del pomeriggio italiano sono apparse nella rivista *Progetto Alice*.



ONE HUNDRED YEARS OF THE INTERNATIONAL COMMISSION  
ON MATHEMATICAL INSTRUCTION

SYMPOSIUM IN ROME: 5–8 MARCH 2008

The International Commission on the Teaching of Mathematics (Commission Internationale de l'Enseignement Mathématique, Internationale mathematische Unterrichtskommission, Commissione Internazionale dell'insegnamento matematico) was created in 1908, during the Fourth International Congress of Mathematicians, which took place in Rome from 6 to 11 April. The first to formulate a proposal for the institution of an organisation of this type was David Eugene Smith, a professor at Teachers College in New York who was profoundly interested in education and in the history of mathematics. The first president was Felix Klein, eminent mathematician and promoter of significant reforms in the teaching of mathematics in Germany. Klein was an unflinching and enthusiastic promoter of the commission during its early period.

The initial goal of the commission was to “promote an inquiry and publish a general report on current trends in mathematics teaching in the various countries”. From that time, the Commission, which since 1954 has been known as the “International Commission on Mathematical Instruction” (ICMI), went through successive periods of more or less intense activity (connected with the dramatic events of the first half of the twentieth century). At the end of the 1960s, it experienced a veritable renaissance based on new aims and work methodologies. In the last quarter of the century its activities and the lines of research broadened and diversified, to the point of creating a new discipline, research in the teaching of mathematics.

To celebrate the Centennial of the founding of ICMI, an international symposium, entitled “The First Century of the International Commission on Mathematical Instruction: Reflecting and Shaping the World of Mathematics Education”, was held in Rome, from 5 to 8 March 2008 (<http://www.unige.ch/math/EnsMath/Rome2008/>). The International Programme Committee (IPC) was composed of sixteen members, with Ferdinando Arzarello as its president, while Marta Menghini represented the Organising Committee within the IPC. Palazzo Corsini, home of the Accademia Nazionale dei Lincei, and Palazzo Mattei di Paganica, home of the Enciclopedia Italiana, were the splendid venues for the symposium.

Taking as a point of departure the themes connected to ICMI activities over the course of its one-hundred year history (reforms in the teaching of the sciences, teacher training, relationship between mathematicians and researchers in teaching, etc.), the symposium sought to identify the future directions of research in didactics and possible initiatives for improving the level of mathematical culture in the various countries.

The symposium was subdivided into ten plenary talks, eight talks in parallel, five working groups, and an afternoon reserved for Italian teachers, with lectures by scholars from Italy and abroad. The talks on the “Italian afternoon” were broadcast via videoconference to fifty schools throughout Italy.

The talks dealt with a wide variety of topics: the origins of ICMI and the roles played by Klein and by Smith; ICMI's renaissance at the end of the 1960s and the emergence of a new field of research; the dialectic between rigour and intuition in the teaching of mathematics; the relationship between pure and applied mathematics and the emphasis that should be given to modelling in the teaching and learning of mathematics; the interactions between research and practice; the relationship between centres and peripheries in the world; teacher training; the connections between mathematics and

teaching of mathematics; and the relationship of mathematics education to technology, society, and the other disciplines.

Some 200 participants from 43 countries the world over took part in the congress. The symposium ended with an excursion which, like a hundred years ago, took participants to visit Villa d'Este at Tivoli and Villa Adriana, both rich in historical memories.

On the occasion of the congress a website dedicated to the history of ICMI was created under the direction of Fulvia Furinghetti and Livia Giacardi (<http://www.icmihistory.unito.it/>). It portrays the most significant events and key figures through documents, images and interviews. The site is divided into six sections: Timeline; Portrait Gallery; Documents; The Affiliated Study Groups; The International Congresses on Mathematical Education; Interviews and Film Clips. The Timeline section marks the most important moments in the history of ICMI, and each fact is documented with references to the original sources. The Portrait Gallery provides the list of members of the various executive committees with biographic cameos, in order to emphasize their roles within ICMI, their contributions to the study of problems inherent to mathematics teaching, and those of their publications that are concerned with this subject.

