

CEIC Quadrennial Report: 2010-14

Members and terms

Thierry Bouche, UFR de Mathématiques, Institut Fourier, Université de Grenoble I, Grenoble, France (2011-2014)
Olga Caprotti, Department of Computer Science and Engineering, Chalmers and University of Gothenburg, Sweden, subsequently University of Helsinki, Finland (2008-2016)
Tim Cole, Grainger Engineering Library Information Center, University of Illinois at Urbana-Champaign, USA (2013-2016)
James Davenport, Departments of Computer Science and Mathematical Sciences, University of Bath, UK (2008-2016)
Carol Hutchins, Courant Institute Library, New York University, USA (2008-2016)
László Lovász, Department of Computer Science, Eötvös Loránd University, Budapest, Hungary (2011-2014)
Peter Olver, School of Mathematics, University of Minnesota, Minneapolis, USA (Chair) (2008-2014)
Ravi Vakil, Department of Mathematics, Stanford University, USA (2011-2014)

Retirements: The following members of CEIC left at the end of 2010: John Ball, Michael Doob, Ulf Rehmann.

Meetings

New York on May 6-8, 2011
Berlin, July 19-20, 2012
Bath, UK, June 15-16, 2013
Berlin, July 12-13, 2014

Minutes can be found on the CEIC web page: <http://www.mathunion.org/ceic>.

Terms of References

Following input from CEIC at the Bath meeting, the EC in March 2014 approved new terms of reference for the committee, to be adopted by the GA at ICM 2014.

- (a) Reporting regularly to the EC, advising it on aspects of IMU operations related to information and communication, including financial implications, and keeping it informed of new developments.
- (b) Reviewing the development of electronic information, communication, publication, and archiving so as to keep the EC abreast of current and emerging issues. Publicising relevant developments to the wider community via IMU on the Web and other methods.
- (c) Advising the EC about potential opportunities to endorse standards ('best practice recommendations') on issues related to publication and communication, including such matters as the use of software and data repositories.
- (d) Advising the EC about potential opportunities to foster the growth of electronic infrastructure, and selectively creating tools for this purpose.

CEIC Email List

For discussions among committee members and email from IMU and elsewhere, it was decided to establish a moderated e-mail distribution list: ceic14@mathunion.org. The recipients of the list are the members of CEIC, along with the IMU technician. People who can post to the list without requiring explicit approval are members of the IMU EC, the IMU staff, and three former CEIC members: Ulf Rehmann, John Ball, and Michael Doob. Messages from others to the list need the approval of the CEIC Chair. The list became operational on February 21, 2011.

CEIC web site

On January 13, 2012, the temporary CEIC web pages hosted by Peter Olver were ported to the IMU Berlin web site. The permanent CEIC web pages on the IMU Berlin web site were made active on January 28, 2013, and are at <http://www.mathunion.org/ceic>

It was decided at the 2011 meeting that, because they were no longer relevant in the current form of the Internet, CEIC will no longer support the Federated World Directory of Mathematicians (FWDM) and the Electronic World Directory of Mathematicians (EWDM). Thus, links to these do not appear on the new CEIC web pages, although a link to FWDM does still appear on the main IMU web page, as well as the historical CEIC pages.

Archiving

The IMU Archiving Guidelines based on the CEIC recommendations were endorsed by the IMU EC at its meeting in Berlin on March 11/12, 2013. They will be presented to the 17th IMU General Assembly in 2014.

The IMU web pages are now being archived on a weekly basis. However, the archiving process in Berlin is not yet capable of handling confidentiality requirements, e.g. the seventy-five year embargo on Fields Medal Committee deliberations. Some electronic archives, e.g. email correspondence of IMU Presidents, is permanently lost. The IMU document archives remain incompletely catalogued, and some papers are in bad physical condition. The CEIC is investigating what is missing in the IMU archives, both physical and electronic.

IMU-Net

IMU-Net is edited by Mireille Chaleyat-Maurel. Six regular issues are published on the IMU web site each year, along with special issues as necessary.

Wikipedia

The Wikipedia article on the IMU, at http://en.wikipedia.org/wiki/International_Mathematical_Union, was updated and improved by Lena Koch in 2012.

Best Current Practices for Journals

This document had been drafted at the February 2010 CEIC meeting by CEIC together with Douglas Arnold (University of Minnesota). It was approved (subject to minor changes) by the IMU Executive Committee, and is now available on the IMU website. It also appeared in the January 2011 issue of the Notices of the American Mathematical Society.

