# Bulletins of the International Mathematical Union



# Bulletin of the IMU, No. 66 (2014)

### **Bulletin of the International Mathematical Union**

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# **IMU**

# BULLETIN OF THE

# INTERNATIONAL MATHEMATICAL UNION

No. 66

December 2014

# **Secretariat:**

International Mathematical Union Secretariat Markgrafenstr. 32 D-10117 Berlin, Germany

http://www.mathunion.org

## **List of Abbreviations**

**AO** Adhering Organization

**CDC** Commission for Developing Countries

**CDE** Commission on Development and Exchange

**CEIC** Committee on Electronic Information and Communication

**DCSG** Developing Countries Strategy Group

**EC** Executive Committee

**ICHM** International Commission on the History of Mathematics

**GA** General Assembly

ICM International Congress of Mathematicians

**ICM OC** ICM Opening Ceremony

**ICMI** International Commission on Mathematical Instruction

ICSU International Council for Science

**IMU** International Mathematical Union

**IUHPST** International Union for the History and Philosophy of Science and

Technology

Dear Members of the International Mathematical Union,

2014 was characterized by the 17th IMU General Assembly (GA) meeting in Gyeongju and the International Congress of Mathematicians in Seoul, Republic of Korea.

The delegates of the General Assembly elected the members of the IMU Executive Committee (EC), the Commission for Developing Countries (CDC), and the IMU members of the International Commission on the History of Mathematics (ICHM) for the term 2015-2018.

The IMU budget proposed for 2015-2018 was approved by the GA, the delegates adopted a number of resolutions. Resolution 11, e.g., expressed the request to consider the possibility of adjusting the rules governing the IMU prizes and medals, Resolution 13 covered the request to study the feasibility of introducing a new category of IMU Regional Member.

The General Assembly endorsed the GA Guidelines, the ICM Bidding Guidelines, the Guidelines for Handling Conflicts of Interest, the Archiving Guidelines, and the IMU Membership Guidelines. The GA also endorsed the Recommendation on the evaluation of individual researchers in the mathematical sciences that was prepared by a committee set up by the IMU EC in order to explore the question of how to evaluate and rank the work of individual researchers in the mathematical sciences.

The General Assembly decided that Rio de Janeiro, Brazil, will be the location of ICM 2018, São Paulo will be the venue of the 18th General Assembly. The Congress will take place from August 1-9, 2018, the meeting of the GA will be held in São Paulo from July 29-30, 2018.

The IMU welcomed Papua New Guinea and Senegal as new Associate Members, Ecuador changed its status to full IMU member, several countries upgraded their groups of adherence.

One day before the opening of ICM 2014 the MENAO (*Mathematics in Emerging Nations: Achievements and Opportunities*) symposium took place. More than 250 participants from around the world attended the symposium. The event was a substantial initiative to raise awareness and build partnerships between mathematical communities, governments, international agencies, private business, and foundations.

At the opening ceremony of ICM 2014, four Fields Medals (given since 1936), the Rolf Nevanlinna Prize (given since 1986), the Carl Friedrich Gauss Prize (given since 2006), and the Chern Medal Award (given since 2010) were awarded. These prizes were presented by Park Geun-hye, the Honorable President of the Republic of Korea. ICM 2014 saw the first woman to win the Fields Medal. At the closing ceremony of the ICM, the Leelavati Prize, sponsored by Infosys, was awarded (given since 2010).

There was an IMU DonAuction taking place on the occasion of the Congress, which was organized to support young mathematicians and win mathematical objects.

Thanks to the invitation program *NANUM 2014* offered by the ICM 2014 organizing committee, travel grants were made available for 1,000 mathematicians from developing countries to participate in ICM 2014.

IMU continued its support programs *The Abel Visiting Scholar Program* and the *IMU-Simons Travel Fellowship Program*, funded by the Niels Henrik Abel Board and the Simons Foundation respectively. The donations received under these programs were used to support mathematicians from developing countries.

The second Heidelberg Laureate Forum (HLF) took place in September 2014 in the city of Heidelberg, Germany. The HLF brings together winners of the Abel Prize, the Fields Medal, the Nevanlinna Prize, and the Turing Award with outstanding young scientists from all over the world for a one week conference. The IMU who is a partner of the HLF is involved in the selection of young scientists attending the HLF. More than twenty Fields and Nevanlinna laureates participated in the HLF 2014.

One exciting news was that three mathematicians were elected members of the Executive Board of ICSU (International Council for Science) at ICSU's General Assembly in Auckland, New Zealand. Daya Reddy from South Africa, who was an invited speaker at ICM 2014, became the new President-elect of ICSU, former IMU President John Ball (2003-2006) and IMU EC member Manuel de León (2007-2014) were elected Ordinary Members of the ICSU Executive Board. Thus, mathematics plays an increasingly important role within ICSU to which IMU adheres as a scientific union, and whose guiding principle is *Strengthening international science for the benefit of society*.

With best wishes

Martin Grötschel IMU Secretary

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## 1. IMU leadership and membership information

### 1.1. Executive Committee 2011-2014

### INTERNATIONAL MATHEMATICAL UNION

#### **Executive Committee**

January 1, 2011 – December 31, 2014

**President:** Ingrid Daubechies (USA)

Vice-Presidents: Christiane Rousseau (Canada)

Marcelo Viana (Brazil)

**Secretary:** Martin Grötschel (Germany)

Members-at-Large: Manuel de León (Spain)

Yiming Long (China)

Cheryl E. Praeger (Australia)

Vasudevan Srinivas (India)

John F. Toland (United Kingdom)

Wendelin Werner (Switzerland)

Ex-officio Member (Past President)

László Lovász (Hungary)



### **Meetings of the Executive Committee in 2014:**

84th EC Meeting, Princeton, USA, March 8-9, 2014

85th EC Meeting, Gyeongju, Republic of Korea, August 9, 2014

### 1.2. IMU Leadership 2011-2014

### **IMU Executive Committee (EC) 2011 – 2014**

Ingrid Daubechies **IMU President USA** Martin Grötschel **IMU Secretary** Germany Christiane Rousseau IMU Vice President Canada Marcelo Viana IMU Vice President Brazil Manuel de León Spain IMU EC Member-at-Large Yiming Long IMU EC Member-at-Large China Cheryl E. Praeger IMU EC Member-at-Large Australia Vasudevan Srinivas India IMU EC Member-at-Large John F. Toland IMU EC Member-at-Large UK Wendelin Werner Switzerland IMU EC Member-at-Large

László Lovász IMU EC Ex-officio Member (Past President) Hungary

### Commission for Developing Countries (CDC) 2011 – 2014

José-Antonio de la Peña **CDC President** Mexico C. Herbert Clemens USA CDC Secretary Policy Srinivasan Kesavan **CDC Secretary Grants** India Carlos Cabrelli CDC, Latin American Member Argentina Wandera Ogana CDC, African Member Kenya Hoang Xuan Phu CDC, Asian Member Vietnam Ragni Piene CDC Member appointed by IMU EC Norway Polly W. Sy CDC Member appointed by IMU EC Philippines Angel Ruiz CDC Member appointed by ICMI EC Costa Rica Ingrid Daubechies CDC Ex-officio Member (IMU President) USA

### **International Commission on the History of Mathematics (ICHM) 2011 – 2014**

Jesper Lützen ICHM Denmark
Kim Plofker ICHM USA

### **International Commission on Mathematical Instruction (ICMI) 2010 – 2012**

(Three-year terms of service until 2012. Four-year terms of service according to changed election model starting in 2013.)

William (Bill) Barton ICMI President New Zealand Jaime Carvalho E Silva ICMI Secretary-General Portugal

Angel Ruiz	ICMI Vice President	Costa Rica
Mina Teicher	ICMI Vice President	Israel
Mariolina Bartolini Bussi	ICMI EC Member-at-Large	Italy
Sung Je Cho	ICMI EC Member-at-Large	Korea
Roger Howe	ICMI EC Member-at-Large	USA
Renuka Vithal	ICMI EC Member-at-Large	South Africa
Zhang Yingbo	ICMI EC Member-at-Large	China
Michèle Artigue	ICMI EC Ex-officio Member (Past President)	France
Ingrid Daubechies	ICMI EC Ex-officio Member (IMU President)	USA
Martin Grötschel	ICMI EC Ex-officio Member (IMU Secretary)	Germany

# **International Commission on Mathematical Instruction (ICMI) 2013 – 2016**

Ferdinando Arzarello Abraham Arcavi	ICMI President ICMI Secretary-General	Italy Israel
Cheryl E Praeger Angel Ruiz	ICMI Vice President ICMI Vice President	Australia Costa Rica
Catherine P. Vistro-Yu, Ed.D. Jean-Luc Dorier Roger Howe Yuriko Yamamoto Baldin Zahra Gooya	ICMI EC Member-at-Large	Philippines Switzerland USA Brazil Iran
William (Bill) Barton Ingrid Daubechies Martin Grötschel	ICMI EC Ex-officio Member (Past President) ICMI EC Ex-officio Member (IMU President) ICMI EC Ex-officio Member (IMU Secretary)	New Zealand USA Germany

# $Committee \ on \ Electronic \ Information \ and \ Communication \ (CEIC) \ 2008-2014 \ (CEIC \ terms \ of \ membership \ are \ staggered.)$

Peter Olver	CEIC Chair (chair as of 2011)	Jul 1, 2008 – Dec 31, 2014	USA
Thierry Bouche	CEIC Member	Jan 1, 2011 – Dec 31, 2014	France
Olga Caprotti	CEIC Member	Jul 1, 2008 – Dec 31, 2012	Finland
Tim Cole	CEIC Member	Jan 1, 2013 – Dec 31, 2016	USA
James Davenport	CEIC Member	Jul 1, 2008 – Dec 31, 2012	UK
Carol Hutchins	CEIC Member	Jul 1, 2008 – Dec 31, 2012	USA
László Lovász	CEIC Member	Jan 1, 2011 – Dec 31, 2014	Hungary
Ravi Vakil	<b>CEIC Member</b>	Jan 1, 2011 – Dec 31, 2014	USA

# Persons representing IMU in various organizations

Body	Representative/ liaison person	
COSPAR	T. Padmanabhan	2011-2014
Gruber Foundation Cosmology Prize	Gerhard Huisken	2012-2014
ICMI (IMU EC liaison person)	Cheryl Praeger	2010-2014
CEIC (IMU EC liaison person)	László Lovász	2011-2014
IMU-Net editor	Mireille Chaleyat-Maurel	2011-2014
IMU-Net EC correspondent	Christiane Rousseau	2011-2014
Ramanujan Prize	Vasudevan Srinivas	2011-2014
Curator of the IMU archive	Guillermo Curbera	2011-2014
UNESCO	Michèle Artigue	2011-2014
ICSU	Manuel de León	2010-2014
ICSU Regional office for Latin America and the Caribbean (ROLAC)	Marcelo Viana	2011-2014
ICSU Regional office for Asia and the Pacific (ROAP)	Yiming Long	2011-2014
ICSU Regional office for Africa (ROA)	Fanja Rakotondrajao	2011-2014

### 1.3. IMU Leadership elected for the term 2015-2018

### IMU Executive Committee (EC) 2015 – 2018

Shigefumi Mori IMU President Japan Helge Holden IMU Secretary Norway

Alicia Dickenstein IMU Vice President Argentina

Vaughan Jones IMU Vice President New Zealand/USA

Benedict H. Gross IMU EC Member-at-Large USA
Hyungju Park IMU EC Member-at-Large Korea
Christiane Rousseau IMU EC Member-at-Large Canada
Vasudevan Srinivas IMU EC Member-at-Large India
John Francis Toland IMU EC Member-at-Large UK

Wendelin Werner IMU EC Member-at-Large Switzerland

Ingrid Daubechies IMU EC Ex-officio Member (Past President) USA

### **Commission for Developing Countries (CDC) 2015 – 2018**

Wandera Ogana CDC President Kenya
C. Herbert Clemens CDC Secretary Policy USA
Srinivasan Kesavan CDC Secretary Grants India

Mama FoupouagnigniCDC, African MemberCameroonPolly SyCDC, Asian MemberPhilippinesAlf OnshuusCDC, Latin American MemberColombia

Budi Nurani Ruchjana CDC Member appointed by IMU EC Indonesia

Angel Pineda CDC Member appointed by IMU EC USA/Honduras

Angel Ruiz CDC Member appointed by ICMI EC Costa Rica

Shigefumi Mori CDC Ex-officio Member (IMU President) Japan

### International Commission on the History of Mathematics (ICHM) 2015 – 2018

Ciro Ciliberto ICHM Italy Shrikrishna G. Dani ICHM India

### **International Commission on Mathematical Instruction (ICMI) 2013 – 2016**

Ferdinando Arzarello ICMI President Italy
Abraham Arcavi ICMI Secretary-General Israel

Cheryl E Praeger ICMI Vice President Australia
Angel Ruiz ICMI Vice President Costa Rica

Catherine P. Vistro-Yu, Ed.D. ICMI EC Member-at-Large Philippines

Jean-Luc Dorier ICMI EC Member-at-Large Switzerland

Roger Howe	ICMI EC Member-at-Large	USA
Yuriko Yamamoto Baldin	ICMI EC Member-at-Large	Brazil
Zahra Gooya	ICMI EC Member-at-Large	Iran
William (Bill) Barton	ICMI EC Ex-officio Member (Past President)	New Zealand
Shigefumi Mori	ICMI EC Ex-officio Member (IMU President)	Japan
Helge Holden	ICMI EC Ex-officio Member (IMU Secretary)	Norway

# Committee on Electronic Information and Communication (CEIC) 2015 – 2018\*

James Davenport	CEIC Chair CEIC Member	$2015 - 2018 \\ 2008 - 2014$	UK
Thierry Bouche	CEIC Member	2011 - 2018	France
Olga Caprotti	CEIC Member	2008 - 2016	Sweden
Tim Cole	CEIC Member	2013 - 2016	USA
Carol Hutchins	CEIC Member	2008 - 2016	USA
Patrick Ion	CEIC Member	2015 - 2018	USA
Victoria Stodden	CEIC Member	2015 - 2018	USA
Masakazu Suzuki	CEIC Member	2015 - 2018	Japan
Ravi Vakil	CEIC Member	2011 - 2018	USA

<sup>\*</sup> CEIC terms of membership are staggered

## Committee for Women in Mathematics (CWM) 2015 – 2018

Marie-Françoise Roy	CWM Chair	France
Caroline Series	CWM Vice-Chair	UK
Carolina Araujo	CWM Member-at-Large	Brazil
Bill Barton	CWM Member-at-Large	New Zealand
Ari Laptev	CWM Member-at-Large	UK/Sweden
Kristin Lauter	CWM Member-at-Large	USA
Sunsook Noh	CWM Member-at-Large	Korea
Marie-Françoise Ouedraogo	CWM Member-at-Large	Burkina Faso
Sujatha Ramdorai	CWM Member-at-Large	Canada
Betül Tanbay	CWM Member-at-Large	Turkey

# Persons representing IMU in various organizations

Body	Representative/liaison	Term
COSPAR, International Scientific Union Representative	T. Padmanabhan	2014 - 2016
Gruber Foundation, Cosmology Prize, Selection Advisory Board	Frans Pretorius	2015 - 2017
ICSU	Christiane Rousseau	2015 - 2018
ICSU Regional office for Latin America and the Caribbean (ROLAC)	Marcelo Viana	2015 – 2018
ICSU Regional office for Asia and the Pacific (ROAP)	Hyungju Park	2015 - 2018
ICSU Regional office for Africa (ROA)	Olabisi O. Ugbebor	2015 - 2018
UNESCO	Christiane Rousseau	2015 - 2018
Ramanujan Prize	Vasudevan Srinivas	2015 - 2018
ICMI (IMU EC liaison)	Alicia Dickenstein	2015 - 2018
ICHM (IMU EC liaison)	Vasudevan Srinivas	2015 - 2018
CEIC (IMU EC liaison)	Ingrid Daubechies	2015 - 2018
CWM (IMU EC liaison)	John Francis Toland	2015 - 2018

# $66^{th}\,Bulletin$ of the International Mathematical Union

IMU-Net editor	Mireille Chaleyat-Maurel	2015 - 2015
IMU-Net EC correspondent	Benedict H. Gross	2015 - 2018
Curator of the IMU archive	Guillermo Curbera	2015 - 2018

### 1.4. Members of the Union

The following countries were members of IMU through December 2014:

The following	countries were membe	is of fivio unlough Dece	111061 2014.
Group I	Algeria	Armenia	Bosnia & Herzegovina
_	Bulgaria	Cameroon	Colombia
	Croatia	Cuba	Ecuador
	Estonia	Georgia	Greece
	Hong Kong	Iceland	Indonesia
	Ivory Coast	Kazakhstan	Latvia
	Lithuania	Montenegro	New Zealand
	Nigeria	Pakistan	Peru
	Philippines	Romania	Saudi Arabia
	Serbia	Singapore	Slovenia
	Tunisia	Turkey	Uruguay
	Venezuela	Vietnam	
Group II	Austria	Chile	Denmark
1	Egypt	Ireland	Portugal
	Slovakia	South Africa	Ukraine
Group III	Argentina	Belgium	Czech Republic
Group III	Finland	Hungary	Mexico
	Norway	Trungury	WEXIEU
	1101114		
Crown IV	Australia	Brazil	India
Group IV	Iran		Netherlands
	Poland	Republic of Korea Spain	Sweden
	Switzerland	Spain	Sweden
	Switzeriand		
<b>C V</b>	G 1	C1:	T.
Group V	Canada	China	France
	Germany	Israel	Italy
	Japan	Russia	United Kingdom
	United States		
	G 1 1'	0.1	17
Associate	Cambodia	Gabon	Kenya
Membership	Kyrgyzstan	Madagascar	Malaysia
	Moldova	Nepal	Oman
	Papua New Guinea	Senegal	Thailand

The following 4 organizations are members of IMU:

AffiliateAfrican Mathematical Union (AMU)MembershipEuropean Mathematical Society (EMS)

South East Asian Mathematical Society (SEAMS)

Unión Matemática de América Latina y el Caribe (UMALCA)

# 2. Financial Information

# 2.1. Approved IMU membership dues

## For the Period 2011–2014

Approved membership dues 2011 – 2014 (Swiss Francs)				
Year	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Group I	1.637	1.670	1.703	1.737
Group II	3.274	3.340	3.406	3.474
Group III	6.548	6.680	6.812	6.948
Group IV	13.096	13.360	13.624	13.896
Group V	19.644	20.040	20.436	20.844

## For the Period 2015-2018

At the IMU General Assembly meeting 2014 in Gyeongju, Korea, the delegates decided about the dues structure for the years 2015-2018, see schedule below. Associate and Affiliate IMU members do not pay dues.