The symposium proceedings will be published by the *Enciclopedia Italiana*, in the book series *Scienze e Filosofia* (contents and order form available at <http://www.unige.ch/math/EnsMath/Rome2008/AnnProc08.pdf>). The talks of the Italian afternoon have appeared in the journal *Progetto Alice*.

## LE CENTENAIRE DE LA COMMISSION INTERNATIONALE DE L'ENSEIGNEMENT MATHÉMATIQUE

SYMPOSIUM À ROME: 5–8 MARS 2008

La Commission Internationale de l'Enseignement Mathématique (International Commission on the Teaching of Mathematics, Internationale mathematische Unterrichtskommission, Commissione Internazionale dell'insegnamento matematico) fut créée lors du 4<sup>e</sup> Congrès International des Mathématiciens qui eut lieu à Rome du 6 au 11 avril 1908. Toutefois la proposition de fonder un organisme international de ce type avait déjà été formulée par David Eugene Smith, professeur au Teachers College de New York, qui nourrissait un fort intérêt pour l'éducation et l'histoire des mathématiques. Felix Klein, éminent mathématicien et promoteur d'une importante réforme de l'enseignement des mathématiques en Allemagne, en fut le premier président.

L'objectif initial de la commission était de "faire une enquête et publier un rapport général sur les tendances actuelles de l'enseignement mathématique dans les divers pays". Dès lors, la Commission, appelée depuis 1954 International Commission on Mathematical Instruction (ICMI), a traversé des périodes de stagnation (liées aux événements dramatiques de la première moitié du XX<sup>e</sup> siècle), puis de reprise, pour arriver à la fin des années Soixante à une véritable renaissance sur la base de nouvelles finalités et méthodologies de travail. Pendant le dernier quart de siècle, ses activités et les courants de recherche se sont élargis et diversifiés et ont contribué à la naissance d'une nouvelle discipline, la "recherche en didactique des mathématiques".

Pour célébrer le Centenaire de la fondation de la CIEM, un colloque international intitulé *The First Century of the International Commission on Mathematical Instruction: Reflecting and Shaping the World of Mathematics Education* (<http://www.unige.ch/math/EnsMath/Rome2008/>) s'est tenu à Rome du 5 au 8 mars dernier. Le Comité scientifique international (CSI), composé de 16 membres, était présidé par Ferdinando Arzarello; et Marta Menghini représentait le Comité d'organisation au sein du CSI. Le Palais Corsini, siège de l'Académie Nationale des Lincei, et le Palais Mattei di Paganica, siège de l'Institut de l'Encyclopédie Italienne, ont constitué le merveilleux décor des travaux.

A partir d'une analyse des principaux thèmes liés à l'activité de la CIEM tout au long de ses cent ans d'histoire (réformes dans l'enseignement des sciences, formation des enseignants, rapports entre mathématiciens et chercheurs en didactique, etc.), le colloque a tenté d'identifier les futures directions de recherche en didactique et les initiatives que l'on souhaiterait prendre pour améliorer le niveau de la culture mathématique dans les différents pays.

Les travaux ont été organisés en 10 conférences plénières, 8 conférences parallèles, 5 groupes de travail et un après-midi réservé aux enseignants italiens, avec des interventions de spécialistes italiens et étrangers. Les conférences de cet après-midi ont été transmises en visioconférence dans 50 écoles à travers toute l'Italie.

Divers thèmes ont été abordés lors des interventions: les origines de la CIEM et le rôle joué par Klein et par Smith, sa renaissance à la fin des années soixante et l'émergence d'un nouveau domaine de recherche; la dialectique entre rigueur et intuition dans l'enseignement des mathématiques; les rapports entre mathématiques pures et appliquées et l'importance à attribuer à la modélisation dans l'enseignement et dans l'apprentissage de cette discipline; les interactions entre la recherche et la pratique; la relation entre centres et périphéries dans le monde; les rapports entre mathématiques et didactique des mathématiques, la formation des enseignants, les rapports de l'éducation mathématique avec la technologie, la société et les autres disciplines.