Journal blog

In 2011, the IMU and the International Council for Industrial and Applied Mathematics (ICIAM) established a Working Group to study the issue of Ranking of Mathematical Journals. As a result, the IMU and ICIAM approved a blog on mathematical journals to be hosted by the IMU. The first post, by Ingrid Daubechies, appeared on November 18, 2011, with the final post, also by Ingrid Daubechies, on October 25, 2012. The moderators were Doug Arnold (ICIAM), Carol Hutchins (IMU), Nalini Joshi (ICIAM), Peter Olver (IMU, Chair), Fabrice Planchon (IMU), Tao Tang (ICIAM, until January, 2012), and Ming-Chih Lai (ICIAM, after January, 2012).

World Heritage Digital Mathematics Library

In 2011, the CEIC applied for and was awarded a \$73,000 grant by the Sloan Foundation to support the symposium

The Future World Heritage Digital Mathematics Library: Plans and Prospects

that took place June 1-3 at the National Academy of Sciences (NAS) in Washington DC. The stated goal of the meeting was to "develop a viable plan of action to realize the long standing dream of a universally accessible library for the world's mathematics literature". The grant funds were administered by the Friends of the International Mathematical Union (FIMU). The organizing committee consisted of the members of CEIC along with R. Keith Dennis (Cornell University), Michael Doob (University of Manitoba), and Ulf Rehmann (University of Bielefeld). Attendance was by invitation, and there were total of 52 participants, with 11 keynote talks, 8 panel discussions, and several break out sessions. Details, including slides from talks, summaries of panels and break out sessions, position statements, and a final report, can be found on the workshop wiki:

http://ada00.math.uni-bielefeld.de/mediawiki-1.18.1/index.php/Main_Page

In addition, the NAS received a grant from Sloan to assemble a committee to write a report, entitled "Developing a 21st Century Global Library for Mathematics Research". The NAS committee was assembled and had three meetings in the year following the workshop. Ingrid Daubechies served as co-chair and Peter Olver as a member. The report was published in March, 2014, and is available at

http://www.nap.edu/catalog.php?record_id=18619

and also on the arXiv: <http://arxiv.org/abs/1404.1905>. In addition, a Panel to discuss the WDML is being organized by CEIC for ICM 2014.

Online education and MOOCs

Bill Barton from ICMI attended the Bath meeting of CEIC and presented a report written by himself, Ferdinando Arzarello, and John Toland on Massively Open Online Courses (MOOCs). The report discusses history, advantages, disadvantages, and the potential as transformative teaching tools. Following the discussion, the CEIC produced an "Executive Summary" containing recommendations for an extended version of the report. The current version of the report is posted:

http://www.mathunion.org/fileadmin/CEIC/Minutes/MOOCs_-_A_Preliminary_Report_for_CEIC_v2_001.pdf

In addition, a Panel discussion on MOOCs and online education is being organized by CEIC for ICM 2014.

ICSU and WDS

The IMU is a member of the International Council for Science (ICSU). In response to a request to the IMU from ICSU President John Ball, the CEIC prepared a short statement answering questions on open access to the scientific literature.

On June 28, 2012, CEIC officially joined the International Council for Science (ICSU)'s World Data System (WDS) as an Associate Member, based on the IMU representing mathematicians throughout the world, many of whom maintain their own data sets and/or conduct research on mathematical methods for analyzing large data sets. Olga Caprotti served as the Committee's representative to the 23rd International CODATA Conference "Open Data and Information for a Changing Planet" held in Taipei on 28-31 October, 2012, where she sent contributions to the ongoing preparation of the policy brief on open access and brought a poster on the activities of the IMU.

International Congresses

A Round Table on The Use of Metrics in Evaluating Research, organized by CEIC, was held at ICM 2010 in Hyderabad. An edited transcript has appeared in the ICM Proceedings.

Starting with ICM 2014 in Seoul, the CEIC composed a text to be signed by speakers at all recorded ICM lectures and events authorizing the taking of photos, videos, recordings, etc. and to publicly display such material, including reasonable modifications.

CEIC will be organizing three evening panel discussions at ICM 2014:

1. A Panel Discussion of MOOCs (Massive Open Online Courses) and new developments in online education, to be held in conjunction with the “How can we teach better” panel/round table to be organized by ICMI.
2. A Panel Discussion on the Future of Mathematical Publishing. This will include such topics as open access, publishing costs and ethics, the cost of knowledge boycott, new models of publishing, and so on.
3. A Panel Discussion on the the World Digital Mathematics Library, covering recent initiatives funded by the Sloan Foundation, including a workshop at the National Academy of Sciences in 2012, a Report issued by the National Research Council in March, 2014, and recent developments.