

INTERNATIONAL CONGRESS OF MATHEMATICIANS ICM 2010

Hyderabad (India), August 19-27, 2010

<http://www.icm2010.org.in/>

<http://www.ams.org/notices/201004/rtx100400560p.pdf>

<http://www.mathunion.org/activities/icm/icm-2010-program-structure/>

<http://www.mathunion.org/activities/icm>

In Programme:

* IMU AWARDS 2010 CEREMONY

On August 19, between 9:30 and 12:30 Indian time, the Honourable President of India, will give away the IMU awards :

- the Fields Medals (recognizing outstanding mathematical achievement),
 - the Rolf Nevanlinna Prize (honoring distinguished achievements in mathematical aspects of information science),
 - the Carl Friedrich Gauss Prize (for outstanding mathematical contributions with significant impact outside of mathematics),
- and

- the new Chern Medal (awarded to an individual whose accomplishments warrant the highest level of recognition for outstanding achievements in the field of mathematics).

* ROUND TABLE "The use of metrics in evaluating research"

On 26 August will be a Round Table organized by CEIC and chaired by IMU President Lszlo Lovasz on "The use of metrics in evaluating research". It will be a follow-up meeting to the IMU/CIAM/IMS report on "Citation Statistics" (June 2008)

<http://www.mathunion.org/fileadmin/IMU/Report/CitationStatistics.pdf> which highlighted the dangers of uncritical use of impact factors, which play an increasing role in funding, promotions and library purchases. The Round Table will consider such questions as: Are impact factors and other such indices good measures of journal quality, and should they be used to evaluate research and individuals? What can be done about unethical practices like impact factor manipulation? Is there a role for metrics in evaluating research? Are there better alternatives?

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1. EDITORIAL

As the Hyderabad ICM approaches, I would like to draw your attention to two events to be held there.

The first, on Wednesday 25 August from 17.00-19.00, is a panel discussion meeting organized by the London Mathematical Society on Mechanisms for strengthening mathematics in developing countries. This meeting will highlight three such mechanisms, the Mentoring African Research in Mathematics project (MARM), the IMU Volunteer Lecturer Program, and the work of the International Centre for Theoretical Physics (ICTP) Trieste. The questions to be addressed include: What are the best mechanisms? What principles should underlie them? Are there effective ways in which different types of project can cooperate? How can individuals and institutions contribute to these efforts?

The second, on Thursday 26 August from 18.00-20.00 is a Round Table organized by CEIC and chaired by IMU President LA!szlA3 LovA!szon The use of metrics in evaluating research. It will be a follow-up meeting to the IMU/ICIAM/IMS report on Citation Statistics <http://www.mathunion.org/fileadmin/IMU/Report/CitationStatistics.pdf>, which highlighted the dangers of uncritical use of impact factors, which play an increasing role in funding, promotions and library purchases. The Round Table will consider such questions as: Are impact factors and other such indices good measures of journal quality, and should they be used to evaluate research and individuals? What can be done about unethical practices like impact factor manipulation? Is there a role for metrics in evaluating research? Are there better alternatives?

If you are attending the ICM I hope you will consider participating in these meetings, which concern matters of central importance to the international mathematical community.

John Ball

Chair, IMU Committee on Electronic Information and Communication (CEIC)

(N.n.: Prof. John Ball a fost Presedintele IMU intre 2002 si 2006)

2. IMU PRIZES AND MEDALS 2010

One of the "big events" in mathematics is the quadrennial ICM Opening Ceremony. In 2010 this takes place in Hyderabad, India, where, e.g., on August 19 between 9:30 and 12:30 Indian time, Shrimati Pratibha Patil, the Honourable President of India, will give away the IMU awards (a medal and a cheque for each of the prize winners). All recipients will attend the ceremony, their names remain secret until August 19.