Quelque 200 participants provenant de 43 pays et représentant toutes les régions du monde ont contribué à ce colloque. Tout comme il y a cent ans, les travaux se sont achevés par une excursion qui a conduit les congressistes à Tivoli pour la visite de la Villa d'Este et de la Villa Adriana, lieux riches en souvenirs historiques.

Le congrès a donné lieu à la création d'un site sur l'histoire de la CIEM, réalisé par Fulvia Furinghetti et Livia Giacardi (<http://www.icmihistory.unito.it/>), qui permet d'évoquer les événements les plus significatifs et les personnages-clés de la commission à travers des documents, des photos et des interviews. Le site est composé de six sections: Timeline; Portrait Gallery; Documents; The Affiliated Study Groups; The International Congresses on Mathematical Education; Interviews and Film Clips. La section Timeline présente les moments les plus importants de l'histoire de la CIEM et chaque événement est documenté et accompagné de références aux sources originales. La section Portrait Gallery propose, quant à elle, la liste des membres des différents comités exécutifs, avec un aperçu biographique qui présente le rôle de chacun au sein de la CIEM, leurs contributions à l'étude des problèmes liés à l'enseignement des mathématiques et leurs publications sur ce thème.

Les Actes du colloque seront publiés par l'*Enciclopedia Italiana* dans la collection *Scienze e Filosofia* (table et bulletin de commande disponibles à l'adresse <http://www.unige.ch/math/EnsMath/Rome2008/AnnProc08.pdf>). Les conférences de l'après-midi italien sont parues dans la revue *Progetto Alice*.

ZUM HUNDERTJÄHRIGEN JUBILÄUM DER INTERNATIONALEN  
MATHEMATISCHEN UNTERRICHTSKOMMISSION

SYMPOSIUM IN ROM: 5–8. MÄRZ 2008

Die internationale mathematische Unterrichtskommission (Commission Internationale de l'Enseignement Mathématique, International Commission on the Teaching of Mathematics, Commissione Internazionale dell'insegnamento matematico) wurde während des 4. internationalen Mathematikerkongresses, welcher vom 6. bis 11. April 1908 in Rom stattfand, gegründet. Der Vorschlag, eine solche internationale Organisation zu gründen, wurde bereits früher von David Eugene Smith formuliert, Professor am Teachers College von New York mit großem Interesse für die Mathematikausbildung und ihre Geschichte. Der erste Präsident der Kommission war Felix Klein, der hervorragende Mathematiker, welcher auch Initiator einer wichtigen Reform des Mathematikunterrichts in Deutschland war. Klein war ein unermüdlicher und enthusiastischer Förderer der Kommission während ihrer Entstehungsperiode.

Die Anfangszielsetzung der Kommission war, "die derzeitigen Tendenzen des mathematischen Unterrichts in den verschiedenen Ländern zu untersuchen und einen Gesamtbericht darüber zu veröffentlichen". Danach hatte die Kommission diverse Perioden der Stagnation und der Wiederbelebung erfahren, dies insbesondere im Zusammenhang mit den dramatischen Ereignissen der ersten Hälfte des 20. Jahrhunderts. Seit 1954 ist die Kommission als International Commission on Mathematical Instruction (ICMI) bekannt, und sie erlebte seit Ende der Sechzigerjahre eine neue Erstarkung, diese aufgrund von neuen Aufgaben und Methodologien. Im letzten Vierteljahrhundert haben sich ihre Aktivitäten und Forschungen erweitert und diversifiziert, und sie haben zur Entstehung einer neuen Disziplin, der "Forschung in Didaktik der Mathematik", geführt.