Approved membership dues 2015 – 2018							
Year	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>			
Group I	1,395 €	1,395 €	1,395 €	1,395 €			
Group II	2,790 €	2,790 €	2,790 €	2,790 €			
Group III	5,580 €	5,580 €	5,580 €	5,580 €			
Group IV	11,160 €	11,160 €	11,160 €	11,160 €			
Group V	16,740 €	16,740 €	16,740 €	16,740 €			

# 2.2. Approved IMU budget

# <u>For the Period 2011–2014</u>

		Inte	rnation	nal Math	nemati	cal Uni	on					
Proposed new Budget for 2011-2014, in Swiss Francs (CHF)												
		2011			2012			2013			2014	
	General	Special	Sum	General	Special	Sum	General	Special	Sum	General	Special	Sum
INCOME												
I. General												
Membership Dues												
Sum General Income	435.442			444.220			452.998			462.042		
II. Special												
Special Development Fund		30.000			30.000			30.000			30.000	
Donations		56.000			56.000			56.000			56.000	
Grants												
Sum Special Income from Third Parties		1 000			1 000			1 000			1 000	
Income from IMU bank accounts Other Income		1.000 300			1.000 300			1.000 300			1.000 300	
Sum Special Income from Other Sources		300			300			300			300	
TOTAL INCOME	435,442	87.300	522.742	444.220	87.300	531.520	452,998	87.300	540.298	462,042	87.300	549.34
TOTALINCOINE	455.442	<i>67.300</i>	<u> </u>	777.220	07.500	331.320	432.330	07.500	340.230	402.042	87.300	<del>343.34</del>
EXPENDITURE												
1. Commissions & Committees (C&C)												
1.1 CDC	89.734	45.000		89.734	45.000		89.734	45.000		89.734	45.000	
1.2 CEIC	22.434	.5.500		22.434	.5.500		22.434	.5.560		22.434	.5.000	
1.3 ICMI	67.300			67.300			67.300			67.300		
1.4 Ad hoc committees	13.460			13.460			13.460			13.460		
1.5 Special support	0			0			0			0		
C&C Expenditure	192.928	45.000	237.928	192.928	45.000	237.928	192.928	45.000	237.928	192.928	45.000	237.92
2. ICM												
2.1 Site Committee	4.487			4.487			4.487			4.487		
2.2 Program Committee	8.974			8.974			8.974			8.974		
2.3 Prize Committees	8.974			8.974			8.974			8.974		
2.4 Congress Subvention	22.434			22.434			22.434			22.434		
2.5 Travel Grants (Young & Senior)	31.407	30.000		31.407	30.000		31.407	30.000		31.407	30.000	
2.6 ICM related admin., outreach	22.434			22.434			22.434			22.434		
ICM Expenditure	98.710	30.000	128.710	98.710	30.000	128.710	98.710	30.000	128.710	98.710	30.000	128.71
3. Union Administration												
3.1 General Assembly	4.487			4.487			4.487			4.487		
3.2 President & Secretary	35.894			35.894			35.894			35.894		
3.3 Executive Committee	35.894			35.894			35.894			35.894		
3.4 Other	13.460			13.460			13.460			13.460		
Union Administration Expenditure	89.735	0	89.735	89.735	0	89.735	89.735	0	89.735	89.735	0	89.73
4. Outreach												
4.1 ICSU Union Member Contribution	8.974			8.974			8.974			8.974		
4.2 Awards		11.000		0			0			0		
4.3 Website Support, Media Relations	8.974			8.974			8.974			8.974		
4.4 Bulletin	0			0			0			0		
4.5 Other	4.487			4.487			4.487			4.487		
4.6 Scientific activity support	0		22.425	0	44.000		0	44.000		0		
Outreach Expenditure	22.435	11.000	33.435	22.435	11.000	33.435	22.435	11.000	33.435	22.435	11.000	33.43
5. Overhead												
	4.487			4.487			4.487			4.487		
5.1 Office Expenses 5.2 Bank Charges	4.487			4.487			4.487			4.487		
5.3 Legal Advice, Audit Fees	17.947			17.947			17.947			17.947		
5.4 Other	17.947	1.300		17.947	1.300		17.947	1.300		17.947		
Overhead Expenditure	44.868	1.300	46.168	44.868	1.300	46.168		1.300	46.168		1.300	46.16
Overnead Experiantale	74.000	1.500	40.100	-4.000	1.500	-0.100	17.000	1.500	70.100	74.000	1.500	-0.10
TOTAL EXPENDITURE			535.976			535.976			535.976			535.97
Draw from Reserves			13.234			4.456			0			233.31
Return to Reserves			0			0			4.322			13.36
												.5.50
INCOME LESS EXPENSES			0			0			0			

# For the Period 2015–2018

		Inte	rnatio	nal Math	emati	cal Uni	on					
Proposed new Budget for 2015-2018, in Euro (EUR)												
		2015			2016			2017			2018	
	General	Special	Sum	General	Special	Sum	General	Special	Sum	General	Special	Sum
INCOME	General	эрсски	Juin	General	эрсски	Juili	General	Special	Juili	General	эрсски	Juin
I. General												
Membership Dues	386.415			386.415			386.415			386.415		
Sum General Income	386.415			386.415			386.415			386.415		
II. Special		10 000			10.000			10,000		 	10.000	
Special Development Fund Donations		10.000 44.000			10.000 44.000			10.000 44.000			10.000 44.000	
Grants		44.000			44.000			44.000			44.000	
Sum Special Income from Third Parties		54.000			54.000			54.000			54.000	
Income from IMU bank accounts		1.000			1.000			1.000			1.000	
Other Income		9.600			9.600			9.600			9.600	
Sum Special Income from Other Sources		10.600			10.600			10.600			10.600	
TOTAL INCOME	386.415	64.600	<u>451.015</u>	386.415	64.600	<u>451.015</u>	386.415	64.600	<u>451.015</u>	386.415	64.600	451.01
EXPENDITURE												
1. Commissions & Committees (C&C)	77 202	44.000	424.22	77 202	44 000	426.22	77.283	44.000	424.00	77.283	44.000	42.2.
1.1 CDC 1.2 CEIC	77.283 19.321	44.000	121.283	77.283 19.321	44.000	121.283	19.321	44.000	121.283	19.321	44.000	121.28
1.3 ICMI	57.962			57.962			57.962			57.962		
1.4 Ad hoc committees	19.321			19.321			19.321			19.321		
1.5 Special support	0			0			0			0		
C&C Expenditure	173.887	44.000	217.887	173.887	44.000	217.887	173.887	44.000	217.887	173.887	44.000	217.88
2. ICM												
2.1 Site Committee	3.864			3.864			3.864			3.864		
2.2 Program Committee	7.728			7.728			7.728			7.728		
2.3 Prize Committees	7.728			7.728			7.728			7.728		
2.4 Congress Subvention	19.321	10,000		19.321	10.000		19.321	10,000		19.321	10.000	
2.5 Travel Grants (Young & Senior) 2.6 ICM related admin., outreach	27.049 19.321	10.000	<u>37.049</u>	27.049 19.321	10.000	<u>37.049</u>	27.049 19.321	10.000	<u>37.049</u>	27.049 19.321	10.000	<u>37.049</u>
ICM Expenditure	85.011	10.000	95.011		10.000	95.011	85.011	10.000	95.011	85.011	10.000	95.01
Telvi Experiareare	03.011	10.000	33.011	05.011	10.000	33.011	05.011	10.000	33.011	05.011	10.000	33.01
3. Union Administration												
3.1 General Assembly	3.864			3.864			3.864			3.864		
3.2 President & Secretary	46.370			46.370			46.370			46.370		
3.3 Executive Committee	23.185			23.185			23.185			23.185		
3.4 Other	3.864			3.864			3.864			3.864		
Union Administration Expenditure	77.283	0	77.283	77.283	0	77.283	77.283	0	77.283	77.283	0	77.28
4. Outreach 4.1 ICSU Union Member Contribution	7.728			7.728			7.728			7.728		
4.2 Awards	3.864	0		3.864	0		3.864	0		3.864	0	
4.3 Website Support, Media Relations	7.728	<u> </u>		7.728	<u> </u>		7.728			7.728	- 0	
4.4 Bulletin	0			0			0			0		
4.5 Other	3.864	5.600	9.464	3.864	5.600	9.464	3.864	5.600	<u>9.464</u>	3.864	5.600	9.46
4.6 Scientific activity support	0			0			0			0		
Outreach Expenditure	23.185	5.600	28.785	23.185	5.600	28.785	23.185	5.600	28.785	23.185	5.600	28.78
5. Overhead												
5.1 Office Expenses	3.864	1.600	5.464	3.864	1.600	5.464	3.864	1.600	5.464	3.864	1.600	5.46
5.2 Bank Charges	3.864	1.000	4.864	3.864	1.000	4.864	3.864	1.000	4.864	3.864	1.000	4.86
5.3 Legal Advice, Audit Fees	7.728	1.600	<u>9.328</u>	7.728	1.600	9.328	7.728	1.600	9.328	7.728	1.600	9.328
5.4 Other	11.592	800	12.392	11.592	800	12.392	11.592	800	12.392	11.592	800	<u>12.39.</u>
Overhead Expenditure	27.049	5.000	32.049	27.049	5.000	32.049	27.049	5.000	32.049	27.049	5.000	32.04
TOTAL EXPENDITURE			451.015			451.015			451.015			451.01

# 2.3. Independent Auditor's Report 2014



Berlin, 24 July 2015 68173/E

# **International Mathematical Union**

Berlin

Audit Report on the Annual Financial Statements as of 31 December 2014



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In the presentation of rounded numbers ( $\in$ , k $\in$ , %), calculation differences may result in tables because calculations are made on the basis of exact numbers.



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### A. Audit Engagement

We were engaged by the Secretary of the

# International Mathematical Union Berlin

(hereinafter "IMU" or "Union")

to audit and report on the annual financial statements for the reporting year ending 31 December 2014.

We draw your attention that the RBS RoeverBroennerSusat GmbH & Co. KG is renamed in Roever Broenner Susat Mazars GmbH & Co. KG. The legal identity is not affected by the name change.

The IMU is an international association. According to German law, the IMU is an "ideal" association (§ 21 German Civil Code (BGB) non-profit association) since it pursues ideal purposes rather than financial purposes. The Union does not have legal capacity in Germany because it is not registered with the German Register of Associations.

The Union is not required by law to have its annual financial statements audited. In accordance with Article 45 of the IMU Statutes, at least once every four years the members of the Union shall obtain from the Executive Committee an audit of the accounts. In continuation of current practice, the audit of the annual financial statements is performed annually. The financial statements consist of a statement of assets and liabilities as well as a statement of income and expenditure. According to the size definitions of § 267 German Commercial Code (HGB), the IMU would be classified as a small entity. Accordingly, the audit was performed in conformity with the accounting regulations applicable to small entities.

As per agreement, we included explanations to the net assets, financial position and results of operations in our audit report (section D.).

The enclosed Budget Comparison 2014 included in Appendix 4 for informational purposes was, per agreement, not audited.

The performance of the audit and our liability, including any third-party liability, is controlled by the "General Engagement Terms for German Public Auditors and Public Audit Firms as of January 1, 2002" enclosed as an Appendix.

In performing our audit, we observed the rules on independence under § 321 (4a) HGB.



This report was prepared under the auditing standard of the *Institut der Wirtschaftsprüfer in Deutschland e. V.* IDW PS 450 "Generally Accepted Standards for the Issuance of Long-form Audit Reports for the Audit of Financial Statements".

### B. Object, Nature and Scope of the Audit

#### **Object of the Audit**

We audited the annual financial statements of the IMU as of 31 December 2014 together with the bookkeeping system. The financial statements (statements of assets and liabilities and income and expenditure) were prepared in accordance with German accounting principles. Bookkeeping and the preparation of the annual financial statements are the responsibility of the Union's Treasurer. Our responsibility is to provide an opinion on the annual financial statements based on our audit.

As of 1 January 2011, the IMU has kept its permanent office in Berlin and is affiliated with the Weierstraß-Institut für Angewandte Analysis und Stochastik (WIAS), Berlin. The Federal Republic of Germany and the State of Berlin grant the IMU annual financial support, in particular by assuming personnel and material costs in the amount of approximately k€ 500 borne directly by the WIAS, and which are therefore not recorded in the statement of income and expenditure.

An audit of compliance with other statutory regulations is part of our engagement only to the extent that those regulations typically have an effect on the annual financial statements or to the extent that, in our experience, non-compliance may result in risks that have an effect on the annual financial statements.

In addition, an audit is not intended to determine whether the Union is compliant with all regulations of, for example, tax law, social security and employment law, competition and price regulations, the law of foreign transactions, consumer protection regulations or environmental regulations or similar matters.

It is not the nature of an audit to detect and investigate criminal acts (e. g. embezzlement, fraud, collusion) and administrative offences occurring beyond the scope of the financial accounting.

We have not examined the extent and appropriateness of insurance coverage.

M A Z A R S

Roever Broenner Susat Mazars

#### Nature and Scope of the Audit

We conducted our audit of the annual financial statements in accordance with §§ 316 et seq. HGB as well as in observance of the Principles of Performing Audits of Financial Statements of the Institut der Wirtschaftsprüfer in Deutschland e. V. (IDW), in particular observing IDW PS 750 "Audits of Associations". Therein, an audit has to be planned and performed such that material misstatements affecting the bookkeeping and annual financial statements are to be detected with reasonable assurance.

The evidence supporting the disclosures in the accounting and annual financial statements is to be examined on a test basis. The audit includes assessing the accounting, measurement and classification principles used and significant estimates made by management, as well as evaluating the overall presentation of the annual financial statements. We believe that our audit provides a reasonable basis for our opinion.

We conducted our audit in February 2015 in the premises of the IMU Secretariat as well as, with interruptions, in June and July 2015 in our office. The audit report was subsequently prepared in our office.

Our audit commenced with our unqualified independent auditor's report dated 12 May 2014 on the annual financial statements for the year ended 31 December 2013. The Statutes do not provide for an adoption of the annual financial statements. Instead, on the basis of every fourth annual financial statement (most recently on 31 December 2013), the preparation of a budget for the following four-year-period is anticipated. The budget for the period from 1 January 2015 to 31 December 2018 was approved by the 17<sup>th</sup> General Assembly in Gyeongju/Republic of Korea on 10 and 11 August 2014.

We received information from:

Prof. Dr. Alexander Mielke
 Treasurer of the IMU

Ms. Sylwia MarkwardtMs. Anita OrlowskyManager, IMU SecretariatAccountant, IMU Secretariat

Management provided us with the information and documentation we requested and issued a standard letter of representation.

The audit had no particular focus because of the limited size of the Union. We audited the complete and timely recording of business transactions on a test basis and were convinced of the implementation of the four-eye-principle as the main instrument of the internal control system.



Our audit included events of particular importance occurring after the end of the reporting year as well as whether the annual financial statements as a whole provide an accurate view of the net assets, financial position and results of operations of the Union.

### C. Findings and Explanations on Accounting

### 1. Proper Accounting

### 1.1. Bookkeeping and Other Audited Documents

Financial bookkeeping is performed applying the principles of double-entry bookkeeping, using Lexware professional 2014 Version 15.05 software. Wage and salary accounting is not necessary because personnel expenses are borne by the WIAS, the organisation that employs the staff of the IMU Secretariat.

Records are properly kept and, together with the books and other documents, allow for a proper audit. In accordance with our findings, which are based on sampling, the bookkeeping corresponds to statutory requirements and the supplementary provisions of the Statutes.

#### 1.2. Annual Financial Statements

### **Preparation of the Annual Financial Statements**

The enclosed annual financial statements were prepared in accordance with the regulations of the Third Book of the HGB (§§ 238 *et seq.*) under observance of the supplementary regulations for corporations in the Second Section (§§ 264 *et seq.*).

The annual financial statements commence with the prior year's financial statements and are based on proper bookkeeping. In accordance with the written statement issued by management, the annual financial statements include all required assets, liabilities and risks.

#### **Recognition and Measurement**

Proper documentation of assets and liabilities is maintained. Assets and liabilities have been reported and measured in compliance with statutory regulations and principles of proper bookkeeping.

M A Z A R S

Roever Broenner Susat Mazars

#### Classification

The classifications used in the statement of assets and liabilities and statement of income and expenditure correspond to the provisions of §§ 265 to 277 HGB.

The statement of income and expenditure is prepared in accordance with the total cost (nature of expense) method (§ 275 (2) HGB). Classifications were modified to conform to the requirements of the IMU.

#### **Notes to the Annual Financial Statements**

The Union does not have a legal obligation to prepare notes to the annual financial statements. Accordingly, the IMU has permissibly waived the preparation of notes.

### 1.3. Management Report

The Union does not have a legal obligation to prepare a management report. Accordingly, the IMU has permissibly waived the preparation of a management report.

The IMU provides its members with an annual accounting of its activities in the Bulletin of the International Mathematical Union. The current Bulletin number 64, dated July 2014, was published prior to the 17<sup>th</sup> General Meeting and summarises the 4-year period from 2010-2014. Printed versions of the Bulletin are provided to members. Electronic versions are available on the homepage of the IMU (http://www.mathunion.org/publications/bulletins/archive/).

The Bulletin provides, in particular, a description of IMU activities for the promotion of mathematics in the world and the proper use of member contributions and donations.

According to management information and the results of our audit, no events of particular importance occurred after the conclusion of the reporting year.

#### 2. Overall Assertions of the Annual Financial Statements

#### 2.1. Findings on the Overall Assertions of the Annual Financial Statements

According to the results of our audit, the annual financial statements give a true and fair view of the net assets, financial position and results of operations of the Union in accordance with German principles of proper accounting.



Within the framework of our audit we have not made any finding on changes in measurement principles (exercise of accounting and measurement elective options as well as the use of discretion) or on grooming transactions with a material influence on the presentation of the net assets, financial position and results of operations.

The influence of material measurement principles in the presentation of the net assets, financial position and results of operations are explained in section 2.2.

### 2.2. Significant Measurement Principles

The exercise of accounting and measurement elective options and the use of discretion correspond to the prior year and do not indicate any tendency to improve or worsen the result or in any way influence the total disclosures of the annual financial statements.

