

**REPORT OF THE ELEVENTH MEETING OF
THE COMMITTEE ON
ELECTRONIC INFORMATION AND COMMUNICATION (CEIC)
OF THE INTERNATIONAL MATHEMATICAL UNION
HELD AT AMS HEADQUARTERS
PROVIDENCE, RHODE ISLAND NOVEMBER 02–04, 2007**

The Eleventh meeting of the CEIC took place at the headquarters of the American Mathematical Society, Providence, Rhode Island from Friday, November 2 to noon Sunday, November 4.

The Committee takes this opportunity to thank the AMS for its helpful and efficient arrangements and its fine hospitality.

Membership and Participation. All seven members: Jonathan Borwein (chair), John Ball, Michael Doob, David Eisenbud, John Ewing, Ulf Rehmann, and Alf van der Poorten attended the meeting.

1. FUTURE OF THE CEIC

The Committee carefully analyzed its history and identified its appropriate role in the next several years.

Past highlights clearly include the CEIC’s promulgation of Best Practices statements including “**Best Current Practices**”, the Copyright Recommendations “**What do you want from your Publisher**”, the “**Digital Mathematics Library: A Vision for the Future**”, and “**Some Best Practices for Retro-Digitization**”.

Specifically, the Committee recognised that the changing role of the CEIC warranted further revision of its mandate. Accordingly the CEIC recommends that the Executive Committee (EC) of the IMU review the recent activities of its Committee on Electronic Information and Communication (CEIC) and endorse the following terms of reference at its 77th session scheduled to take place on April 20–21, 2008, in Budapest.

RECOMMENDED CEIC REVISED MANDATE FOR 2008-2010

The CEIC is a standing committee of the Executive Committee of the IMU, reviewed every four years by the EC at its meeting preceding that of the GA. Members are appointed in even-numbered years for staggered four year terms, normally commencing on January first of the following year, using criteria similar to those for IMU Commissions. The mandate of the CEIC is to advise the EC on matters concerning electronic information and communication. The CEIC’s duties include:

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- Reporting regularly to the EC, advising it on electronic aspects of IMU operations, including financial implications, and keeping it informed of new developments.
- Reviewing the development of electronic information, communication, publication, and archiving so as to keep the international mathematical community abreast of current and emerging issues.
- Suggesting international standards ('best practice recommendations') on issues related to publication and electronic communication including use of software and data repositories. Such recommendations, if endorsed by the EC, may be published and promoted in the name of the IMU.
- Fostering the growth of electronic infrastructure within the mathematical community and where appropriate the development of tools for this purpose (such as the Federated World Directory of Mathematicians).
- Promoting development of the Digital Mathematics Library—through activity on retro-digitization, on registries of digitized material and like matters.

2. NEW MEMBERS

The Committee briefly discussed criteria that should be applied in placing a slate of possible new members of the CEIC before the EC and resolved that possible names of possible candidates (each accompanied by a brief cv highlighting relevant achievements) be supplied to the Chair of the Committee by the end of November with the intention that recommendations be made to the EC by mid-December.

3. NEXT MEETING

The Committee resolved that its next meeting take place in Budapest April 21–23 coinciding with and immediately following the meeting of the EC.

4. DIGITAL COLLECTION OF ICM PROCEEDINGS

At its 2006 meeting in Berlin the CEIC had drawn attention to the 'scandal' of past ICM Proceedings having ill-defined or inappropriate ownership and proposed a project to digitize and make available all past International Congress of Mathematicians proceedings. The matter of digitization and acquisition of the necessary permissions has been taken up by UR aided significantly by past work done at the University of Michigan and forming part of its [Historical Math Collection](#) (this incorporates the Proceedings 1897–1924); in this context the name of R. Keith Dennis warrants positive mention. The consolidated collection of digitized ICM Proceedings will become available on the web, both for search and mirroring, in the near future.

At the present meeting the CEIC prepared a draft paragraph introducing the IMU Proceedings on the Web which inter alia will have the IMU formally acknowledge its gratitude to the various copyright owners for allowing the IMU to provide a consolidated collection of ICM Proceedings as well as admitting to some residual copyright related issues. On that last matter the introduction will report:

The editorial committee has made efforts to obtain the relevant rights of distribution of the proceedings. However, for several of the congresses it appears that copyright is held by the individual authors and it is not practicable to contact all of them. We presume that those authors will welcome their participation in and

contribution to the present project. Should this not be the case, the copyright holder should contact the IMU Secretary to have such material removed. To obtain assistance in mirroring this site contact

The Committee also turned to the matter of protecting rights to future Proceedings and the like with a number of detailed recommendations to the EC amending the guidelines provided to the Organizing Committee (OC) of the International Congress:

DISSEMINATION AND PUBLICATION OF ICM CONTRIBUTIONS

4.1. The OC is responsible for the collection of contributions and production of the proceedings of the Congress. All arrangements must be approved by the EC, and the PC can make recommendations about this part of the Congress.

4.2. The IMU must have a non-exclusive, irrevocable, and perpetual license to distribute the proceedings in print and electronic form, by all present and future means, possibly with a delay of up to two years following the Congress. The OC arranges for the initial publication of the Congress proceedings. The OC should obtain a suitable transfer of rights from all contributors whose work appears in the proceedings, as well as electronic files for each contribution. The OC is responsible for providing precise guidelines as to how abstracts and papers should be submitted. Abstracts of all plenary and sectional lectures should be made available at the Congress in printed form. The OC is requested to also provide an abstract booklet of the contributed presentations.