IMU is grateful to the selection committees who have done a great job by selecting outstanding mathematicians for the Fields Medal (recognizing outstanding mathematical achievement), the Rolf Nevanlinna Prize (honoring distinguished achievements in mathematical aspects of information science), the Carl Friedrich Gauss Prize (for outstanding

mathematical contributions with significant impact outside of mathematics), and the new Chern Medal (awarded to an individual whose accomplishments warrant the highest level of recognition for outstanding achievements in the field of mathematics). For the Fields Medal and the Nevanlinna Prize the 40th birthday of a recipient must not have occurred before January 1, 2010

The Web page with detailed information about the Prizes has been updated and contains new photos of the medals as well as information about the physical properties of the medals (they are all made of gold) and the cash values of the awards. If you are interested check <http://www.mathunion.org/general/prizes> <http://www.mathunion.org/general/prizes/physical-medals-and-cash-awards/> and the links on these Web pages.

3. A CONTRIBUTION BY D.MUMFORD

David Mumford, President of IMU in the years 1995-1998, has sent the editor the following paper, written on the occasion of the ICM in 1998. With the ICM 2010 coming up, the editor believes his thoughts are of interest to the readers of IMU-Net. See <http://www.mathunion.org/fileadmin/IMU/Trends-in-Math-ICM98.pdf>

4. IMU ON THE WEB

"The Future Impact of Internet-Based Technologies on Academic" Abridged version of an address by Terence Tao given at a meeting of the American Academy of Arts and Sciences, on the occasion of his induction into the Academy, October 10, 2009.

[Editor's Note:

- Terence Tao is Professor of Mathematics at University of California, Los Angeles (UCLA). He is Fields medalist 2006. His blog is <http://terrytao.wordpress.com/>

- full version of the address at

<http://www.amacad.org/publications/bulletin/winter2010/ceremony.pdf>

and printed in Bulletin of the American Academy, v. 62(2) : 3-5 2010. Short version available at the author's blog.]

"It is a great honour, both to be inducted to the Academy and to address you all today. I must confess that while I have given over a hundred scientific talks, this is only my second speech; and the first one was when I was nine. So I please bear with me; I'll try not to sound like a nine-year-old.

I would like to talk about the impact of the internet, and all the unreasonably effective services it has spawned, from modern search engines to Wikipedia.

We know that the internet has revolutionised area after area: entertainment, journalism, politics will never be the same again. But those of us in academia like to feel protected in our ivory towers from the internet revolution, with our tenure, our expertise, and our academic traditions. After all, our classes can't be replaced by a Wikipedia entry, and our research can't be replaced by a search engine -not yet, anyway.

Nevertheless, I believe major change is already underway.

Consider teaching, for instance. There is a mathematical topic - Mobius transformations - which is taught in a thousand mathematics departments across the world, to perhaps thirty or fifty students at a time. I've done so myself many times.

But if you do a web search for Mobius transformations, you'll find a beautiful video on YouTube explaining this concept clearly, which has been viewed one million, six hundred thousand times - more people than can be reached by ten thousand mathematics classes.

On a smaller scale, hundreds of academics (including myself) have actively pushed their classes onto the internet, using such tools as blogs. I have had classes with perhaps thirty local students but up to a hundred online participants. Even after the physical class ends, the online class goes on, with new visitors stumbling onto the class via a search engine and continuing the conversation.

These tools can have unexpected uses; for instance, I posted a draft of this talk online a few weeks ago, and got a tremendous amount of valuable feedback in return.

Or consider research. This year, for instance, by ad hoc usage of existing tools such as blogs and wikis, the first \polymath projects were launched - massively collaborative mathematical research projects, completely open for any interested mathematician to drop in.

The very first such project solved a significant problem in combinatorics after almost six weeks of effort, with almost a thousand small but non-trivial contributions from dozens of participants. It was a novel, transparent, and lively way to initiate and then do mathematics. One participant even compared his anticipation to seeing the latest developments on a polymath project to the suspense one might feel while watching a TV or movie drama. (You had to be there, I guess.)

Academia has not experienced massive change - on the scale of the industrial revolution - since the invention of the printing press. With the advent of the internet - the modern day analogue of the printing press, among other things - could it be revolutionized once again?"