Foreign currency receivables and payables are recorded in the bookkeeping in Euro at the exchange rate valid on the date of their accrual. Measurement on the balance sheet date is at the lower (for receivables), or higher (for liabilities), exchange rate valid on that date.



# D. Other Classifications and Explanations to the Annual Financial Statements

### 1. Net Assets

In order to evaluate the net assets and changes thereto, the balance sheets of the last two financial years are compared in condensed form:

	31.12.2014		31.12.2013		Change
	k€	%	k€	%	k€
ASSETS					
Current assets					
Receivables from member contributions	114	8.0	122	8.4	-8
Other assets (including Prepaid Expenses)	1	0.1	5	0.3	-4
Cash and cash equivalents	1,318	92.0	1,323	91.2	-5
	1,433	100.0	1,450	100.0	-17
LIABILITIES					
Net assets (own funds)	1,299	90.6	1,349	93.0	-50
Borrowed capital					
Provisions	9	0.6	8	0.6	1
Liabilities from restricted donations	117	8.2	81	5.6	36
Other liabilities (incl. Deferred Income)	8	0.6	12	0.8	-4
	134	9.4	101	7.0	33
	1,433	100.0	1,450	100.0	-17



## Receivables from member contributions are as follows:

Country	Year	WD	Amo	unt
			€	CHF
Algeria	2014		1,444.00	1,737.00
Argentina	2014		4,573.10	5,501.00
Belgium	2014		5,776.01	6,948.00
Bosnia & Herzegovina	2014		1,444.00	1,737.00
Cameroon	2014	*	1,444.00	1,737.00
Cuba	2014	*	1,444.00	1,737.00
Ecuador	2014		842.13	1,013.00
France	2014		17,328.03	20,844.00
India	2014		11,552.02	13,896.00
Iran	2014		8,182.68	9,843.00
Kazakhstan	2014		1,444.00	1,737.00
Montenegro	2014	*	1,444.00	1,737.00
Peru	2014	*	1,444.00	1,737.00
Philippines	2014		1,444.00	1,737.00
Russia	2014		2,620.32	3,152.00
Saudi Arabia	2014		1,444.00	1,737.00
Spain	2014		11,552.02	13,896.00
Ukraine	2014		2,888.01	3,474.00
Venezuela	2014		1,444.00	1,737.00
			79,754.32	95,937.00
Argentina	2013		1,329.23	1,598.94
Bosnia & Herzegovina	2013		1,415.74	1,703.00
Cameroon	2013	*	1,415.74	1,703.00
Cuba	2013	*	1,415.74	1,703.00
Greece	2013		1,415.74	1,703.00
Latvia	2013		1,415.74	1,703.00
Montenegro	2013	*	1,415.74	1,703.00
Peru	2013	*	1,415.74	1,703.00
Saudi Arabia	2013		1,415.74	1,703.00
Slovakia	2013		2,831.48	3,406.00
Spain	2013		5,463.18	6,571.69
Venezuela	2013		1,415.74	1,703.00
			22,365.55	26,903.63
Carry forward:			102,119.87	122,840.63



#### **Roever Broenner Susat Mazars**

Country	Year	WD	Amo	ount
			€	CHF
Carry forward:			102,119.87	122,840.63
Algeria	2012		1,272.75	1,531.00
Bosnia & Herzegovina	2012		1,388.30	1,670.00
Cameroon	2012	*	1,388.30	1,670.00
Cuba	2012	*	1,388.30	1,670.00
Greece	2012		1,388.30	1,670.00
Kazakhstan	2012		1,388.30	1,670.00
Latvia	2012		1,388.30	1,670.00
Montenegro	2012	*	1,388.30	1,670.00
Peru	2012	*	1,388.30	1,670.00
Saudi Arabia	2012		1,388.30	1,670.00
Venezuela	2012		1,388.30	1,670.00
			15,155.75	18,231.00
Bosnia & Herzegovina	2011		1,360.88	1,637.00
Cameroon	2011	*	1,360.88	1,637.00
Cuba	2011	*	1,360.88	1,637.00
Montenegro	2011	*	1,360.88	1,637.00
Peru	2011	*	1,360.88	1,637.00
			6,804.40	8,185.00
Cameroon	2010	*	1,334.27	1,605.00
Cuba	2010	*	1,334.27	1,605.00
Montenegro	2010	*	444.76	535.00
Peru	2010	*	214.75	258.33
			3,328.05	4,003.33
Total receivables			127,408.07	153,259.96
Write-downs 50% (marked with a * )			-12,881.87	-15,495.68
			114,526.20	137,764.28

At the end of 2014, outstanding member contributions were k€ 127 (kCHF 153), of which k€ 90 were open at the time of our audit. As a result of the consistent non-payment of their member contributions, open receivables of the above countries marked with a star "\*" were directly written down (WD) by 50 % or the write-down was retained. Receivables are measured at the period-end exchange rate.



**Cash and cash equivalents**, part of which is in foreign currency, is located in accounts with the Berliner Bank AG and is composed of the following:

	Foreign currency	€
Account in € (5113915 10)		52,348.57
Account in CHF (5113915 01)	CHF 850,160.30	706,753.00
Account in USD (5113915 00)	USD 86,441.36	71,108.30
Account in USD (5113915 06)	USD 46,608.84	38,341.30
Account in € - Ito Fund (5113915 01)		10,500.16
Account in € (5113915 00)		60,822.27
Account in € (5113915 05)		194,502.56
Account in € (5113915 04)		183,144.22
Cash in €		81.97
		<u>1,317,602.35</u>

The conversion of foreign currency into Euro occurs at the period-end exchange rate.

Net assets (own funds) at the period-end date are composed of the following:

	k€	k€
Association capital		307
Reserves		
<ul> <li>Annual surplus 2007 - 2013</li> </ul>	863	
<ul> <li>Annual deficit 2014</li> </ul>	-51	
<ul> <li>ICMI and CDC (Commission Fund)</li> </ul>	<u>180</u>	992
		<u>1,299</u>

The Statutes do not make reference to association net assets.

Of the Association capital, € 307,465.98 originates from the time before moving the domicile of the IMU to Germany as of 1 January 2007. Revenues earned as of 2007 are allocated to reserves in accordance with the recommendations of the Secretary and of the Treasurer at the end of the reporting year. The General Assembly reaches a resolution every four years on the recognition of reserves.



#### Reserves are allocated as follows:

	k€
Travel support	
- Fields Medal 2018	11
- ICM 2018 in Brazil	70
<ul> <li>ICME 2016 in Hamburg</li> </ul>	5
Co-financing joint workshops with other ICSU members 2015-2018	15
ICMI and CDC 2015	180
ICM default reserve	438
Unrestricted reserves	<u>273</u>
	<u>992</u>

Funds are shown under **ICMI and CDC (Commission Fund)** that the IMU has made available to its ICMI and CDC commissions for their work in the coming year. The restricted reserves for ICMI amount to € 58,000.00 and to € 121,500.00 for CDC.

### Liabilities from restricted donations developed as follows:

	€	€
Special Development Fund		
Per 1 Jan. 2014		29,612.46
Contributions		
<ul> <li>Mathematical Society Japan (MSJ)</li> </ul>	14,232.45	
<ul> <li>London Mathematical Society (LMS)</li> </ul>	4,023.17	<u>18,255.62</u>
Per 31 Dec. 2014		47,868.08
Ito Fund		
Per 1 Jan. 2014		10,498.75
Contribution interest revenue 2014 less		
account fees		<u> </u>
Per 31 Dec. 2014		10,500.16
Carry forward		58,368.24



	€	€
Carry forward		58,368.24
Simons Foundation		
Per 1 Jan. 2014		18,661.74
Contribution (kUSD 25)	19,012.85	
Travel Fellowships for 9 mathematicians	- <u>14,348.70</u>	4,664.15
Per 31 Dec. 2014		23,325.89
IMU Developing Country Fund		
Per 1 Jan. 2014		22,165.74
Contribution FIMU (kUSD 17)		13,466.83
Per 31 Dec. 2014		35,632.57
		<u>117,326.70</u>

The funds shown under **Special Development Fund (SDF)** are for the support of mathematicians from developing countries for travel to International Congresses of Mathematicians (ICM). An international committee decides on the grant applications.

The cash of the SDF collected between 2007 and 2010 for the congress in August 2010 in Hyderabad/India was fully expended. The cash collected for the congress in August 2014 in Seoul/Republic of Korea was not needed to finance the travel costs of ICM participants because the Korean Mathematical Society (KMS) provided travel assistance in the amount of kUSD 2,000 for mathematicians from developing countries. Cash of SDF not required for ICM 2014 is to be used for the ICM 2018 in Brazil.

The cash received from the **Simons Foundation** is designated as a Travel Fellowship for research stays of mathematicians from developing countries.

The cash received from the Friends of IMU (FIMU) during the reporting year included in the **IMU Developing Country Fund** are for the promotion of mathematical research and scholarships in developing countries.



### 2. Financial Position

The IMU was in a position to meet its payment obligations in a full and timely manner. The cash flow from current activities amounts to  $k \in -5$  and corresponds to the change in the amount of cash between 1 January 2014 ( $k \in 1,323$ ) and 31 December 2014 ( $k \in 1,318$ ).

### 3. Results of Operations

The summarized statements of income and expenditure for the past two financial years show the following structure and changes in the results of operations:

	2.0.4	4	2.0	1.0	Ch a mara
	201		20		Change
	k€	%	k€	%	k€
Revenues	504	100.0	470	100.0	34
Administrative expenses	-85	-16.9	-53	-11.3	-32
Expenditures for scientific promotion					
and activities	-471	-93.5	-269	-57.2	-202
Other expenditures	-556	-110.3	-322	-68.5	-234
Operating result	-52	-10.3	148	31.5	-200
Interest	1	0.2	2	0.4	-1
Result before taxes on income	-51	-10.1	150	31.9	-201
Taxes on income	0	0.0	0	0.0	0
Annual deficit/surplus	-51	-10.1	150	31.9	-201
Withdrawal from/Allocation to reserves (net)	51	10.1	-150	-31.9	201
Unallocated cash balance	0	0.0	0	0.0	0

The IMU had **revenues** of k€ 504 in the reporting year, consisting largely of member contributions. In addition, the IMU received donations which, as a rule, come from scientific organizations.

### **Revenues** are composed of the following:

	k€
Member contributions	390
Third-party contributions	87
Other income	_27
	504



The composition of **Member contributions** is shown in Appendix 3 to this report.

Third-party contributions are composed of the following:

	€
Niels Henrik Abel Board, Norway (thereof approx. k€ 12.4 [kUSD 15] for awarding	
the Abel Visiting Scholar Program)	42,922.20
ICSU grant	30,000.00
Simons Travel Fellowship	<u>14,348.70</u>
	<u>87,270.90</u>

Other income (k€ 27) largely involves exchange rate gains (k€ 21).

**Other expenditures** of k€ 556 (prior year: k€ 322) are shown in detail in the Statement of Income and Expenditures (Appendix 2) as well as in the Budget Comparison (Appendix 4). The increase results from the ICM conducted in the reporting year in Seoul/Republic of Korea.

Interest represents the interest paid on the bank balances by the Berliner Bank AG.

### E. Independent Auditor's Report and Concluding Statement

We have issued the following unqualified opinion for the annual financial statements as of 31 December 2014 of the International Mathematical Union, Berlin. The annual financial statements are enclosed in this report under Appendices 1 to 2:

#### **Independent Auditor's Report**

To the International Mathematical Union, Berlin

We have audited the annual financial statements, consisting of the statement of assets and liabilities and the statement of income and expenditure, together with the bookkeeping system of the International Mathematical Union for the reporting year from 1 January 2014 to 31 December 2014. The maintenance of the books and the preparation of the annual financial statements in accordance with the German Commercial Code (HGB) are the responsibility of the Union's management. Our responsibility is to express an opinion on the annual financial statements, together with the bookkeeping system, based on our audit.



We performed our audit of the annual financial statements in accordance with § 317 HGB and generally accepted standards for the audit of financial statements promulgated by the *Institut der Wirtschaftsprüfer* (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the annual financial statements in accordance with German principles of proper accounting are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Union as well as expectations of possible misstatements are taken into account in determination of audit procedures. The effectiveness of the internal control system and the evidence supporting the disclosures in the books and records and in the annual financial statements are examined primarily on a test basis.

The audit includes assessing the accounting principles used and significant estimates made by management as well as evaluating the overall presentation of the annual financial statements. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion based on the information gathered during the audit, the annual financial statements correspond to statutory requirements as applicable to small entities and give a true and fair view of the net assets, financial position and results of operations of the Union in accordance with German principles of proper accounting.

The above audit report is submitted in compliance with German statutory provisions and Generally Accepted Standards for the Issuance of Long-form Audit Reports for the Audit of Financial Statements (IDW PS 450).



Use of the above independent auditor's report outside of this audit report requires our prior consent. Publication or distribution of the annual financial statements of the International Mathematical Union, Berlin, for the financial year from 1 January 2014 to 31 December 2014 in a form different from the certified form also requires our consent if our independent auditor's report is quoted or if reference is made to our audit. We herein refer to § 328 HGB.

Berlin, 24 July 2015

Roever Broenner Susat Mazars GmbH & Co. KG Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft

In the original German version signed by

Helmut Schuhmann Wirtschaftsprüfer

Appendix 1

International Mathematical Union, Berlin

STATEMENT OF ASSETS AND LIABILITIES as of 31 December 2014

ASSETS	per 31.12.2014	Prior Year	LIABILITIES	per 31.12.2014	4	Prior Year
	Э	Э Э		€	€	€
A. Current Assets			A. Net Assets			
I. Receivables and other			I. Association net assets	307.465,98		307.465,98
assets			II. Reserves	991.593,74		1.042.236,56
1. Receivables from member contributions	114.526,20	121.988,31		1.299	1.299.059,72	1.349.702,54
<b>2.</b> Other assets	73,50	2.449,13				
	114.599,70		124.437,44 B. Provisions	κό	8.800,00	7.735,00
II Cash-in-band			G Liabilities			
bank balances *	1.317.602,35	12,35 1.323.064,48	1.323.064,48 1. Liabilities from restricted			
			donations	117.326,70		80.938,69
B. Prepaid Expenses	98	860,00 2.553,75	2.553,75 2. Other liabilities	7.875,63		6.281,44
				125	125.202,33	87.220,13
			D. Deferred Income		00,00	5.398,00
Total Assets	1.433.06	1.433.062,05	Total Liabilities	1.433	1.433.062,05	1.450.055,67

\* contained therein ICMI € 194,502.56 and CDC € 183,144.22

## International Mathematical Union, Berlin

# STATEMENT OF INCOME AND EXPENDITURE for 2014

			2014	Prior Year
	€	€	€	€
Revenues			504.266,27	470.370,92
Member contributions	389.560,00			377.993,54
Donations - international	87.270,90			77.115,40
Other income	27.435,37			15.261,98
Other Expenditures Administrative Expenses		-84.395,97	-555.321,39	-321.583,59 -52.797,95
Reimbursement personnel expenses	-10.177,66			-10.581,51
Travel expenses	-28.702,32			-6.582,26
Audit fees	-13.369,60			-7.790,00
Member contributions	-10.291,00			-9.991,00
Postage	-260,29			-118,52
Bank fees	-1.656,79			-1.169,41
Other	-19.938,31			-16.565,25
Expenditures for Scientific Promotion and Activities		-470.925,42		-268.785,64
Promotion of scientifc activities	-314.627,02			-228.622,51
Expenditures ICM	-156.298,40			-34.409,74
Expenditures for prize awards	0,00			-5.753,39
Interest and Similar Income		_	412,30	1.635,05
Result of Association				
Activities			-50.642,82	150.422,38
Taxes		_	0,00	0,00
Annual Deficit / Surplus			-50.642,82	150.422,38
Withdrawals from Reserves			50.642,82	0,00
Allocation to Reserves		-	0,00	-150.422,38
Unallocated Cash Balance		=	0,00	0,00

Appendix 3/1

## **International Mathematical Union**

## **Schedule of Member Contributions 2014**

Country	Amount EUR	Amount CHF
Argentina	2.833,67	3.474,00
Armenia	1.416,84	1.737,00
Australia	5.667,35	6.948,00
Austria	2.833,67	3.474,00
Belgium	5.667,35	6.948,00
Bosnia & Herzegovina	1.416,84	1.737,00
Brazil	11.334,70	13.896,00
Bulgaria	1.416,84	1.737,00
Cameroon	1.416,84	1.737,00
Canada	17.002,00	20.844,00
Chile	2.833,67	3.474,00
CMS, Beijing	10.201,20	12.506,40
Math Society, Taipei	6.800,82	8.337,60
Colombia	1.416,84	1.737,00
Croatia	1.416,84	1.737,00
Cuba	1.416,84	1.737,00
Czech Republic	5.667,35	6.948,00
Denmark	2.833,67	3.474,00
Egypt	2.833,67	3.474,00
Estonia	1.416,84	1.737,00
Finland	5.667,35	6.948,00
France	17.002,00	20.844,00
Georgia	1.416,84	1.737,00
Germany	17.002,00	20.844,00
Greece	1.416,84	1.737,00
Hong Kong	1.416,84	1.737,00
Hungary	5.667,35	6.948,00
Iceland	1.416,84	1.737,00
India	11.334,70	13.896,00
Indonesia	1.416,84	1.737,00
Iran	5.667,35	6.948,00
Ireland	2.833,67	3.474,00
Israel	17.002,00	20.844,00
Italy	17.002,00	20.844,00
lvory Coast	1.416,84	1.737,00
Japan	17.002,00	20.244,00
Kazakhstan	1.416,84	1.737,00
Korea, Republic of	11.334,70	13.896,00
Latvia	1.416,84	1.737,00