4.3. The following are recommended arrangements:

- (i) If possible, the invited plenary and sectional lectures should be published before the Congress in printed and electronic form.
- (ii) It has become customary to print a daily ICM newsletter that informs the Congress participants of highlights of the day, special activities, and program changes. The OC is asked to consider the dissemination of such information.

Advice (November 22, 2007) from the IMU Secretary confirms that “this proposal has been accepted by the EC and is, thus, the EC’s new policy in this respect.”

The Committee also noted that ICMI/ICME is certain to be faced with related difficulties; the matter of the CEIC offering assistance will in the first instance be taken up by UR.

This context provides a general reminder that, when at all relevant, the CEIC might make a point in future of explicitly writing to the Executive Committee of ICMI to advise it of warnings and advice incidentally given by the CEIC to the EC of the IMU.

5. OTHER DIGITIZATION MATTERS

5.1. **Registries.** Valuable listings of digitized mathematics include the registry [Retrodigitized Mathematics Journals and Monographs](#) maintained by UR and containing links to 2445 digitized books (comprising well over half a million pages) and to 226 digitized journals/seminars (comprising more than four hundred thousand pages) and the [AMS Digital Mathematics Registry](#) listing 1382 journals/seminars. Both the generality of the coverage and, regrettably, that a sizable majority of digitized journals is not freely available (even with moving wall) warrants comment.

5.2. **CMS/SMC.** Acting on behalf of the Canadian Mathematical Society, MD has led a pilot project testing the possibility of a moderately sized organisation retro-digitising its research journals (rather than, for example, giving such projects over entirely to a major player such as Google). MD reports that on his experience such projects are technically and financially feasible for smaller organisations.

6. IMU ARCHIVE

The Committee recalled that the context of the EC's request to the CEIC to comment on archiving matters is the lack of certainty that the University of Helsinki can sustain its present contribution to the IMU's archiving arrangements and the certainty that it cannot deal with the IMU's desire also to archive its electronic records.

In the course of an extended discussion the Committee noted that the present material in the Helsinki archive should if at all practicable stay in Helsinki at least/say until 2010 and resolved as follows:

In order to help the IMU archivist and the IMU Secretary deal with the complex issues of archiving, the CEIC recommends that the EC establish a small committee to advise it on archiving, and to drive the process forward. This committee could consist of

- The IMU Secretary as chair
- The IMU archivist
- A member from the EC
- A member of CEIC

The CEIC expressed the view that it is probable that the proposed committee would need to have an initial physical meeting, perhaps in Helsinki.

7. OTHER MATTERS

7.1. **Impact.** JE commented briefly on the present progress of the joint Committee on Quantitative Assessment of Research of ICIAM, the IMS, and the IMU, established on the initiative of the EC of the IMU following advice from the CEIC (see the [IMU on the Web](#) report).

7.2. **SCOAP.** The CEIC noted a reference, provided it by the IMU President, to the High-Energy Physics notion **SCOAP** wherein the HEP community canvasses the vision that it finance OA (in effect of the author-pay variety) by paying the relevant imposts to the publishers of the small group of HEP journals in advance, somehow financed by interested governments, relevant agencies, and appropriate library consortia.

7.3. **Topology and K-Theory.** The Committee reflected briefly on several recent effective transfers of publisher of journals; for some details of the specific cases see the respective remarks and references at IMU on the Web [#18](#) and [#22](#), the [very first](#) IMU on the Web item, and the associated Best Practices [addendum](#).

7.4. **The Federated World Directory of Mathematicians (FWDM) and Electronic World Directory of Mathematicians (EWDm).** The Committee recalled that with the World Directory of Mathematicians now replaced by the **FWDM** providing federated (simultaneous) search of membership directories of Mathematical Societies and of Google and Google Scholar entries (for background

see IMU on the Web [#7](#) and [#15](#)), the EWDM gives opportunity for mathematicians to be identified by the FWDM even when they are not member of some mathematical society with a suitable web presence.

However, the EWDM has barely one and a half thousand registrants. Accordingly the Committee asks (i) the EC to consider explicitly asking adhering organisations to recommend that mathematicians choose to add their names to the EWDM; and proposes (ii) to directly contact societies whose members are not accessible by the FWDM with a request to include mention of the EWDM in their bulletin/newsletter to members.

In this context the CEIC noted that any advertising of the EWDM should of course also mention the independent merit of receiving IMU-Net. The Committee also remarks that the EWDM need monitoring/moderation inter alia to remove entries that have multiplicity greater than one. Much the same may apply to the IMU-Net mailing list in that anecdotal evidence suggests that some (former) recipients may have become orphaned.

7.5. Scams. Members of the Committee remarked on the pernicious use of e-mail to spam mathematicians with news of dubious conferences and questionable journals (the matter was promptly taken up in IMU on the Web; see [#23](#) for details).

7.6. IMU on the Web. Members of the Committee reiterated the propositions that contributions should be solicited and that members of the CEIC be expected each to make an annual contribution. More helpfully, it was proposed that IMU on the Web transform itself to a blog (inter alia facilitating readers adding comments and changing IMU on the Web from a bi-monthly event to a continuous burden on its maintainer).