Die Hundertjahrfeier der Gründung der ICMI war eine günstige Gelegenheit, ein internationales Symposium mit dem Titel *The First Century of the International Commission on Mathematical Instruction: Reflecting and Shaping the World of Mathematics Education* (<http://www.unige.ch/math/EnsMath/Rome2008/>) in Rom vom 5. bis 8. März zu veranstalten. Das aus 16 Mitgliedern bestehende internationale wissenschaftliche Komitee (IWK) wurde von Ferdinando Arzarello geleitet; Marta Menghini vertrat das Organisationskomitee innerhalb des IWK. Der Palazzo Corsini, Sitz der nationalen Akademie der Lincei, und der Palazzo Mattei di Paganica, Sitz des Instituts der italienischen Enzyklopädie, haben den wunderschönen Dekor des Kongresses gebildet.

Ausgehend von einer Analyse der Hauptaktivität der ICMI während ihrer hundertjährigen Geschichte (Reformen im wissenschaftlichen Unterricht, Ausbildung der Lehrer, Beziehungen zwischen Mathematikern und Forschern in Didaktik, usw.), hat das Kolloquium versucht, die künftigen Richtungen für Forschung in Didaktik und wünschenswerte Initiativen herauszuarbeiten, um das Niveau der mathematischen Kultur in den verschiedenen Ländern zu erhöhen.

Das Symposium wurde in 10 Plenarsitzungen und 8 parallelen Sitzungen gegliedert, mit 5 Arbeitsgruppen und einem Nachmittag mit Vorträgen italienischer und ausländischer Spezialisten, welcher für die italienischen Lehrer reserviert war. Die Vorträge dieses Nachmittags wurden durch eine Videokonferenz in 50 Schulen in ganz Italien übertragen.

Bei den Vorträgen wurde eine Vielfalt von Themen zur Sprache gebracht: die Ursprünge der ICMI und die Rolle, die Klein und Smith gespielt haben, ihr Wiederaufleben Ende der Sechzigerjahre und das Herausbilden eines neuen Forschungsgebiets, die Dialektik zwischen Strenge und Intuition im Mathematikunterricht, die Verknüpfungen zwischen reiner und angewandter Mathematik, das wissenschaftliche Modellieren im mathematischen Unterricht, die Wechselwirkungen zwischen Forschung und Praxis, die Beziehungen zwischen zentralen und peripheren Teilen der Welt, die Beziehungen zwischen Mathematik und Didaktik der Mathematik, die Ausbildung der Lehrer, die Beziehungen der mathematischen Erziehung mit der Technik, mit der Gesellschaft und mit den anderen Disziplinen.

Ungefähr 200 Teilnehmer aus 43 Ländern, aus allen Regionen der Welt, nahmen an diesem Kolloquium teil. Genauso wie vor hundert Jahren endeten die Arbeiten mit einem Ausflug, der die Kongreßteilnehmer nach Tivoli in die historisch wichtigen Orte Villa d'Este und Villa Adriana führte.

Anlässlich des Kongresses wurde eine Webseite über die Geschichte der ICMI von Fulvia Furinghetti und Livia Giacardi geschaffen (<http://www.icmihistory.unito.it/>). Diese Webseite gibt Einblick in die wichtigsten Ereignisse und Persönlichkeiten durch Dokumente, Fotos und Interviews. Sie besteht aus sechs Sektionen: Timeline; Portrait Gallery; Documents; The Affiliated Study Groups; The International Congresses on Mathematical Education; Interviews and Film Clips. Die Sektion Timeline stellt die wichtigsten Zeitpunkte der Geschichte der ICMI vor, und jedes Ereignis wird mit Hinweisen auf die Originalquellen dokumentiert. Die Sektion Portrait Gallery gibt die Liste der Mitglieder der verschiedenen Exekutivkomitees mit Kurzbiographien. Diese erklären die Rolle jedes Mitglieds innerhalb der ICMI, ihre Beiträge zur Studie des mathematischen Unterrichts und ihre Publikationen zu diesem Thema.

Die Abhandlungen des Kolloquiums wird die *Enciclopedia Italiana* in der Sammlung *Scienze e Filosofia* veröffentlichen. (Inhaltsverzeichnis und Bestellformular sind an <http://www.unige.ch/math/EnsMath/Rome2008/AnnProc08.pdf> erhältlich.) Die Vorträge des "italienischen Nachmittags" sind in der Zeitschrift *Progetto Alice* erschienen.

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