Total	389.560,00	476.931,00
Iran	2.379,58	2.895,00
Ecuador	829,55	1.013,00
	1.659,92	2.027,00
Australia Mexico	3.319,03	4.053,00
Argentina Australia	1.659,92	2.027,00
Argentine	1.416,84	1.737,00
***************************************	1.416,84	1.737,00
Vietnam	<u></u>	1.737,00
Venezuela	17.002,00	
Uruguay	17.002,00	20.844,00
	1.416,84	1.737,00
United Kingdom	17.002,00	20.844,00
Ukraine	2.833,67	3.474,00
Turkey	1.416,84	1.737,00
Tunisia	1.416,84	1.737,00
Switzerland	11.334,70	13.896,00
Sweden	11.334,70	13.896,00
Spain Spain	11.334,70	13.896,00
South Africa	2.833,67	3.474,00
Slovenia	2.833,67 1.416,84	1.737,00
Slovakia	2.833,67	3.474,00
Singapore	1.416,84	1.737,00 1.737,00
Serbia	1.416,84 1.416,84	1.737,00
Saudi Arabia		
Russia	17.002,00	20.844,00
Portugal Romania	2.833,67 1.416,84	3.474,00 1.737,00
	~f~~~~	·····
Philippines Poland	1.416,84 11.334,70	1.737,00 13.896,00
Peru	··	1.737,00
	1.416,84 1.416,84	1.737,00
Norway Pakistan	5.667,35	6.948,00
Nigeria	1.416,84	1.737,00
	··	1.737,00
New Zealand	11.334,70 1.416,84	13.896,00
Montenegro Netherlands	1.416,84	1.737,00
	2.833,67	3.474,00
Mexico	2 222 67	2 474 00

Appendix 4

#### INTERNATIONAL MATHEMATICAL UNION

#### **Budget Comparison 2014**

	В	udget 2014	,	,	Actual 2014		E	Budget 2014		,	Actual 2014	
		CHF			CHF			EUR		١	EUR	
INICOME	General	Special	Sum	General	Special	Sum	General	Special	Sum	General	Special	Sum
INCOME I. General												
I.a Membership Dues	462.042			468.532			384.164			389.560		
Sum General Income	462.042			468.532			384.164			389.560		
II. Special	102.0.2											
II.a Special Development Fund		30.000			21.957			24.944			18.256	
II.b Donations		56.000			51.623			46.561			42.922	
II.c Grants					75.146						62.480	
Sum Special Income from Third Parties		86.000			148.726			71.505			123.658	
II.d Income from IMU bank accounts		1.000			495			831			412	
II.e Other Income		300			32.997			250			27.435	
Sum Special Income from Other Sources		1.300			33.492			1.081			27.847	
TOTAL INCOME	462.042	87.300	<u>549.342</u>	468.532	182.218	650.750	384.164	72.586	<u>456.750</u>	389.560	151.505	541.06
EXPENDITURE												
1. Commissions & Committees (C&C)	00.72	45.000		104 40-	147.010		74.000	27.445		00.00=	122 224	
1.1 CDC	89.734	45.000		104.405	147.010		74.609	37.415		86.807	122.231	
1.2 CEIC 1.3 ICMI	22.434			1.645			18.653			1.368		
1.4 Ad hoc committees	67.300 13.460			106.253 0			55.957 11.191			88.344 0		
1.5 Special support	15.460			0	0		11.191			0	0	
C&C Expenditure	192.928	45.000	237.928	212.303	147.010	359.313	160.410	37.415	197.825	176.519	122.231	298.750
2. ICM												
2.1 Site Committee	4.487			0			3.731			0		
2.2 Program Committee	8.974			7.943			7.461			6.604		
2.3 Prize Committees	8.974			12.602			7.461			10.478		
2.4 Congress Subvention	22.434			88.282			18.653			73.402		
2.5 Travel Grants (Young & Senior)	31.407	30.000		0	1.716		26.113	24.943		0	1.427	
2.6 ICM related admin., outreach	22.434			74.101			18.653			61.611		
ICM Expenditure	98.710	30.000	128.710	182.928	1.716	184.644	82.072	24.943	107.015	152.095	1.427	153.522
3. Union Administration												
3.1 General Assembly	4.487			17.657			3.731			14.681		
3.2 President & Secretary	35.894			18.410			29.844			15.307		
3.3 Executive Committee	35.894			28.205			29.844			23.451		
3.4 Other	13.460			147			11.191			122		
Union Administration Expenditure	89.735	0	89.735	64.419	0	64.419	74.610	0	74.610	53.561	0	<u>53.56</u> 2
4. Outreach												
4.1 ICSU Union Member Contribution	8.974			12.377			7.462			10.291		
4.2 Awards	0	11.000		0			0	9.146		0		
4.3 Website Support, Media Relations	8.974			4.777			7.462			3.972		
4.4 Bulletin	0			0			0			0		
4.5 Other	4.487			0			3.730			0		
4.6 Scientific activity support  Outreach Expenditure	22.435	11.000	33.435	0 17.154	0	17.154	18.654	9.146	27.800	14.263	0	14.263
5. Overhead												
5.1 Office Expenses	4.487			0	5.537		3.730	0		0	4.604	
5.2 Bank Charges	4.487			0	1.993		3.731	0		0	1.657	
5.3 Legal Advice, Audit Fees	17.947			5.957	10.123		14.922	0		4.953	8.417	
5.4 Other	17.947	1.300		2.917	15.839		14.922	1.081		2.425	13.169	
Overhead Expenditure	44.868	1.300	46.168	8.874	33.492	42.366	37.305	1.081	38.386	7.378	27.847	35.22
TOTAL EXPENDITURE			535.976			667.896			445.636			555.32
Draw from Reserves			0			60.909			0			50.64
Return to Reserves Income less expenses			13.366 <u>0</u>			0 - <b>17.146</b>			11.114 <b>0</b>			-14.25
,								f	_			-
								from dona r expendit		yet spent	EUR	-36.387
						LVCC22 OL	IIICOIIIE OVE	- expellult	шЕ		EUK	

Actual Euro Income and Expenses converted to Swiss Franc, using the December 31, 2014 rate of 1 Euro = 1,20272 Swiss Franc.

## **Legal and Tax Position**

## 1. Legal Position

### **Association, Legal Domicile**

International Mathematical Union, Berlin/Germany

The IMU is an international association. According to German law, the IMU is an "ideal" association (§ 21 German Civil Code (BGB)) since it pursues ideal purposes rather than financial purposes. The Association does not have legal capacity in Germany because it is not registered with the German Register of Associations.

The legal domicile of the IMU was located in Princeton/USA, until 31 December 2006. According to article 29 of the IMU Statutes, as amended in 2010, the legal domicile of the Union shall be located at the offices of the Union.

The permanent Secretariat shall be located in Berlin/Germany as of 1 January 2011.

## **Place of Management**

IMU Secretariat, Markgrafenstraße 32, 10117 Berlin/Germany.

The IMU Secretariat transacts the entire routine operative business of the IMU. This includes the administrative support of the International Commission on Mathematical Instruction (ICMI) and the Commission for Developing Countries (CDC). In addition, the IMU Secretariat is also responsible for bookkeeping and monetary transactions; it prepares the annual financial statements and operates the IMU archives.

#### **Statutes**

The Statutes were amended on 16 and 17 August 2010 in Bangalore/India by the 16<sup>th</sup> General Assembly. The amendments included article 28 (Treasurer) and article 29 (Legal Domicile). A certified German translation is on file.

Appendix 5/2

### **Objectives of the Association**

According to article 1 of the Statutes, the objectives are:

- "(a) to promote international cooperation in mathematics;
- (b) to support and assist the International Congress of Mathematicians and other international scientific meetings or conferences;
- (c) to encourage and support other international mathematical activities considered likely to contribute to the development of mathematical science in any of its aspects, pure, applied, or educational."

#### **Association Capital, Members**

The Statutes make no provision for association capital. Association capital amounted to k€ 307 on 1 January 2007, the time when the legal domicile was transferred from Princeton/USA to Berlin/Germany.

According to article 3, a country adheres to the Association through an adhering organization. This may be the principal academy, a mathematical society, its research council or some other institution or association of institutions, or an appropriate agency of its government. At the end of 2014, the IMU had 71 regular members (voting), 12 associate members (non-voting) and 4 affiliate members (non-contributory and non-voting).

### **Executive Committee**

Since January 2011, the Executive Committee consists of the following persons:

- Ingrid Daubechies, USA (President)
- Martin Grötschel, Germany (Secretary)
- Christiane Rousseau, Canada (Vice-President)
- Marcelo Viana, Brazil (Vice-President)
- Manuel de León, Spain (Member-at-Large)

- Yiming Long, China (Member-at-Large)
- Cheryl E. Praeger, Australia (Member-at-Large)
- Vasudevan Srinivas, India (Member-at-Large)
- John Francis Toland, Great Britain (Member-at-Large)
- Wendelin Werner, Switzerland (Member-at-Large)
- László Lovász, Hungary (Ex-officio, because he is the former President of the IMU)

Prof. Dr. Alexander Mielke was appointed Treasurer of the IMU at the meeting of the Executive Committee in Perth, Australia on 27 and 28 February 2011.

As of 1 January 2015, the Executive Committee will consist of the following persons:

- Shigefumi Mori, Japan (President)
- Helge Holden, Norway (Secretary)
- Alicia Dickenstein, Argentina (Vice-President)
- Vaughan Jones, New Zealand/USA (Vice-President)
- Benedict H. Gross, USA (Member-at-Large)
- Hyungju Park, Korea (Member-at-Large)
- Christiane Rousseau, Canada (Member-at-Large)
- Vasudevan Srinivas, India (Member-at-Large)
- John Francis Toland, Great Britain (Member-at-Large)
- Wendelin Werner, Switzerland (Member-at-Large)
- Ingrid Daubechies, USA (Ex-officio, because she is the former President of the IMU)

### **Reporting Year**

The reporting year corresponds to the calendar year.

Reports to members are made annually by dispatching the Bulletin of the IMU as well as through publication on the IMU homepage www.mathunion.org.

Appendix 5/4

### **General Assembly**

The following was resolved during the last General Assembly in August 2014:

- Appointments to various committees and commissions
- Budget for the time between 2015 and 2018
- No increase in member contributions
- The next General Assembly will take place in 2018 in São Paulo/Brazil.

#### 2. Tax Information

The Association is registered with the Finanzamt für Körperschaften I, Berlin, under the tax number 27/640/57572.

At the time of the audit, no tax assessment notifications had been issued for the Association, which has had its legal domicile in Germany since 2007.

The Association is non-profit. After common inquiries on 16 April 2007 at the Finanzamt für Körperschaften I, Berlin, the formal requirements for the recognition as a non-profit organization were fulfilled. The final certification of the non-profit status will be made after actual fulfilment of the requirements.

The Finanzamt für Körperschaften I, Berlin, issued a preliminary certification on 4 May 2007. This was done upon the instruction of the Senatsverwaltung für Finanzen, Berlin, before it issued a notice of exemption for 2007 and 2008 on 9 June 2009.

On 28 November 2012 it issued a notice of exemption for 2009 to 2011 in which the current income of the IMU is exempt from corporate and trade tax. In addition, revenue from capital of the IMU is not subject to withholding tax on capital up to 31 December 2016. The IMU is entitled to issue donation confirmations.

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#### [Translator's notes are in square brackets]

### **General Engagement Terms**

for

#### Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms] as of January 1, 2002

This is an English translation of the German text, which is the sole authoritative version

#### 1. Scope

- (1) These engagement terms are applicable to contracts between Wirtschaftsprüfer [German Public Auditors] or Wirtschaftsprüfungsgesellschaften [German Public Audit Firms] (hereinafter collectively referred to as the "Wirtschaftsprüfer") and their dients for audits, consulting and other engagements to the extent that something else has not been expressly agreed to in writing or is not compulsory due to legal requirements.
- (2) If, in an individual case, as an exception contractual relations have also been established between the Wirtschaftsprüfer and persons other than the client, the provisions of No. 9 below also apply to such third parties.

#### 2. Scope and performance of the engagement

- (1) Subject of the Wirtschaftsprüfer's engagement is the performance of agreed services not a particular economic result. The engagement is performed in accordance with the Grundsätze ordnungsmäßiger Berufsausübung [Standards of Proper Professional Conduct]. The Wirtschaftsprüfer is entitled to use qualified persons to conduct the engagement.
- (2) The application of foreign law requires except for financial attestation engagements an express written agreement.
- (3) The engagement does not extend to the extent it is not directed thereto -to an examination of the issue of whether the requirements of tax law or special regulations, such as, for example, laws on price controls, laws limiting competition and Bewirtschaftungsrecht [laws controlling certain aspects of specific business operations] were observed; the same applies to the determination as to whether subsidies, allowances or other benefits may be claimed. The performance of an engagement encompasses auditing procedures aimed at the detection of the defalcation of books and records and other irregularities only if during the conduct of audits grounds therefore arise or if this has been expressly agreed to in writing.
- (4) If the legal position changes subsequent to the issuance of the final professional statement, the Wirtschaftsprüfer is not obliged to inform the client of changes or any consequences resulting therefrom.

#### 3.The client's duty to inform

- (1) The client must ensure that the Wirtschaftsprüfer even without his special request is provided, on a timely basis, with all supporting documents and records required for and is informed of all events and circumstances which may be significant to the performance of the engagement. This also applies to those supporting documents and records, events and circumstances which first become known during the Wirtschaftsprüfer's work.
- (2) Upon the Wirtschaftsprüfer's request, the client must confirm in a written statement drafted by the Wirtschaftsprüfer that the supporting documents and records and the information and explanations provided are complete.

#### 4. Ensuring independence

The client guarantees to refrain from everything which may endanger the independence of the Wirtschaftsprüfer's staff. This particularly applies to offers of employment and offers to undertake engagements on one's own account

### 5. Reporting and verbal Information

If the Wirtschaftsprüfer is required to present the results of the work in writing, only that written presentation is authoritative. For audit engagements the long-form report should be submitted in writing to the extent that nothing else haven agreed to. Verbal statements and information provided by the Wirtschaftsprüfer's staff beyond the engagement agreed to are never binding.

#### 6. Protection of the Wirtschaftsprüfer's intellectual property

The client guarantees that expert opinions, organizational charts, drafts, sketches, schedules and calculations - expecially quantity and cost computations - prepared by the Wirtschaftsprüfer within the scope of the engagement will be used only for his own purposes.

#### 7. Transmission of the Wirtschaftsprüfer's professional statement

- (1) The transmission of a Wirtschaftsprüfer's professional statement (long-form reports, expert opinions and the like) to a third party requires the Wirtschaftsprüfer's written consent to the extent that the permission to transmit to a certain third party does not result from the engagement terms. The Wirtschaftsprüfer is liable (within the limits of No. 9) towards third parties only if the prerequisites of the first sentence are given.
- (2) The use of the Wirtschaftsprüfer's professional statements for promotional purposes is not permitted; an infringement entitles the Wirtschaftsprüfer to immediately cancel all engagements not yet conducted for the client.

#### 8. Correction of deficiencies

- (1) Where there are deficiencies, the client is entitled to subsequent fulfilment [of the contract]. The client may demand a reduction in fees or the cancellation of the contract only for the failure to subsequently fulfill [the contract]; if the engagement was awarded by a person carrying on a commercial business as part of that commercial business, a government-owned legal person under public law or a special government-owned fund under public law, the client may demand the cancellation of the contract only if the services rendered are of no interest to him due to the failure to subsequently fulfill [the contract]. No. 9 applies to the extent that claims for damages exist beyond this.
- (2) The client must assert his claim for the correction of deficiencies in writing without delay. Claims pursuant to the first paragraph not arising from an intentional tort cease to be enforceable one year after the commencement of the statutory time limit for enforcement.
- (3) Obvious deficiencies, such as typing and arithmetical errors and formelle Mangel [deficiencies associated with technicalities] contained in a Writschaftsprüfer's professional statements (long-form reports, expert opinions and the like) may be corrected and also be applicable versus third parties by the Wirtschaftsprüfer at any time. Errors which may call into question the conclusions contained in the Wirtschaftsprüfer's professional statements entitle the Wirtschaftsprüfer to withdraw also versus third parties such statements. In the cases noted the Wirtschaftsprüfer should first hear the client, if possible.

#### 9. Liability

- (1) The liability limitation of \$ ["Article"] 323 (2)["paragraph 2"] HGB [, Handelsgesetzbuch": German Commercial Code] applies to statutory audits required by law.
- (2) Liability for negligence; An individual case of damages

(2) Learnity for negligence, An individual case or darneges in the case of th

#### (3) Preclusive deadlines

A compensatory damages claim may only be lodged within a preclusive deadline of one year of the rightful claimant having become aware of the damage and of the event giving rise to the claim - 1 at the very latest, however, within 5 years subsequent to the event giving rise to the claim. The claim expires if legal action is not taken within a six month deadline subsequent to the written refusal of acceptance of the indemnity and the client was informed of this consequence.

The right to assert the bar of the preclusive deadline remains unaffected. Sentences 1 to 3 also apply to legally required audits with statutory liability

#### 10. Supplementary provisions for audit engagements

- (1) A subsequent amendment or abridgement of the financial statements or management report audited by a Wirtschaftsprüfer and accompanied by an auditor's report requires the written consent of the Wirtschaftsprüfer even if these documents are not published. If the Wirtschaftsprüfer has not issued an auditor's report, a reference to the audit conducted by the Wirtschaftsprüfer in the management report or elsewhere specified for the general public is permitted only with the Wirtschaftsprüfer's written consent and using the wording authorized by him.
- (2) If the Wirtschaftsprüfer revokes the auditor's report, it may no longer be used. If the client has already made use of the auditor's report, he must announce its revocation upon the Wirtschaftsprüfer's request.
- (3) The client has a right to 5 copies of the long-form report. Additional copies will be charged for separately.

#### 11. Supplementary provisions for assistance with tax matters

- (1) When advising on an individual tax issue as well as when furnishing continuous tax advice, the Wirtschaftsprüfer is entitled to assume that the facts provided by the client - especially numerical disclosures - are correct and complete; this also applies to bookkeeping engagements. Nevertheless, he is obliged to inform the client of any errors he has discovered.
- (2) The tax consulting engagement does not encompass procedures required to meet deadlines, unless the Wirtschaftsprüfer has explicitly accepted the engagement for this. In this event the client must provide the Wirtschaftsprüfer, on a timely basis, all supporting documents and records - especially tax assessments - material to meeting the deadlines, so that the Wirtschaftsprüfer has an appropriate time period available to work therewith.
- (3) In the absence of other written agreements, continuous tax advice encompasses the following work during the contract period:
  - a) preparation of annual tax returns for income tax, corporation tax and business tax, as well as net worth tax returns on the basis of the annual financial statements and other schedules and evidence required for tax purposes to be submitted by the client
  - b) examination of tax assessments in relation to the taxes mentioned in (a)
  - c) negotiations with tax authorities in connection with the returns and assessments mentioned in (a) and (b)
  - d) participation in tax audits and evaluation of the results of tax audits with respect to the taxes mentioned in (a)
  - e) participation in Einspruchs- und Beschwerdeverfahren [appeals and complaint procedures] with respect to the taxes mentioned in (a).