5. IMU BOOKLET

The International Mathematical Union has produced an information brochure with a survey of all current IMU activities. The printed version of this booklet will be distributed to all participants of the International Congress of Mathematicians 2010 in Hyderabad. The booklet can be downloaded from

http://www.mathunion.org/fileadmin/IMU/ICM2010/hyderabad_booklet.pdf

6. A NEW PRESIDENT FOR THE EUROPEAN MATHEMATICAL SOCIETY

The Council meeting of the European Mathematical Society, held in Sofia (Bulgaria) on July 10-11 2010, has elected Marta Sanz-SolA as new President of the Society for the years 2011-2014. Marta Sanz-SolA is Professor of Mathematics at the University of Barcelona. For more information: <http://www.euro-math-soc.eu/node/665>

7. PASSING AWAY OF PROFESSOR VLADIMIR ARNOLD

Professor Vladimir Arnold passed away on June 3, 2010. He was Vice President of IMU (1995-98) and member of the Executive Committee of IMU (1999-2002).

See:

http://www.gazeta.ru/science/2010/06/03_a_3379953.shtml

<http://images.math.cnrs.fr/Vladimir-Igorevich-Arnold-est-mort.html>

http://www.lemonde.fr/carnet/article/2010/06/03/le-mathematicien-russe-vladimir-arnold-est-mort_1367545_3382.html

<http://www.nytimes.com/2010/06/11/science/11arnold.html>

8. KYOTO PRIZE

The Inamori Foundation promoting academic and cultural development and international understanding, annually awards three Kyoto Prizes to those who have contributed significantly in the categories of Advanced Technology, Basic Sciences, and Arts and Philosophy.

The laureate for the 2010 Kyoto Prize in the category "Basic Sciences" is IMU President Laszlo Lovasz for "Outstanding Contributionsto Mathematical Sciences Based on Discrete Optimization Algorithms". More details can be found at: http://www.inamori-f.or.jp/e_kp_lau_thi.html

9. RAMANUJAN PRIZE CALL FOR NOMINATIONS

ICTP has created the Ramanujan Prize for young mathematicians from developing countries. The Prize is funded by the Niels Henrik Abel Memorial Fund.

The Prize is awarded annually to a researcher from a developing country less than 45 years of age on 31 December of the year of the award, who has conducted outstanding research in a developing country. Researchers working in any branch of the mathematical sciences are eligible. The Prize carries a \$15,000 cash award and travel and subsistence allowance to visit ICTP for a meeting where the Prize winner will be required to deliver a lecture. The Prize is usually awarded to one person, but may be shared equally among recipients who have contributed to the same body of work.

ICTP awards the prize through a selection committee of five eminent mathematicians appointed in conjunction with the International Mathematical Union (IMU). The deadline for receipt of nominations for the 2010 Prize is 30 September 2010.

Please send nominations to director@ictp.it describing the work of the nominee in adequate detail. Two supporting letters should also be arranged. For more information, see: <http://prizes.ictp.it/prizes/Ramanujan/>

10. SUBSCRIBING TO IMU-NET

There are two ways of subscribing to IMU-Net:

1. Click on <http://www.mathunion.org/IMU-Net> with a Web browser and go to the "Subscribe" button to subscribe to IMU-Net online.
2. Send an e-mail to imu-net-request@mathunion.org with the Subject-line: Subject: subscribe

In both cases you will get an e-mail to confirm your subscription so that misuse will be minimized. IMU will not use the list of IMU-Net addresses for any purpose other than sending IMU-Net, and will not make it available to others.

Previous issues can be seen at:

<http://www.mathunion.org/imu-net/archive/>

IMU-Net is the electronic newsletter of the International Mathematical Union.

More details about IMU-Net can be found at: <http://www.mathunion.org/IMU-Net/> You can find here, for instance, detailed information about subscribing to the IMU-Net mailing list and unsubscribing from it.