IMU-Net 60: July 2013
A Bimonthly Email Newsletter from the International Mathematical Union
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1. EDITORIAL

Traditional mathematical research publications developed over the centuries are in danger of being regarded as obsolete because of developments in Information Technology that have led to changes in human behaviour and expectations. Print can no longer compete with existing technology that offers search engines, data bases and online archives, and will be even more challenged by future developments, such as the integration of new technology in publication processes (animation, video streaming, colour graphics, nonlinear organization of research papers and books etc.) and secondary processing of research results (survey articles, encyclopaedias, blogs, comment files, cross-references etc.

However there is a danger that some recent proposals and initiatives on new forms of publication are superficially attractive but fail to replicate essential roles played by academic journals. Below is an (incomplete) list of these roles and a brief indication of how they are served or endangered by modern technology.

* Dissemination of Results and Discoveries.
For rapid dissemination to expert groups, traditional printed journals can no longer compete with email, the internet, ArXiV, etc. For dissemination to the wider community, their influence is curtailed by the extent to which researchers no longer browse current periodicals for information.

* Permanent Preservation of Knowledge.
The archiving of materials to make them easily accessible to posterity is an essential role for journals or their electronic counterpart.
However there are deep concerns about how this is to be secured. For example, changes in formats or technological advances can make archived materials unreadable and a prominent publisher, which holds a digital archive going bankrupt could jeopardise the long-term accessibility of archives. In spite of sophisticated IT many archivists across the sciences and humanities believe that paper is still the most reliable and longest lasting medium.

* Producing Paper Copies.
Many people prefer to read from paper, and libraries like to have paper copies. Demands from individuals for paper copies will probably fade, but perhaps not soon, and the need for paper archives will persist in libraries and elsewhere until an agreed technology for the creation and maintenance of permanent archives have been developed.

* Validation of Results.
Refereeing for electronic media publications should not be different than for electronic or printed publications, with or without a major publisher. However the IT age has led to a proliferation of published papers that means it is difficult for editors-in-chief to find referees willing to study papers in detail, especially when they contains lengthy computations or complicated case distinctions. If this persists, journals could cease to play this validation role.

* Quality Assurance and Related Issues.
The certification by journals of quality, which relies on the subjective judgement of referees and editors, is frequently used to validate the reputations of individuals or institutions. However objective judgements may be based on citation counts and impact factors using on modern technology rather than being based on the perceived reputation of the average paper in particular journals. In assigning priority for discoveries, journal submission and publication dates have been supplemented by ArXiV dates, online DOI publishing dates etc. in electronic media.

* Error Correction and Formatting.
Referees and copy editors have had a vital role in the avoidance of minor errors and misprints, and in the maintenance of generally high production values, in printed papers. However with the advent of TeX and LaTex , and the expectation that authors formatted their own manuscripts, standards of presentation and readability have deteriorated. This is unfortunate if papers are to be preserved for posterity.

There to be no answer to some of these concerns in the information age.

Ingrid Daubechies, President of IMU
László Lovász, past President of IMU
John Toland, Member at large of the Executive Committee of IMU

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2. ICM 2014

The next International Congress of Mathematicians will take place at COEX in Seoul, Korea, from Wednesday August 13, through Thursday August 21, 2014.
It is time to pre-register by following the simple instructions at the homepage:

http://www.icm2014.org/
You will then receive the ICM e-News. We strongly recommend that you visit the homepage regularly for updated information and ICM related activities.

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3. NANUM 2014

The Organizing Committee of ICM 2014 places special emphasis on supporting mathematicians from developing countries. This has motivated the theme of "Solidarity in Mathematics", and 1,000 mathematicians from developing countries will be invited to Korea during ICM 2014.
This travel assistance program is called "NANUM 2014". A selection policy integrating age, gender and geographical balance is being carefully crafted.

NANUM 2014 in detail
The financial support will be granted in three categories:
* 45% senior mathematicians
* 45% junior mathematicians
* 10% advanced graduate students
Here is the timeline of the application and selection procedure
* Jun. 10, 2013 - Aug. 31, 2013: Applications received
* Dec. 31, 2013: Review of Applications completed
* Jan. 2014: Notification of acceptance

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4. HEIDELBERG LAUREATE FORUM

38 Abel, Fields and Turing Laureates confirmed their attendance at the 1st Heidelberg Laureate Forum (HLF), which will take place from September 22 until 27, 2013.
The laureates will meet 200 of the most talented young researchers in the fields of mathematics and computer science from 47 countries.

The Forum was initiated by the Klaus Tschira Stiftung and the Heidelberg Institute for Theoretical Studies. It is organized in collaboration with the Association for Computing Machinery, the International Mathematical Union and the Norwegian Academy for Science and Letters.
www.heidelberg-laureate-forum.org

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5. CALL FOR NOMINATIONS FOR THE ABEL PRIZE 2014

Deadline: September 15, 2013
Nomination guidelines:
http://www.abelprize.no/c53676/artikkel/vis.html?tid=53705&strukt_tid=53676

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6. CALL FOR NOMINATIONS FOR THE OSTROWSKI PRIZE 2013

The aim of the Ostrowski Foundation is to promote the science of
mathematics by periodically awarding an international prize for recent
outstanding achievements in pure mathematics or the theoretical
foundations of numerical mathematics. The value of the prize for 2013 is
100,000 Swiss francs.
The prize has been awarded every two years since 1989.
The most recent winners are Ben Green and Terence Tao in 2005, Oded
Schramm in 2007, Sorin Popa in 2009, and Ib Madsen, David Preiss and
Kannan Soundararajan in 2011; see
http://www.ostrowski.ch/index_e.php?ifile=preis for the complete list.
The jury invites nominations for candidates for the 2013 Ostrowski Prize.
Nominations should include a c.v. of the candidate, a letter of nomination
and 3 letters of reference. The Chair of the jury for 2013 is Cameron
Stewart of the University of Waterloo. Nominations should be sent to
cstewart@uwaterloo.ca by September 15, 2013.

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7. CREATION OF THE NIMS/DNVA/PGS PROGRAM IN GHANA

This program is intended to foster mathematical development in Ghana and
sub-Saharan Africa. It will take place at the National Institute for
Mathematical Sciences (NIMS), a Ghanaian independent institute located at
the premises of the Kwame Nkrumah University of Science and Technology
(KNUST). The program is sponsored by the Norwegian Academy of Science and
Letters (DNVA) and Petroleum Geo-Services ASA (PGS).

The program will comprise (a) setting up a Center of Excellence in
Mathematics in Kumasi or Accra, Ghana; (b) offering advanced courses and
seminars both in core mathematics and in applied and industrial
mathematics; (c) administering a scholarship program for postgraduate
students enrolling in the courses referenced in section b) and leading to
the degree of Master of Science; (e) undertaking collaborative research
which fosters interaction with Ghanaian national industry;
(f) organizing and conducting research conferences (at least one per
year) in mathematics, with periodic emphasis on industrial and applied
mathematics; (g) developing and subsequently implementing a postgraduate
Degree Program in mathematical modelling and scientific computing.

IMU will be represented on the Steering Committee by Wandera Ogana.

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