In the afore-mentioned work the Wirtschaftsprüfer takes material published legal decisions and administrative interpretations into account.

- (4) If the Wirtschaftsprüfer receives a fixed fee for continuous tax advice, in the absence of other written agreements the work mentioned under paragraph 3 (d) and (e) will be charged separately.
- (5) Services with respect to special individual issues for income tax, corporate tax, business tax, valuation procedures for property and net worth taxation, and net worth tax as well as all issues in relation to sales tax, wages tax, other taxes and dues require a special engagement. This also applies to:
  - a) the treatment of nonrecurring tax matters, e. g. in the field of estate tax, capital transactions tax, real estate acquisition tax
  - b) participation and representation in proceedings before tax and administrative courts and in criminal proceedings with respect to taxes, and
  - c) the granting of advice and work with respect to expert opinions in connection with conversions of legal form, mergers, capital increases and reductions, financial reorganizations, admission and retirement of partners or shareholders, sale of a business, liquidations and the like.

(6) To the extent that the annual sales tax return is accepted as additional work, this does not include the review of any special accounting prerequisites nor of the issue as to whether all potential legal sales tax reductions have been claimed. No guarantee is assumed for the completeness of the supporting documents and records to validate the deduction of the input tax credit.

#### 12. Confidentiality towards third parties and data security

- (1) Pursuant to the law the Wirtschaftsprüfer is obliged to treat all facts that he comes to know in connection with his work as confidential, irrespective of whether these concern the client himself or his business associations, unless the client releases him from this obligation.
- (2) The Wirtschaftsprüfer may only release long-form reports, expert opinions and other written statements on the results of his work to third parties with the consent of his client.
- (3) The Wirtschaftsprüfer is entitled within the purposes stipulated by the client to process personal data entrusted to him or allow them to be processed by third parties.

#### 13. Default of acceptance and lack of cooperation on the part of the client

If the client defaults in accepting the services offered by the Wirtschaftsprüfer or if the client does not provide the assistance incumbent on him pursuant to No. 3 or otherwise, the Wirtschaftsprüfer is entitled to cancel the contract immediately. The Wirtschaftsprüfer's right to compensation for additional expenses as well as for damages caused by the default or the lack of assistance is not affected, even if the Wirtschaftsprüfer does not exercise his right to cancel.

#### 14. Remuneration

- (1) In addition to his claims for fees or remuneration, the Wirtschaftsprüfer is entitled to reimbursement of his outlays: sales tax will be billed separately. He may claim appropriate advances for remuneration and reimbursement of outlays and make the rendering of his services dependent upon the complete satisfaction of his claims. Multiple clients awarding engagements are jointly and severally liable.
- (2) Any set off against the Wirtschaftsprüfer's claims for remuneration and reimbursement of outlays is permitted only for undisputed claims or claims determined to be legally valid.

#### 15. Retention and return of supporting documentation and records

- (1) The Wirtschaftsprüfer retains, for ten years, the supporting documents and records in connection with the completion of the engagement that had been provided to him and that he has prepared himself as well as the correspondence with respect to the engagement.
- (2) After the settlement of his claims arising from the engagement, the Wirtschaftsprüfer, upon the request of the client, must return all supporting documents and records obtained from him or for him by reason of his work on the engagement. This does not, however, apply to correspondence exchanged between the Wirtschaftsprüfer and his client and to any documents of which the client already has the original or a copy. The Wirtschaftsprüfer may prepare and retain copies or photocopies of supporting documents and records which he returns to the client.

#### 16. Applicable law

Only German law applies to the engagement, its conduct and any claims arising therefrom.

## 2.4. IMU Special Development Fund

Contributions to the IMU Special Development Fund.

2014

London Mathematical Society, UK	4,023.17 EUR
Mathematical Society Japan	14,232.45 EUR

## 2.5. Third-Party Donations (monetary contributions)

2014

American Mathematical Society, US	13,466.83 EUR
ICSU	30,000.00 EUR
Niels Henrik Abel Board, Norway	42,922.20 EUR
Simons Foundation, US	19,012.85 EUR

## 2.6. IMU Bank accounts

International Mathematical Union, Markgrafenstr. 32, D-10117 Berlin, Germany

Berliner Bank

Niederlassung der Deutsche Bank Privat- und Geschäftskunden AG

Hardenbergstr. 32, D-10623 Berlin, Germany

BIC (SWIFT) code: DEUTDEDB110

<u>CHF transfer</u> to account No.:	EUR transfer to account No.:	USD transfer to account No.:
IBAN code:	IBAN code:	IBAN code:
DE58100708480511391501	DE85100708480511391500	DE85100708480511391500

## 3. Commissions and committees

## 3.1. International Commission on Mathematical Instruction (ICMI)

http://www.mathunion.org/icmi

## **Activity and Financial Report 2014**

Ferdinando Arzarello, Abraham Arcavi, Lena Koch



### 2014 at a glance

### **Key activities:**

### **Administration and Governance**

The ICMI Executive Committee (2013-2016) held its second meeting in Rio de Janeiro, Brazil from April 22-24, 2014. The third meeting will be held in Macao, China from May 30 – June 2, 2015. The formation of the Nomination Committee for the upcoming ICMI EC (2017-2020) has commenced.

#### **Member Countries**

In 2014, ICMI had 92 member countries, 70 are also members of IMU and 10 are associate members of IMU.

#### **ICMI Regional Conferences**

In 2014 ICMI was involved in the preparation of the following regional conferences:

CIAEM-14 (XIV Inter-American Conference on Mathematics Education), which will be held in Tuxtla Gutiérrez, Chiapas, Mexico, from May 3-7, 2015 (http://xiv.ciaemiacme.org/index.php/xiv\_ciaem/xiv\_ciaem).

The 7th EARCOME conference "In Pursuit Of Quality Mathematics Education For All" will be held in the Philippines from May 11-15, 2015 (http://earcome7.weebly.com/).

The sixth EMF conference (L'Espace Mathèmatique Francophone - EMF- 2015) which will be held in Algeria from October 10-14, 2015.

The Espaço Matemático em Língua Portuguesa was created and preparations started for its first meeting from October 28-31, 2015, Coimbra, Portugal.

#### **ICMI Studies**

ICMI Study 21 "Mathematics Education and Language Diversity": Jointly edited by members of the IPC, coordinated by IPC member Richard Barwell (Canada), was finalized in 2014 and submitted to the publisher.

ICMI Study 22 "Task Design in Mathematics Education": Co-chaired by Anne Watson (UK) and Minori Ohtani (Japan). The proceedings of the conference were uploaded for free use (hal.archives-ouvertes.fr/hal-00834054). The Study Volume has been completed and submitted to the publishers.

ICMI Study 23: "Primary Mathematics Study on Whole Numbers": Co-chaired by Mariolina Bartolini Bussi (Italy) and Sun Xuhua (China). The IPC meeting was held in January 2014, the ICMI Study Conference will be held from June 3-7, in Macau, China (http://www.umac.mo/fed/ICMI23/).

### **Outreach to Developing Countries**

The following activities under the umbrella of the Capacity and Network Project (CANP) were held in 2014:

**CANP 4, East Africa**: The IPC and Local Organizing committee started working in 2013. The fourth CANP was held from September 1-12, 2014, in Dar es Salaam, Tanzania (http://www.mathunion.org/icmi/activities/outreach-to-developing-countries/canp-project-2014-east-africa/?no cache=1&sword list%5B%5D=tanzania).

**CANP 5, Andean Region**: in 2014 the ICMI EC selected the fifth region with the participation of the following countries: Bolivia, Ecuador, Peru, Paraguay and Amazonian Brazil. The Program Manager and Local Coordinating Chair have been selected and started working in 2014. The fifth CANP will be held in February 2016.

#### Klein Project

A Klein Workshop and a meeting for the design team were held in <u>Rio de Janeiro</u>, Brazil in April 2014.

#### **ICMI Awards**

In 2014 the first Emma Castelnuovo Award Committee was selected and started working. The mandate of the F. Klein and the H. Freudenthal Awards Committee was extended for one year (until 2016) in order to complete the selection process of the 2015 awardees.

#### ICME-13

Preparations for the ICME-13 to be held in Hamburg on July 24-31, 2016 (<a href="http://icme13.org/">http://icme13.org/</a>) were under way.

#### **Outreach and Dissemination of Information**

- Three issue of the ICMI Newsletter were published and distributed (March 1, July 1 and November 1, see <a href="http://www.mathunion.org/icmi/publications/icmi-news/?no-cache=1&sword-list%5B%5D=newsletter">http://www.mathunion.org/icmi/publications/icmi-news/?no-cache=1&sword-list%5B%5D=newsletter</a>)
- Papers from hitherto unpublished issues of the ICMI Bulletin were assembled and published on the ICMI website: http://www.mathunion.org/?id=2750

- ICMI materials were distributed at various conference and events, e.g. at the MENAO symposium in Seoul, Korea, at the ICM in Seoul, during CANP East Africa and other events.
- The regular columns on ICMI News were published in the journal <u>L'Enseignement</u> <u>Mathématique</u> (the official organ of ICMI) and the December Issue of the Newsletter of the European Mathematical Society.
- ICMI Archives: activities to document and preserve items from the history of ICMI are ongoing.

#### 2014 in Detail

### **Administration and Governance**

## **Organization**

### **ICMI Members and Representatives**

In 2014 ICMI had 92 member countries, 70 are also members of IMU and 10 are associate members of IMU. Each member country is required to elect an ICMI Representative who represents the ICMI member country at the ICMI General Assembly and has the (sole) voting right for the ICMI Executive Committee (ICMI EC). The ICMI representatives also inform the national communities of developments within ICMI.



Participants ICMI EC Meeting April 2014, IMPA Rio de Janeiro, Brazil
Yuriko Yamamoto Baldin, Angel Ruiz, Jean-Luc Dorier, Bill Barton, Lena Koch, Abraham Arcavi, Ferdinando Arzarello, Zahra Gooya,
Cheryl E Praeger (from left to right)

#### **Executive Commission 2013-2016**

The members of the EC 2013-2016 are: PRESIDENT: Ferdinando Arzarello (Italy)

SECRETARY-GENERAL: Abraham Arcavi (Israel) VICE-PRESIDENT: Cheryl Praeger (Australia) VICE-PRESIDENT: Angel Ruiz (Costa Rica)

MEMBERS AT LARGE (5): Jean-Luc Dorier (Switzerland)

Yuriko Baldin (Brazil) Roger Howe (USA)

Catherine P. Vistro-Yu (Philippines)

Zahra Gooya (Iran)

Ex officio: Bill Barton (New Zealand) (Past President of ICMI) Ingrid Daubechies (President of IMU) (until 31.12.2014) Martin Grötschel (Secretary of IMU) (until 31.12.2014)

Cheryl Praeger was the ICMI liaison person with the IMU EC until December 31, 2014.

The second meeting of the 2013-2016 Executive Commission took place in Rio de Janeiro, Brazil in April 2014.

#### **IMU Secretariat**

The IMU Secretariat in Berlin, Germany gives administrative and logistical support for ICMI activities. Lena Koch is the ICMI administrator and responsible for all administrative and organisational issues regarding ICMI. Other staff members in Berlin also assist ICMI, including the IMU Secretariat Manager, the accountant, the IT and technical support staff member as well as the IMU Archivist and the Head of the IMU Secretariat.

In January 2014 the ICMI Study 23, IPC meeting was held in the premises of the IMU Secretariat and was financially supported by the funds of the IMU Secretariat (German Ministry of Education and Research and the City of Berlin).

### **ICMI General Assembly**

The next ICMI General Assembly will take place in Hamburg, Germany on Saturday, 23 July 2016.

### **ICMI Affiliate Organizations**

ICMI's organisational outreach includes ten multi-national organisations and study groups with interest in mathematics education.

Affiliated organisations are independent from ICMI and are self-financed. They collaborate with ICMI on specific activities, such as the <u>ICMI Studies</u> or CANP. The ICMI Affiliate Organisations also produce reports for the <u>General Assembly of ICMI</u>. There are currently four multi-national <u>Mathematical Education Societies</u> (one affiliated in 2011) and six international <u>Study Groups</u>, which have obtained affiliation to ICMI.

The multi-national Mathematics Education Societies currently affiliated to ICMI, with year of affiliation are:

- <u>CIAEM</u>: Inter-American Committee on Mathematics Education (2009)
- <u>CIEAEM</u>: International Commission for the Study and Improvement of Mathematics Teaching (2010)
- ERME: European Society for Research in Mathematics Education (2010)
- MERGA: Mathematics Education Research Group of Australasia (2011)

The Study Groups currently affiliated to ICMI, with their year of affiliation, are:

- <u>HPM</u>: The International Study Group on Relations between the History and Pedagogy of Mathematics (1976)
- ICTMA: The International Study Group for Mathematical Modelling and Applications (2003)
- <u>IOWME</u>: The International Organization of Women and Mathematics Education (1987)
- MCG: The International Group for Mathematical Creativity and Giftedness (2011)
- PME: The International Group for the Psychology of Mathematics Education (1976)
- <u>WFNMC</u>: The World Federation of National Mathematics Competitions (1994)

## The International Congress on Mathematical Education (ICME)

#### ICME-13

Hamburg, Germany will host the next ICME-13 from 24 -31 of July 2016. More than 3,000 participants from 80 countries are expected to participate. Gabriele Kaiser, of the University of Hamburg, is chairing the International Programme Committee (IPC) and is the convener of the conference.

Information about the congress is available at: http://icme13.org

Each ICME devotes at least 10 per cent of the registration fees to the ICME Solidarity Fund that allows organizers to give support to some participants from developing countries. The composition of the ICME-13 Solidarity Fund Committee will consist of three ex-officio members: the Chairperson of the IPC, the Chairperson of the LOC and the ICMI Secretary-General and three other members representing the IPC (chosen by the IPC Chairperson), the LOC (chosen by the LOC Chairperson) and the ICMI EC (chosen by the EC). In 2013 the ICMI EC decided that ICMI Vice President Angel Ruiz and Abraham Arcavi, ICMI Secretary-General will represent the ICMI EC in this important committee. Other members of the grant committee are Gabrielle Kaiser (Chair of IPC), Marianne Nolte (Chair of LOC), one person representing the IPC (chosen by the chair of IPC) and one person representing the LOC (chosen by the chair of the LOC). The grants committee will meet in February 2016 to make decisions.

#### ICME-14

The call for intention to bid for ICME-14 in 2020 was distributed globally and resulted in three firm bids to host ICME-14 in 2020.

### **ICM 2014**

The ICM 2014 was held in Seoul, Korea, August 13 - 21, 2014. One day of the ICM is dedicated to Mathematics Education and Popularization of Mathematics. Several ICMI members participated in the program; videos and further information about the invited talks and panels of the "Mathematics Education and Popularization of Mathematics" can be found here:

http://www.mathunion.org/icmi/news/details/?tx\_ttnews[tt\_news]=889&cHash=6feb99c0dbc beeeef7360674b5f25fb9.

### **ICMI Regional Conferences**

Launched in the mid-seventies, ICMI Regional Conferences aim to facilitate wider discussion of mathematical education issues in particular regions. No regional conference was held in 2014.

In 2014 ICMI was involved in the preparation of the following regional conferences:

CIAEM-14 (XIV Inter-American Conference on Mathematics Education) will be held in Tuxtla Gutiérrez, Chiapas, Mexico, May 3-7 2015. Angel Ruiz is the chair of the conference.

The 7th EARCOME conference "In Pursuit Of Quality Mathematics Education For All" will be held in the Philippines from May 11-15, 2015. Catherine Vistro Yu is the chair of the conference and Yuriko Baldin is the ICMI EC Liaison person.

The sixth EMF conference (Espace Mathèmatique Francophone) EMF- 2015) will be held in Algeria from October 10- 14, 2015. Jean Luc Dorier is the ICMI EC Liaison person and a member of the scientific committee of the conference.

#### **ICMI Studies**

A major ICMI programme is the series of ICMI Studies. Each Study addresses an issue or topic of particular significance in contemporary mathematical education, and is conducted by an international team of leading scholars and practitioners. Built around an international conference, it is directed towards the preparation of a published volume to promote discussion and action at the international, regional or institutional level. More than 21 volumes have been published between 1986 and 2014.

The series editors 2013-2016 are ICMI President Ferdinando Azarello, Secretary-General Abraham Arcavi and Vice President Cheryl Praeger.

Current Studies are:

### **ICMI Study 21: Mathematics Education and Language Diversity:**

The Study Conference took place in Águas de Lindóia, São Paulo, Brazil, on 16-20, September 2011. The Study Volume has entered the editing process and will be published in 2015 (NISS 17).

**ICMI Study 22:** The study on Task Design was launched 2010. The co-chairs are Anne Watson (Oxford University) and Minoru Ohtani (University of Kanazawa, Japan). The Study conference was held 2013 in Oxford, UK and Ferdinando Arzarello and Abraham Arcavi represented the ICMI EC. In 2014 the editing process started and the Study Volume will be published 2015.

ICMI Study 23 Primary Mathematics Study on Whole Numbers was launched in 2012, Co-Chairs are Mariolina Bartolini Bussi, <u>University Modena e Reggio Emilia</u>, Italy and <u>Sun Xuhua</u> of the University of Macau, China. The IPC has been appointed and started working in 2013. The IPC meeting has been held January 19-24, 2014 at the IMU Secretariat in Berlin, Germany. The Study Conference will be held in June 2015 in Macau, China. Roger Howe is the Liaison to ICMI Study 23.

### The Klein Project

The Klein Project, inspired by Felix Klein's Elementary Mathematics from an Advanced Standpoint, provides contemporary mathematics for mathematics teachers.

A workshop "Challenges and Opportunities" was held from April 14-16, 2014 at IMPA in Rio de Janeiro, Brazil. About 60 participants participated in the three-day meeting. http://klein.sbm.org.br/workshop/

The Vignettes are being distributed via a Blog (http://blog.kleinproject.org/ under the coordination of Bill Barton.

Bill Barton presented the Klein Project at Rennes University in France in September 2014 as well as at the Simon Fraser University and University of British Columbia in Vancouver, Canada in November 2014.

### **Outreach to Developing Countries**

### **Capacity and Networking Project (CANP)**

CANP aims to enhance mathematics education in developing countries by supporting the educational capacity of those responsible for mathematics teachers, and creating sustained regional networks of teachers, mathematics educators and mathematicians, linking them to international support.

The first CANP Program, CANP EDIMath Sub Sahara Africa was held for two weeks in 2011 in Mali with about 40 participants from five countries in the region. The follow up meeting of CANP Sub-Sahara EDIMath was successfully held in September 2012 in Senegal.

The second CANP Programme, CANP Central America and the Caribbean, held its two-week workshop in 2012 with 67 researchers and educators from Colombia, Panama, Venezuela, Dominican Republic, Spain, Mexico, Cuba and host country Costa Rica. The most important result of CANP Costa Rica 2012 was the founding of the *Mathematics Education Network of Central America and the Caribbean*, which seeks to enhance capacities in

Mathematics and Mathematics Education in the region. The website is: <a href="http://redumatematicacyc.net">http://redumatematicacyc.net</a>. In 2013 the Network met (as a follow up) in November 6-8 in Santo Domingo, Dominican Republic. In 2014 the Central American and the Caribbean National Report was translated into English and can be found here: <a href="http://www.mathunion.org/icmi/activities/outreach-to-developing-countries/canp-project-2012-central-america-and-the-caribbean/">http://www.mathunion.org/icmi/activities/outreach-to-developing-countries/canp-project-2012-central-america-and-the-caribbean/</a>

**CANP 3 South East Asia:** The Third Capacity and Network Project (CANP) started with a two week workshop which was held from 14th to 25th October, 2013 in Phnom Penh, Cambodia with more than 40 participants from Cambodia, Laos, Thailand and Vietnam.

**CANP 4, East Africa**: The Local Organizing Team, led by Anjum Halai and the Programme Manager, Ferdinando Arzarello met 21-23. February in Dar el Salaam to prepare CANP 4, East Africa. The workshop was held in Dar el Salaam 1-12. September 2014. Mathematics educators from East Africa and gathered at the Aga Khan University Institute for Educational Development from September 1 to 12, for the Capacity and Network Project (CANP) East Africa conference.

About 80 mathematics teachers and teachers' educators from Tanzania, Kenya, Uganda and Rwanda participated in the conference aimed at advancing mathematics education in East Africa. In addition to East African representatives, speakers from Botswana, Canada, Mozambique, France, Italy, South Africa, and Sweden participated in the conference. Among the speakers were Edward Lungu (Botswana), Jill Adler (South Africa, former ICMI EC member), Christiane Rousseau (Canada and IMU EC member) and Daniel Nyanganyura (ICSU Regional Office, ROA, South Africa) as well as the local programme chair, Anjum Halai from the Aga Khan University, and ICMI president and CANP 4 Programme Manager Ferdinando Arzarello.

CANP 5, Andean Region: In 2014 the ICMI EC selected the fifth region. The following countries will be invited to participate: Bolivia, Ecuador, Peru, Paraguay and Amazonian Brazil. The Program Manager and Local Coordinating Chair have been selected (Yuriko Baldin and Uldarico Malaspina) and started working in 2014. The fifth CANP will be held in February 2016. In 2014 Yurko Baldin visited the headquarters of JICA, in Tokyo, as ICMI EC member, and presented the programs of ICMI around the world and to seek support to the activities in South America especially for CANP 5- Andean region. The JICA keep offices and activities including Education in the participating countries of CANP5. ICMI is hoping to involve JICA in the CANP 5 workshop.

### **IMU - Commission for Developing Countries (CDC)**

The ICMI EC also appoints one member of the IMU Commission for Developing Countries (CDC). The ICMI EC 2010-2012 nominated Angel Ruiz as member of this Commission (2010-2014).

### **MENAO Symposium at the ICM**

In 2014, the IMU held a daylong symposium prior to the opening of the International Congress of Mathematicians (ICM), entitled *Mathematics in Emerging Nations:*Achievements and Opportunities (MENAO). Approximately 260 participants from around the world, including representatives of embassies, scientific institutions, private business and foundations attended this session. Attendees heard inspiring stories of individual mathematicians and specific developing nations. Cheryl Praeger chaired the MENAO symposium and Angel Ruiz supported the MENAO symposium and its related activities in his

position as ICMI representative in the IMU-CDC. More information, all lectures and the result booklet can be found here: http://www.mathunion.org/cdc/menao/.

#### **ICMI Awards**

In 2003 ICMI created two awards in mathematics education research: the Felix Klein Award, for lifelong achievement in mathematics education research and the Hans Freudenthal Award for a major programme of research on mathematics education. These awards are announced every two years and conferred at the opening ceremonies of ICMEs. The next award will be announced in 2015. The Klein and Freudenthal Awards Committee has six members and is currently chaired by Carolyn Kieran (Canada).

In 2014 ICMI created a new award named after Emma Castelnuovo. The award committee was formed in 2014 and consists of six members, currently chaired by Jeremy Kilpatrick (USA).

#### **Communication and Outreach**

ICMI uses the following channels of communication with professional organizations and the general public:

- The ICMI News Newsletter is issued three times a year (July 1, November 1, March 1) and includes relevant news, announces activities, and presents reports. The newsletter includes a short editorial by an ICMI EC member and serves to disseminate ICMI information. The ICMI Newsletter editors are Cheryl Praeger and Abraham Arcavi.
- ICMI has a column in the newsletter of the European Mathematical Society (four publication per year) and in L'Enseignement Mathématique. Jean Luc Dorier is the ICMI contact person.
- ICMI is actively maintain its website www.mathunion.org/icmi. The editor is Lena Koch. The ICMI website is hosted on the IMU server in Berlin.
- Each spring ICMI is issuing an annual activity and financial report to IMU.
- The ICMI Facebook page was established in 2011 and has more than 4,700 likes. The editors are Jaime Carvalho e Silva and Lena Koch.

These channels of communication cover ICMIs archival requirements and fulfil ICMI's statutory obligations. It was unanimously decided to discontinue the production of the Bulletin, whose functions will be fully covered by the four channels described above.

All communications except the Social Media Site are under the Senior Editorship of the ICMI Secretary-General.

#### **Further Activities**

#### **ICMI Digitization Program**

The ICMI Digital Library Project aims at providing open access to all ICMI publications and thematic Studies. Currently proceedings of the symposium organized in the year 2000 on the occasion of the centennial of L'Enseignement Mathématique, the official organ of ICMI, the first five ICMI Studies, ICMI Bulletins, and proceedings various meetings and conferences are available for free download on the ICMI website.

http://www.mathunion.org/icmi/digital-library/introduction/.

### **Database Project**

The Database Project, launched in 2011 has as its ultimate goal to build up a free access database of the mathematics curricula (ranging from pre-primary, primary, elementary, middle, secondary to vocational and undergraduate university level) from all over the world. Useful web links can be sent to

the ICMI Secretary General. Currently information from 28 countries is available on the ICMI website. The database is already in use by researchers and curriculum-developers.

### **Further International Cooperation and Outreach**

In March 2014 Ferdinando Arzarello met in Koblenz the different groups, which are organizing the Thematic Afternoon on European Didactic and German Speaking Traditions, Legacy of Felix Klein and European Didactic Traditions at the next ICME in Hamburg (July 24. -31. 2016): see cme13.org/thematic afternoon.

Ferdinando Arzarello presented ICMI in the IMU General Assembly in Korea and gave a report about the past ICMI activities and a financial report (2010-2014).

Cheryl Praeger participated in the ICSU General Assembly in September 2014, in Auckland NZ as an Australian voting delegate but liaised with the IMU delegation. She also participated in IMU EC meetings in August 2014 before the IMU GA, and also during the ICM, participated in the IMU GA and was a Chair of the Credentials Committee.

Bill Barton and a student assistant (Kimberly Strauch) participated in the 4th USA Science & Engineering Festival, which was held in Washington, DC in April 2014. The festival is a large science festival, featuring contests and school programs (<a href="http://www.usasciencefestival.org/">http://www.usasciencefestival.org/</a>). ICMI activities and in particular the Klein Project were presented.

All ICMI EC members kept their national organisations and adhering organisations informed about ICMI developments.

#### **ICMI Archival Activities**

Bernard Hodgson, the ICMI Archive Curator visited the IMU Secretariat Archive from May 13-21 of May 2014. He took first steps towards digitalising old ICMI materials. He also met with the IMU Secretariat Archivist Birgit Seeliger and the IMU Archive Curator Guillermo P. Curbera and the IMU Secretary Martin Groetschel to discuss archiving issues.

### Espaço Matemático em Lingua Portuguesa

In 2014 Yuriko Baldin became a liaison member of the EMeLP (Espaço Matemático em Lingua Portuguesa) which was constituated at the joint meeting of ICMI representatives of Brazil, Portugal and Mozambique. The first conference of EMeLP, including Cabo Verde will be held in Coimbra, Portugal in October 2015.

#### **Financial Summary**

ICMI's principal source of 'core' income is an annual grant from the International Mathematical Union (IMU) that receives its financial support from IMU member countries.

In 2014 ICMI additionally received a grant (Euro 10,000) from the IMU Secretariat (based at the WIAS Berlin) to hold the ICMI Study 23, IPC meeting in Berlin. The IMU Secretariat receives an annual subvention from the IMU Secretariat host country (Germany) to run all its administrative business. In 2014 ICMI also received a grant from ICSU for the CANP 4 Tanzania workshop (Euro 30,000) as well as a grant from UNESCO for CANP 4 (Euro 2,692.80). The other major financial support for ICMI activities is financial support via the home institutions of its members. The ICMI EC approves the ICMI budget and all its related spending.

The ICMI EC would like to thank in IMU, ICSU, UNESCO, the IMU Commission for Developing Countries (IMU-CDC), the IMU Secretariat and all individuals who are actively involved in ICMI activities very much for all the support and collaboration.

More information about ICMI can be found on the website: www.mathunion.org/icmi.

Ferdinando Arzarello, ICMI President Abraham Arcavi, ICMI Secretary- General Lena Koch, IMU Secretariat May 2015

Photo credits: Anjum Halai Jaime Carvalho e Silva Lena Koch

## ICMI Income and Expenditure 1.1.2014-31.12.2014\*

All income in EURO.

**% Revenue by Source** In EURO Savings 2013 (1.1.2014) 67% € 190,099.21 Return funds WIAS € 2,340.19 1% IMU Grant 2014 € 54,895.30 20% **Institutional Fundraising** UNESCO Grant CANP Tanzania € 2,692.80 1% 10% ICSU Grant € 30,000.00 **Interest** 0.03% Bank Interest € 73.52 **Publishing Revenue** Springer Royalties € 520.71 0.17% **Total Income 2014** € 280,621.73 € 280,621.73 100% **EXPENDITURE** by Category ICMI EC MEETING RIO € 14.239.22 17.34% IPC Meeting 22 and 23 € 807.49 0.98% ICMI Website work 0.29% € 236.55 **CANP** Tanzania 63.39% € 52,053.35 **CANP SEA** € 244.86 0.30% Meeting Koblenz March 2014 € 414.17 0.50% Science Fair USA (including PR work) 6.69% € 5,492.50 € 600.00 0.73% Klein Project Blog Assistant € 961.02 1.17% Klein Project Rio ICMI Curator Visit Berlin € 1,938.55 2.36% ICM 2014 Seoul (hotel cost) € 1,997.04 2.43%

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<sup>\*</sup> Budget does not include the flight cost for the ICME-14 (2020) site visits which were spent in 2014, but will be returned to ICMI in 2015 by the three bidding committees.

ICMI EC Meeting 2015	€ 3,077.59	3.75%
Bank Account fee	€ 52.90	0.06%
Total Expenditure in 2014	€ 82,115.24	100%

## 3.2. Commission for Developing Countries (CDC)

http://www.mathunion.org/cdc/

## Report on CDC activities in 2014

Herb Clemens & Lena Koch



The Commission for Developing Countries (CDC) is a nine-member commission. Its members are elected or appointed for a four-year term by the <a href="MUGeneral Assembly">IMU General Assembly</a>.

### The CDC members 2011-2014 were:

- José-Antonio de la Peña (Mexico) CDC President
- C. Herbert Clemens (USA) CDC Secretary for Policy
- Srinivasan Kesavan (India) CDC Secretary for Grant Selection
- Carlos Cabrelli (Argentina) Latin American Member
- Wandera Ogana (Kenya) African Member
- Hoang Xuan Phu (Vietnam) Asian Member
- Ragni Piene (Norway) CDC member appointed by the IMU EC
- Polly W. Sy (Philippines) CDC member appointed by the IMU EC
- Angel Ruiz (Costa Rica)- CDC member appointed by the ICMI EC
- Ingrid Daubechies (USA), IMU President and Ex-officio CDC Member

The CDC is supported by staff members of the IMU Secretariat, Berlin who manage most of the administration of the CDC.

During 2014 the Commission for Developing Countries (CDC) has continued to use the funds it receives from the International Mathematical Union (IMU) to support mathematics research and advanced mathematical teaching in developing countries, guided by the basic principles incorporated into its original charge:

- I. Work with and support local mathematical leadership in developing countries.
- II. Leverage resources through partnering and networking with other organizations with goals compatible with the CDC mandate.
- III. Set clear norms of quality, transparency and accountability.

Guided by these principles, the CDC allocated its funds in 2014 for the following purposes:

### A) Project Support

Under this category the CDC supported capacity building projects and programs in mathematics and mathematics education, be they international, regional or local initiatives in developing countries. The CDC evaluates and selects the grant recipients.

### **B) Volunteer Lecturer Program**

The goal of this program is to offer universities in the developing world lecturers for intensive 3-4 week courses in mathematics at the advanced undergraduate or master's level.

### **C)** Grants for Conferences

The Conference Support Program gives partial support to conferences organized in developing and economically disadvantaged countries. The Program also supports major international conferences occurring in developed countries to enable them to invite mathematicians from developing counties. The funds are for academic use only (travel or living expenses of invited speakers or participants coming from developing countries). The CDC Grant Selection Committee (GSC) selects the grant recipients.

#### D) IMU-Simons Travel Fellowship for Individuals

The IMU- Simons Travel Fellowship supports travel costs for research visits (minimum stay is four weeks) by mathematicians based in developing and economically disadvantaged countries to an international centre of excellence. The Simons Foundation, based in New York, funds the program. The Foundation has been annually giving the amount of USD 25,000 during the period 2014-2016. It replaces the Individual Research Travel Grant Program during this time. The CDC Grant Selection Committee (GSC) selects the grant recipients.

## E) Abel Visiting Scholar Program

In 2013 the Niels Henrik Abel Board (Norway) and the CDC launched the "Abel Visiting Scholar Program". The Niels Henrik Abel Board gives an annual grant of USD 15,000 to support mathematicians professionally based in developing countries to visit an international research collaborator for a period of one month. The period is extendable for up to three months in the case of matching support from the host institution. The program is designed for postdoctoral mathematicians in the early stages of their professional careers. It is designed to offer the opportunity for a 'research sabbatical,' a necessary complement to teaching and other academic duties for mathematicians desiring to also sustain a viable research program. The Abel Visiting Scholar Program Selection Committee selects the grant recipients.

**F)** Reports on mathematics research and graduate education in emerging nations CDC members and regional partners prepared three reports about the current state of mathematics in Africa, Asia and Latin America and on opportunities for new initiatives to

support mathematical development. The reports were made available in August 2014 at the MENAO Symposium. They can be found at: http://www.mathunion.org/cdc/research-and-useful-links/

### **G) Special Projects: MENAO**

In 2014 CDC members and in particular the CDC MENAO sub-committee members Herb Clemens, Ragni Piene and Wandera Ogana and the CDC Administrator invested considerable energy and time organizing the *Mathematics in Emerging Nations: Achievements and Opportunities* (MENAO) symposium. The daylong event was held prior to the opening of the International Congress of Mathematicians (ICM) in Seoul, Korea on August 12<sup>th</sup>, 2014.

#### **Administrative Costs**

Administrative costs are kept to no more than 10% of the CDC operating budget. The CDC Administrator salary and many other administrative expenses are covered by the IMU Secretariat budget, which receives its funds from the German Ministry of Education and Research (BMBF) and the Federal State of Berlin. Therefore administrative costs charged to the IMU budget were very low in 2014.

### A) Project Support

In 2014, projects and activities in Africa, South East Asia, Mongolia and Central America were supported from the CDC Project Grant program:

#### AMMSI 2014 Scholarships

AMMSI is a network of mathematics centres in sub-Saharan Africa that organizes conferences and workshops, visiting lectureships and an extensive scholarship program for mathematics graduate students doing PhD work on the African continent.

As in the previous years, the CDC supported in 2014 the request from AMMSI to support the African graduate student scholarship program in the amount of EURO 20,000 for the academic year 2014. USD 2,000 was used for administration and the remainder of the EURO 20,000 went to African graduate students as scholarships.

The AMMSI scholarship program continued to need international bridge funding to maintain its vital work of supporting the continent's next generation of mathematical leadership. In 2014 the supported students were from the University of Ngaoundere, Cameroon, University of Dar el Salaam, Tanzania, Malawi Mzuzu University, University of Zambia, Zambia and the University of Botswana, Botswana.

More details can be found on the AMMSI website: http://www.ammsi.org

### CIMPA IBN Prize

CDC supported the 2013 Ibni Oumar Mahamat Saleh Prize with EURO 1,500. The awardee was Koffi Wilfrid Houeadanou. More information can be found at:

http://smf4.emath.fr/en/PrixIbni/Documents/proclamation-2013-en.pdf

### XXX Iberoamerican Math Olympiad

In 2014 the CDC gave a grant to support the XXX Iberoamerican Math Olympiad in 2015 in Puerto Rico (EUR 5,000).

#### Mongolia

The CDC supported the visit of Michel Jambu and Herb Clemens to Mongolia in September 2014. An agreement was reached with the University of Mongolia to begin participation in the CDC's Volunteer Lecturer Program. Michel Jambu remained at the University of Mongolia to give an intensive 3-week short course. CDC supported this activity with Euro 2,422.36.

### **Master Student Support**

The CDC gave support to the Cambodian RUPP student Chuum Veasna, to travel to CIMAT

(Mexico) to complete a master's degree. CIMAT gives support for local expenses (housing and food) and CDC supported his travel cost to Mexico (EURO 1,500).

### B) Volunteer Lecturer Program (VLP)

The CDC supported eight lecturers under its Volunteer Lecturer Program in 2014:

- 1. <u>B. Rousselet</u> (University of Nice Sophia Antipolis, France) gave a course, as a part of the Master of Mathematics program of RUPP (Cambodia) during February 2014. CDC supported the course with € 2,349.94.
- 2. <u>Fidel R. Nemenzo</u> (University of the Philippines) gave a course in "Introduction to Number Theory" as a part of the Master of Mathematics program of RUPP (Cambodia) from 1 -18 April 2014. CDC supported the course with € 1,949.73.
- 3. <u>Patrick Scott</u> (University of New Mexico, USA) visited the Universidad Pedagógica Nacional Francisco Morazán in Tegucigalpa, Honduras to deliver an intensive course from September 28 October 30, 2014. CDC supported the course with € 2,963.84.
- 4. <u>Kasso A. Okoudjou</u>, (University of Maryland, College Park, USA) gave a course in "Harmonic analysis, time-frequency analysis, and wavelets" at Institut de Mathematiques et de Sciences Physiques (IMSP) de l'Université d'Abomey Calavi, Benin from January 7 January 26, 2014. CDC supported the course with € 706.11.
- 5. <u>Gonzalo Aranda Pino</u> (Universidad de Málaga, Spain) gave a course in "Number Theory", from 24 November 19 December 2013 in Erbil, Iraq, Erbil CDC supported the course with € 3,403.82.
- 6. <u>Brigitte Lucquin</u> (Université Pierre et Marie Curie Paris 6, France) gave a course in "Introduction aux equations aux derivees partielles et a leurs approximations II" as part of the Master of Mathematics program of RUPP (Cambodia) from 11 29 November 2013. CDC reimbursed the cost of € € 870.00
- 7. <u>Rüdiger Müller</u>, (WIAS Berlin, Germany) gave a course in "Numerical Methods for Partial Differential Equations" Dec. 2 Dec. 21, 2013 at Urgench State University, Urganch City, Uzbekistan. CDC reimbursed from its 2014 funds the accommodation and living costs. CDC supported the course with € 1,006.55.
- 8. <u>Michel Jambu</u>, (Université de Nice Sophia Antipolis) gave Professeur Emérite Laboratoire J.A. Dieudonné UMR 7351 CNRS a course from December 13, 2013- January 6, 2014 at the Master Program at RUPP, Cambodia. CDC supported the course with €1,448.15.

## C) Grants for Conferences

During the interval 1st January – 31st December 2014, the Grant Selection Committee of the Commission for Developing Countries received a total of  $\bf 48$  applications for financial support, in the two existing categories:

Conferences in developing countries\*
Conferences in developed countries\*\*

\_

<sup>\*</sup> In 2010, the IMU/CDC definition of a developing country was where the Per Capita Gross National Income according to the World Bank's Development Indicators (Atlas methodology) was not in excess of USD 7,500 (World Development Indicators database, World Bank, revised 9 July 2010.)

#### A total of 29 awards were made.

## **Conferences in developing countries**

Support was granted in **27 cases** for conferences taking place in the following developing countries:

Country	Number of Awards	Total value of awards (Euro)
Argentina	4	8,000
Brazil	1	2,000
Cameroon	3	4,500
Colombia	1	2,500
Ecuador	1	1,000
India	2	3,000
Indonesia	1	1,500
Iran	2	3,500
Laos	1	1,500
Mongolia	1	2,500
Morocco	4	6,000
Pakistan	2	2,500
Palestine	1	1,000
Peru	1	2,000
Senegal	1	2,000
Serbia	1	1,500
Tunisia	1	2,000
Total	27	€47,000

## **Conferences in Developed Countries**

Support was granted in **2 cases** for conference participation of developing country mathematicians to conferences taking place in the following **developed countries**:

Country	Number of Awards	Total value of awards (Euro)
Uruguay	2	€4,500
Total	2	€4,500

<b>Total Spending for</b>	Total value of awards (Euro)
Conference Grants /Year	
2014	51,500

## D) IMU-Simons Travel Fellowship for Individuals

Country	Number of Awards	Total value of awards (Euro)
Cameroon	1	1,200
China	1	1,000
India	1	2,346.04
Iran	3	4,200
Myanmar	1	2,600

<sup>\*\*</sup> CDC support to this category is intended solely for the participation of mathematicians from developing countries. Furthermore, conference organizers are required to demonstrate that they will match the funds being requested from/granted by CDC by an equal amount from other sources also dedicated to the participation of mathematicians from developing countries.

Senegal	1	2,100
Uzbekistan	1	1,000
Vietnam	1	1,400
Total	10	€ 15,846.04

The IMU Simons Funds are not budgeted to the general CDC budget, but kept in a separate budget line.

### E) Abel Visiting Scholar Program

List of the Abel Visiting Fellowship Awardees 2014:

**Cyrille Nana**, lecturer, University of Buea, Cameroon: His research concerns holomorphic functions of several complex variables. In the research project he aimed to extend previous joint work with Bonami and Garrigós on estimates for Bergman projections in bounded domains. Nana was hosted by Aline Bonami and Sandrine Grellier at the University of Orléans, France.

**Olena Vaneeva**, senior researcher at the National Academy of Sciences, Ukraine: Vaneeva'research focuses on symmetry analysis in the study of nonlinear PDE models, and the project aimed to address classification of symmetries and finding closed-form solutions for variable coefficients PDEs. She was hosted by Prof. C. Sophocleous at the University of Cyprus in Nicosia, Cyprus.

**Do Duc Thuan**, lecturer at Hanoi University of Science and Technology, Vietnam: Thuan's field of research is control problems of dynamical systems under perturbations, and the research project concerns controllability radii of delay descriptor systems. He was hosted by Prof. Volker Mehrmann at the Technical University of Berlin, Germany.

#### F) Research

### Regional Reports

The editors of the regional reports completed their work in 2014. The reports were approved in final form by August 2014 and made available during the MENAO symposium at the ICM 2014 in Seoul, Korea. They can be found at: http://www.mathunion.org/cdc/research-and-useful-links/.

### **G) Special Projects: MENAO**

In 2014, the IMU held a daylong symposium prior to the opening of the International Congress of Mathematicians (ICM) in Seoul, Korea entitled *Mathematics in Emerging Nations: Achievements and Opportunities* (MENAO). A sub-committee of the CDC and the CDC Administrator organized the symposium. Approximately 260 participants from around the world, including representatives of embassies, scientific institutions, private business and foundations attended the session. The event was supported by the IMU with EURO 100,000. The MENAO goals were broad and several were achieved (e.g. supporting regional networks, raising the profile of mathematicians based in developing countries and the presenting of the regional reports). Future symposia on this topic should perhaps be more focused on a well-defined defined target audience and very concrete and specific development goals. A positive outcome of MENAO was its raising awareness within the mathematical community and its importance to create regional networks.

All lectures can be found at:

https://www.youtube.com/watch?v=eODi4b5d27Y&list=PL0c-546bsozhAecE1btXl18B08p1fL\_7u

The result booklet can be found at:

http://www.mathunion.org/fileadmin/CDC/cdc-uploads/menao doku 141120.pdf

#### Administration

The administrative costs consisted primarily of shipments and bank transfers.

#### **CDC Income**

CDC's principal source of 'core' income is an annual grant from the International Mathematical Union (IMU). IMU in turn receives its financial support from IMU member countries as well a generous grant from the Niels Henrik Abel Board (Norway). The CDC Administration is managed by Lena Koch, a staff member from the IMU Secretariat (WIAS Berlin). The IMU Secretariat receives an annual subvention from the IMU Secretariat (WIAS Berlin) host country Germany for administrative purposes.

The CDC would like to express its profound thanks to the IMU, the Niels Henrik Abel Board, the Simons Foundation NY and the IMU Secretariat at the WIAS Berlin for all the support and collaboration.

More information about CDC and its activities can be found on the website: www.mathunion.org/CDC

We look forward to future collaboration.

Herb Clemens, Secretary for Policy CDC Lena Koch, IMU Secretariat May 2015

Photo Credits: Angel Pineda Wolfgang Dalitz Lena Koch

<b>CDC Income and Expenditure 1.1.2014 - 31.12.2014</b>			
Revenue by Source		In EURO	%
Savings 2013 (1.1.2014)		€ 177,652.71	63.04%
IMU and Special Grant Niels Henrik Abel Memorial Fund Board		€ 104,081.00	36.03%
Bank interest		€ 67.45	0.02%
Total Budget 2014		€ 281,801.16	100%
EXPENDITURE by Category		In EURO	%
Volunteer Lecturer Program (VLP)		€ 14,698.14	14.90%
Administrative Cost		€ 1,806.10	1.83%
Project Support		€ 29,794.42	30.20%
Conference Grants		€ 51,500.00	52.20%
CDC Meeting Berlin 2013		€ 858.28	0.87%
Total Expenditure		€ 98,656.94	100%
Savings 2014	€ 183,144.22		

Note: The Simons Funds as well as the funds for the Abel Visiting Scholar Program are not budgeted to the general CDC budget, but kept in a separate budget line.

## List of GSC Supported Activities in 2014 (Conference Grants and IMU Simons Travel Fellowship)

Γ	Grants and INIO Simons Travel Fellowship)	Ι.
Country and Kind of Support	Name of Conference or Host Country for IMU- Simons Travel Fellowship Support	Amount of Support EURO
Argentina	The CIMPA School "Cantor Salta 2015" will be held in the	2,000
Tingontinu	period November 2, 2015 – November 11, 2015, in Salta,	2,000
	Argentina.	
Argentina	The conference "XIII Congreso Dr. Antonio Monteiro will	1,500
Tilgentina	be held from 2015 – 05 - 27 - 2015 – 05 - 29 at INMABB	1,500
	(Instituto de Matematica) and the Department of	
	Mathematics of Universidad Nacional del Sur, Argentina.	
Argentina	The conference: "Random processes and optimal	2,000
Aigentina	configurations in analysis" will be held from 2015-07-06 -	2,000
A	2015-07-17 at CIMPA School, Buenos Aires, Argentina.	2.500
Argentina	The "X Americas Conference on Differential Equations and	2,500
	Nonlinear Analysis" was held in Buenos Aires from	
D. I. LIGA (D.GI	February 9 to 20, 2015.	2 000
Belarus > USA (IMU	Valery Gaiko was granted support for his research visit at	2,000
Simons Travel	the Missouri University of Science and Technology during	
Fellowship)	the period 2015-03-01 - 2015-04-30.	
Brazil	The conference: "New interactions of Combinatorics and	2,000
	Probability" will be held from 2015-08-25 - 2015-09-04 at	
	ICMC, Universidad de Sao Carlos, Brazil.	
Cameroon	The GIRAGA XY Seminar in Yaounde, Cameroon, was	1,500
	held during the period October 06-11, 2014. This event was	
	organized by the Inter-African Research Group in Analysis,	
	Geometry and Applications (GIRAGA) and the	
	International Centre for Pure and Applied Mathematics	
	(CIMPA, Nice, France).	
Cameroon	The conference,,Mini-GIRAGA 2015"will be held in	1,500
	YAOUNDE, JANUARY 05-17, 2015.	
Cameroon	The 4th African Mathematical School was held at the	1,500
	University of Douala from 2014 – 12 - 01 – 2014 - 12 - 12	
	under the theme "Mathematical Tools for Financial and	
	Actuarial Sciences".	
Cameroon > Russia		1,200
(IMU Simons Travel	to the Ivanovo State University, Russia. Period May 1 to	
Fellowship)	June 30, 2014.	
China > India (IMU	Yaxiang Li (Changsha, China) was granted support for a	1,000
Simons Travel	research visit at the Indian Statistical Institute in Chennai,	
Fellowship)	India. His visit was from January 1st to March 31st, 2014.	
Colombia	The CIMPA Research School and Workshop on Real	2,500
	Algebraic Geometry took place from July 13th –26th, 2014	_,- ,- ,-
	in Villa de Leyva, Colombia.	
Ecuador	The conference "Latin-Iberoamerican School on Operations	1,000
2000001	Research"was held in Ecuador from 2015-02-03 to 2015-	1,000
	02-27.	
India	The CIMPA Summer School on "Current Research in	2,000
	Finite Element Methods" will be held at the Indian Institute	_,000
	of Technology Bombay, Mumbai, India. Duration: 2015 –	
	07 - 06 2015 - 07–17	
India	The International Conference on Geometric Function	1,000
maia	Theory and its Applications (ICGFTA 2014) was held at the	1,000
	Theory and its Applications (ICOI 1A 2014) was field at the	

T		
	Indian Institute of Technology Kharagpur, West Bengal, India. Duration: 2014 12 - 18 - 2014 - 12 - 21.	
India > USA (IMU	Srinivasa Siva Rama Krishnarao Taduri was granted	2,346.04
Simons Travel		2,340.04
	support for his research visit at the University of Memphis,	
Fellowship)	Department of Mathematical sciences during the period	
	2015 - 01 - 05 - 2015 - 03 - 04, in Memphis, Tennessee.	
Indonesia	The SEAMS School "Module Theory and its Applications"	1,500
	was held in the period 10.November 2014 – 18.November	
	2014, in Bandung, Indonesia.	
Inon > Commons (IMII		1.500
Iran > Germany (IMU	Amir Mafi was granted support for his research visit at the	1,500
Simons Travel	University of Osnabrück, department	
Fellowship)	Mathematic/Informatics during the period 2015-02-01 -	
	2015-08-30.	
Iran > Germany (IMU	Hero Saremi was granted support for her research visit at	1,600
Simons Travel	the University of Osnabrueck, department	-,000
Fellowship)		
renowship)	Mathematic/Informatics during the period 2015-02-01 -	
_	2015-08-01.	
Iran	The: "Workshop on Operator Algebras and its	1,000
	Applications" from January 7, 2015 to January 10, 2015	
	was held at IPM, Teheran, Iran. The conference was	
	organized by the School of Mathematics (IPM).	
Iran	The CIMPA School "Tilings and Tesselations" will take	2,500
IIaii		2,300
T. G.	place from January 19 to 30, 2015 in Isfahan.	1 100
Iran > Germany	Javad Asadollahi was granted support for his research visit	1,100
	at the Max-Planck Institute for Mathematics, Bonn during	
	the period 2015-03-01 - 2015-04-30.	
Laos	The CIMPA Research School Graph labelings, graph	1,500
	decompositions and Hamiltonian cycles took place	, , , , ,
	December 8 to 19, 2014 at the National University of Laos.	
Manastia		2.500
Mongolia	The conference "Stochastic Analysis and Applications	2,500
	Mongolia 2015", will take place from July 27th to August	
	8th, 2015 at the National University of Mongolia.	
Morocco	The CIMPA school on "Operator Theory and The	2,000
	Principles of Quantum Mechanics" was held at the	
	University Moulay Ismail, Meknes, Morocco. Duration:	
	2014-09-08 to 2014- 09-17.	
M		2.000
Morocco	The CIMPA School on "Number Theory and Applications"	2,000
	in Oujda, Morocco. Duration: 2015 -05 -18 to+ 2015 - 05 -	
	29.	
Morocco	The conference "4ème conférence internationale de la	1,000
	SM2A" in Oujda, Morocco. Duration: 2015 -02 -12 to	
	2015- 02 -14.	
Morocco	The International Conference Of Settat On Opearor	1,000
191010000	<u> </u>	1,000
	Algebras And Applications, Duration: 2015 -01 -26 to 2015	
-	-01-31 to be held at the university Hassan I Morocco.	•
Myanmar > Japan	Ohn Mar was granted support for her research visit at the	2,600
(IMU Simons Travel	Institute of Mathematics for Industry, Kyushu University	
Fellowship)	during the period 2015-01-04 - 2015-03-31.	
Nepal	The conference "Aspects of Dynamical Systems" was held	2,000
P	from 2014 – 11 - 03 – 2014 – 11 - 16, in Kathmandu, Nepal	_,
Dalziatan	The conference "International Conference on Relativistic	1.000
Pakistan		1,000
	Astrophysics" in Lahore, Pakistan. Duration: 2015 – 02 - 10	
	- 2015 – 02 - 14.	
Pakistan	The "14th Regional Conference on Mathematical Physics"	1,500
	was held at the Quaid-i-Azam University, Islamabad,	
	, ,	ı

	Pakistan, March 2 to 8, 2015.	
Palestine	The CIMPA Summer School on Analysis of Random Structures. This event took place on August 18 - 28, 2014 at the University An Najah in Nablus, Palestine.	1,000
Peru	The IV. Latin American Workshop on Optimization and Control. This workshop was held July 15, 2014 in Lima, Peru.	2,000
Senegal	The CIMPA School Algorithms Methods and Application in Real Algebraic Geometry and Number Theory was held at AIMS Senegal June 16-29, 2014.	2,000
Senegal> Spain (IMU Simons Travel Fellowship)	Mamadou Abdoul (Saint-¬-Louis, Senegal) was granted support for a research visit at the University of Sevilla, Spain. His visit will be from October 4 to November 5, 2014.	2,100
Serbia	13th Serbian Mathematical Congress in Vrnjačka Banja. This event took place May 22-25, 2014.	1,500
Tunisia	The Research School on "Nonlinear Partial Differential Equations arising from Geometry and Physics" from March 19, 2015 to March 29, 2015 held in Hammamet, Tunisia.	2,000
Uruguay	The workshop "Foundations of Computational Mathematics" took place at the Universidad de la República, Montevideo, on December 11 -20, 2014.	2,500
Uruguay	The "CIMPA Research School – Hamiltonian and Lagrangian Dynamics" was held in Salto, Uruguay, March 10 to 19, 2015.	2,000
Uzbekistan > Spain (IMU Simons Travel Fellowship)	Abror Khudoyberdiyev, Institute of Mathematics, Tashkent in Uzbekistan) was granted support for his research travel to Departamento de Matematica Aplicada I.E.T.S. de Ingenieria Informatica. Avda. Reina Mercedes, s/n. 41012, Seville, Spain. This visit was in the period 1. October 2014-30. November 2014.	1,000
Vietnam > France (IMU Simons Travel Fellowship)	Van Tan Tran (Vietnam) was granted support for his research visit at the Institut des hautes études scientifiques during the period 24.11-24.12.2014 in Bures-sur-Yvette, France.	1,400
Cameroon > Russia (IMU Simons Travel Fellowship)	Tieudjo Daniel was granted support for his research travel to the Ivanovo State University, Russia. Period May 1 to June 30, 2014.	1,200

## 3.3. International Commission on the History of Mathematics (ICHM)

http://www.unizar.es/ichm/

## Report on the ICHM Activities in 2014

Craig Fraser, Chair

#### **Activities:**

The Executive Council of the ICHM had four electronic meetings (E-meetings) in 2014.

On December 31 Jesper Luetzen and Kim Plofker completed their four-year terms as IMU representatives on the EC of the ICHM. On January 1, 2015 they were replaced as IMU representatives by Professors Ciro Ciliberto (Department of Mathematics, University of Rome Tor Vergata) and Shrikrishna G. Dani (Department of Mathematics, Indian Institute of Technology, Mumbai), who will serve until 2018.

### **Projects:**

- 1. The ICHM continues to maintain a webpage of its activities and of matters of interest to historians of mathematics internationally. See the ICHM website <a href="http://www.unizar.es/ichm/home.htm.">http://www.unizar.es/ichm/home.htm.</a>
- 2. The ICHM continues actively to solicit and to co-sponsor special sessions and conferences internationally.

## **Publications:**

*Historia Mathematica* is the official journal of the ICHM. It appears four times annually and publishes roughly 525 pages of original research in the history of mathematics from all times and cultures. The journal is currently edited by Niccolò Guicciardini (Italy) and **Thomas Archibald (Canada)**. It is published by Elsevier Science and is available electronically to subscribers of IDEAL.

## Conferences co-sponsored by the ICHM in 2014:

Sessions on history of mathematics at the Joint Meeting of the American Mathematical Society and the Mathematical Association of America, January, Baltimore MD. Organizers: Sloan Despeaux, Della Dumbaugh, Glen van Brummelen

12th Austrian Symposium on the History of Mathematics, May, Miesenbach.

Organizer: Christa Binder

Bolzano in Prague, July, Prague.

Organizer: Arianna Betti

Valediction to Jeremy Gray, September, Open University, UK

Organizer: June Barrow-Green

6th International Symposium on Ancient Chinese Books and Records of Science and Technology (ISABRST), October, Borough of Manhattan Community College,

CUNY.

Organizer: Joseph Dauben

Visual and textual representations in exchanges between Europe and East Asia,

November, National Tsing Hua University, China.

Organizer: Luis Saraiva

Research workshop: Reading mathematics in the early modern world, December, All

Souls College, Oxford.

Organizer: Benjamin Wardhaugh

Craig Fraser March 2015

## 3.4. Committee on Electronic Information and Communication (CEIC)

http://www.mathunion.org/ceic/

## **CEIC Activity Report 2014**

James H. Davenport, Chair

J.H. Davenport (Chair) J.H.Davenport@bath.ac.uk March 2015

This report covers the calendar year 2014, when Peter Olver was Chair of CEIC. All the successes are due to his Chairmanship, and all the infelicities to the current author's drafting.

1. World Heritage Digital Mathematics Library

The Wiki for the National Academy of Sciences (NAS) 2012 WDML Workshop has now been archived at <a href="http://www.wias-berlin.de/imu/archive/WDML/">http://www.wias-berlin.de/imu/archive/WDML/</a>.

Following the Sloan funded NAS Committee report, "Developing a 21st Century Global Library for Mathematics Research", was published in March, 2014, and is available at <a href="http://www.nap.edu/catalog.php?record">http://www.nap.edu/catalog.php?record</a> id=18619.

On August 17, 2014, in conjunction with the International Congress of Mathematicians in Seoul, Republic of Korea, the IMU and CEIC hosted a meeting of a select group of 21 experts to plan the next practical steps towards the construction of the Global Digital Mathematical Library (GDML). As a result, a smaller eight person working group (WG) under the sponsorship of the IMU, was created. The WG members are Patrick Ion, chair (USA), Thierry Bouche (France), Bruno Buchberger (Austria), Michael Kohlhase (Germany), Jim Pitman (USA), Olaf Teschke (Germany), Stephen Watt (Canada), and Eric Weisstein (USA). The WG is charged with the tasks of designing a road map for the practical next steps towards the GDML, determining its organizational structure, prioritizing the different requirements for its implementation, estimating an incremental budget, both start-up and sustaining funds, and

fostering the writing of proposals to funding organizations. By the time of writing this report, the working group has held over twenty conference calls, and is preparing proposals for future funding.

A presentation and Panel Discussion on the World Digital Mathematics Library organized by CEIC took place at ICM at 6:00-7:30pm, August 20.

Moderator: Peter Olver, CEIC Chair and University of Minnesota, USA.

- 1. Thierry Bouche, Université Joseph Fourier, Grenoble, France.
- 2. Ingrid Daubechies, IMU President and Duke University, USA.
- 3. Gert-Martin Greuel, University of Kaiserslautern, Germany.
- 4. Patrick Ion, Mathematical Reviews, USA.
- 5. Rajeeva Karandikar, Chennai Mathematical Institute, India.
- 6. June Zhang, Peking University, China.

The discussion was videotaped and is available on Youtube: <a href="https://www.youtube.com/watch?v=OERXmv2oIyU">https://www.youtube.com/watch?v=OERXmv2oIyU</a>.

After ICM, CEIC initiated the WDML blog <a href="http://blog.wias-berlin.de/imu-icm-panel-wdml/">http://blog.wias-berlin.de/imu-icm-panel-wdml/</a> to provide a forum for ongoing discussion of the emerging WDML. As well as appearing on the blog, a summary of the panel discussion will be published in the first volume of the Proceedings of the ICM, entitled "The World Digital Mathematics Library: Report of a Panel Discussion".

In addition, an email list <u>GDML@mathunion.org</u> hosted by IMU was established to further discussions about the WDML and the WG. Peter Olver served as the first moderator; as of Jan 1, 2015, moderation is now handled by Patrick Ion.

The October, 2014 issue of the Notices of the American Mathematical Society contained the article "The Digital Mathematics Library as of 2014" by Thierry Bouche: <a href="http://www.ams.org/notices/201409/rnoti-p1085.pdf">http://www.ams.org/notices/201409/rnoti-p1085.pdf</a>.

Tim Cole and Patrick Ion presented GDML at the Coalition for Networked Information member meeting in December 2014.

### 2. Other ICM Activity

#### 2.1. General

In the run-up to ICM, CEIC has been looking at the archiving and copyright status of the various ICMs, and made recommendations to the local organizers. These seem to have been carried forward, though some details remain to be checked when the proceedings are actually published. The website and videos are copyright of the 2014 ICM, rather than IMU, but IMU has a licence to use.

As well as the WDML Panel mentioned earlier, CEIC organized two others (organizing three panels should *not* be seen as a precedent!).

#### 2.2. Mathematical MOOCs

A Panel Discussion on Mathematical Massive Open Online Courses (M-MOOCs) organized by CEIC took place at ICM at 6:00-7:30pm, August 18.

Moderator: James Davenport, University of Bath, UK

- 1. Bill Barton, The University of Auckland, New Zealand
- 2. Robert Ghrist, University of Pennsylvania, USA
- 3. Matti Pauna, University of Helsinki, Finland
- 4. Angel Ruiz, Universidad de Costa Rica, Costa Rica

The discussion was videotaped and is available on Youtube: <a href="https://www.youtube.com/watch?v=bRjkbmuCm20">https://www.youtube.com/watch?v=bRjkbmuCm20</a>.

After ICM, CEIC initiated the MOOC blog <a href="http://blog.wias-berlin.de/imu-icm-panel-moocs/">http://blog.wias-berlin.de/imu-icm-panel-moocs/</a> to provide a forum for ongoing discussion of Mathematical MOOCs. As well as appearing on the blog, a summary of the panel discussion will be published in the first volume of the Proceedings of the ICM, entitled "Mathematical Massive Open Online Courses (MOOCs): Report of a Panel Discussion".

### 2.3. The Future of Mathematical Publishing

A Panel Discussion on The Future of Mathematical Publishing organized by CEIC took place at ICM at 6:00-7:30pm, August 19.

Moderator: Jean-Pierre Bourguignon, European Research Council, Belgium

- 1. Rajendra Bhatia, Indian Statistical Institute, New Delhi, India and Sungkyunkwan University, Suwon, Korea
- 2. Jean-Pierre Demailly, Institut Fourier, France
- 3. Chris Greenwell, Elsevier, The Netherlands
- 4. Thomas Hintermann, European Mathematical Society Publishing House, Switzerland
- 5. Nalini Joshi, University of Sydney, Australia
- 6. Ravi Vakil, Stanford University, USA

The discussion was videotaped and is available on Youtube:  $\underline{\text{https://www.youtube.com/watch?v=RbIBrE0vepM}}.$ 

### 3. Other Business

CEIC considered various other issues.

**DOIs**. It was noted that IMU-Net had no persistent URLs, e.g. DOIs. The same applied to various IMU documents, such as the "Best Practices" and the "Citations" report. We set up a working group to investigate this.

**IMU-Net**. CEIC's column in IMU-Net is entitled "IMU on the Web", which confuses many people: this is now called "CEIC Notes and Comments".

**Archiving**. Ongoing discussion, to be picked up after the 2015 officer/committee rotation.

**Copyright**. The 2001 "Best Practice" document was looking dated. It needs updating to cover items such as Green/Gold Open Access, Creative Commons licences (which version?), copyright in items such as TeX macros, interaction between ArXiV and publishers' policies. CEIC asked Doug Arnold, Victoria Stodden and Ulf Rehmann to form a working party, with James Davenport as CEIC liaison.

One open question was "non-traditional" means such as Wikipedia, blogs and MathOverflow.

**ICSU** (International Council for Science). CEIC is an Associate Member of the ICSU World Data System. Olga Caprotti maintains our liaison here, and attended the bi-annual members forum in New Delhi in November 2014.

# Expenditure

In the calendar year 2014, EUR 1,368 was received from the IMU budget to cover expenditure related to CEIC activities.

J.H. Davenport (Chair) J.H.Davenport@bath.ac.uk March 2015

# 4. Circular Letters of the IMU Secretary to the Adhering Organizations

# IMU AO Circular Letter 1/2014

# **International Mathematical Union**

February 3, 2014 IMU AO Circular Letter 1/2014

To: IMU Adhering Organizations From: Martin Grötschel, IMU Secretary

### IMU General Assembly (GA) in Gyeongju, Korea

Dear colleagues,

This is an announcement about the next IMU General Assembly including some technical details in order to give you information about what to expect and what to do.

### 1. Time and Location

The next General Assembly meeting of the International Mathematical Union will take place on August 10-11, 2014

in Gyeongju, Korea.

The venue of the General Assembly meeting will be the Hyundai Hotel in Gyeongju, see http://www.hyundaihotel.com/gyeongju en/index.jsp.

The local organizers have reserved 150 rooms in the Hyundai Hotel for the delegates of the General Assembly meeting. Rooms can also be booked by GA delegates in the Commodore Hotel (<a href="http://www.commodorehotel.co.kr/eng/html/main/index.php">http://www.commodorehotel.co.kr/eng/html/main/index.php</a>) which is close to the GA hotel. See hotel information, room rates and room reservation details on the GA Web page <a href="http://www.icm2014.org/en/events/imu/hotel">http://www.icm2014.org/en/events/imu/hotel</a>.

Delegates are expected to arrive on August 9. The GA meeting ends in the evening of August 11. For August 12, the GA organizers offer to all registered GA participants and accompanying persons a bus tour from Gyeongju to Seoul that will include a guided visit to Andong Hahoe Folk Village.

# 2. The General Assembly (basic information)

The role of the GA is described in the IMU Statutes, see <a href="http://www.mathunion.org/fileadmin/IMU/Statutes2010.pdf">http://www.mathunion.org/fileadmin/IMU/Statutes2010.pdf</a> in particular in the articles 18 to 24, and 41.

### 3. Delegations

For each General Assembly meeting, each IMU Member Adhering Organization shall appoint and certify to the Secretary of the Union a delegation, which shall have the number of votes corresponding to the Group in which it adheres, see Statutes Article 19 and http://www.mathunion.org/members/countries for information about the groups.

I would like to ask all Adhering Organizations to start selecting their delegates for the IMU General Assembly meeting in Gyeongju and to nominate the delegations in a letter (by e-mail please) to me (secretary@mathunion.org). This request applies to

- all IMU Members
- all IMU Associate Members and
- all IMU Affiliate Members.

Please note that only the Delegates of IMU Members have voting rights at the GA, however. Affiliate and Associate Members have the right to participate in the GA by a representative without voting rights.

In my capacity as Secretary, I will maintain the list of Delegates (together with the nomination letters) so that there is proof of which persons have the right to vote at the GA.

A Web registration procedure for the GA participants has been set up, see below for more information about the registration system and data needed from each GA participant.

In case it turns out that a formally nominated Delegate will be unable to participate in the GA and the Adhering Organization wishes to nominate a substitute you are asked to contact me by e-mail or phone in due course. We will try to handle the replacement as smoothly as possible.

#### Gender distribution at the GA

I would like to recall that it was noted at previous General Assembly meetings that the gender distribution was not "ideal". It would be excellent if the Adhering Organizations could take gender distribution as one criterion into account when they choose the composition of Delegates for the General Assembly in Gyeongju.

### 4. Other GA participants

The IMU EC will invite further persons to the General Assembly. Among these are

- IMU Officers (this group includes the IMU EC members, and Chairs/Presidents/Secretaries of IMU Commissions and Committees who will provide reports about their activities for IMU)
- Observers (this group includes representatives of countries that will present their application for IMU (Associate) Membership and, moreover, representatives of ICSU, ICIAM, and possibly other IMU related organizations)
- Members of the local GA organization in Gyeongju

No person in one of the categories mentioned here has a voting right at the GA.

Note: No person will be allowed to participate in the GA without a formal approval or invitation from me.

### 5. Web server, formal registration process, hotel booking

The local organizing committee in Gyeongju has set up a Web server with information about the GA:

http://www.icm2014.org/en/events/imu/imuga2014

(also accessible from the bottom right corner of the ICM homepage <a href="http://www.icm2014.org/">http://www.icm2014.org/</a>).

This server contains the online registration form, travel and visa information, maps, and many further details. It will be updated regularly and will be employed to keep all delegates informed.

Details of the online registration process for the IMU General Assembly in Gyeongju

After the nomination of the delegations by the Adhering Organizations (in a letter to me) and the approved nomination/invitation of the persons mentioned under item 4., all Delegates, IMU Officers, Observers and Members of the local organization are requested to register for the GA in detail on

The online registration page at: <a href="http://www.icm2014.org/en/events/imu/registration">http://www.icm2014.org/en/events/imu/registration</a>.

On this Web site all GA participants are asked to provide certain information about themselves such as affiliation, address, contact phone numbers, e-mail and the like, and give other details. Also accompanying persons have to be registered here.

Here is a brief guide through the registration Web site:

- Click on "IMU GA 2014 Registration Form"
- You will now be asked for the "Registration Password" (sent to you in an e-mail from the IMU Secretariat)
- This password is GYEONGJU
- Clicking on "Submit" opens the registration form. Complete the Personal Information boxes, check the box that identifies your registration category, provide information in case someone is accompanying you, indicate whether you will attend the social events offered, provide flight information as well as accommodation information.

The GA participants are requested to submit registration by May 31, 2014.

For accommodation/hotel see: http://www.icm2014.org/en/events/imu/hotel.

The Hyundai Hotel and the Commodore Hotel are the conference hotels offered for reservations. Please submit your reservations with the special GA reservation forms. The GA participants are asked to make hotel reservations by July 3, 2014.

For getting to Gyeongju see: <a href="http://www.icm2014.org/en/events/imu/transportation">http://www.icm2014.org/en/events/imu/transportation</a>.

Here 4 options to get to Gyeongju are presented. Option 01 is for arrival at Busan (Gimhae International Airport), option 03 is for arrival at Seoul (Gimpo International Airport), and options 02 and 04 are for arrival at Incheon (Incheon International Airport, which is close to Seoul). Clicking on the Option 01 (or 02, 03, 04) button opens below it the detailed itinerary including times and fares.

Free shuttle transfer from Singyeongju KTX station (see option 03 and option 04) to the GA venue (Hyundai Hotel), from Gyeongju Express Bus Terminal (see option 01) to the GA venue (Hyundai Hotel), and from Gyeongju Bus Terminal (see option 02) to the GA venue (Hyundai Hotel) will be provided during 9 am – 9 pm on August 9.

For the Tentative General Schedule see: <a href="http://www.icm2014.org/en/events/imu/schedule">http://www.icm2014.org/en/events/imu/schedule</a>.

For visa issues see: <a href="http://www.icm2014.org/en/events/imu/visa">http://www.icm2014.org/en/events/imu/visa</a>.

You have to go to this page if you need an invitation letter. Click on <a href="https://www.icm2014.org/imu/imu\_invitation.asp">https://www.icm2014.org/imu/imu\_invitation.asp</a> in order to open the invitation letter application form. If you want to submit an invitation letter application you must have registered for the GA beforehand.

The GA Web site also provides information on the Additional Tour program as well as general information.

After completing your first visit to the GA registration page you will immediately get a confirmation e-mail providing your personal user name and password with which you can enter the registration pages in the future to complete or change your data. Please don't forget to record this user name and password.

If you need assistance concerning this matter please write to imuga@icm2014.org.

# 6. Agenda topics and next steps

I would like to remind all Adhering Organizations of Articles 38, 39, and 42 of the By-Laws:

"The Adhering Organizations, and the Commissions of the Union may propose business to be transacted at meetings of the General Assembly. Such proposals shall reach the Secretary at least four months before the meeting at which they are to be considered."

"The agenda for a meeting of the General Assembly shall be dispatched by the Executive Committee to the Adhering Organizations at least three months before the meeting at which they are to be considered. A question which has not been put upon the agenda may be discussed, but shall not be put to the vote unless a proposal to that effect be approved by a majority of the total number of votes assigned to the Members."

"The Executive Committee shall present an annual report on its activities and those of the Union to each Adhering Organization and shall also report on its activities and those of the Union at each ordinary meeting of the General Assembly. The report to the General Assembly shall be dispatched by the Secretary to the Adhering Organizations at least two months before the meeting at which it is to be received."

### Summarizing:

- If you want to propose a GA agenda topic, please send your request to me by April 9, 2014, if possible, via e-mail to <a href="mailto:secretary@mathunion.org">secretary@mathunion.org</a>.
- Expect to receive the GA agenda by May 9, 2014.
- Expect to receive the EC report (IMU Bulletin 64) by June 9, 2014.

# 7. Local contact in Gyeongju

If you have any questions about the local arrangements for the General Assembly at Gyeongju or need assistance, please contact

imuga@icm2014.org.

Sincerely,

Martin Grötschel IMU Secretary

### IMU AO Circular Letter 2/2014

# International Mathematical Union

March 31, 2014 IMU AO Circular Letter 2/2014

To: IMU Adhering Organizations From: Martin Grötschel, IMU Secretary

### IMU GA meeting - nominations of AO delegates invited

Dear colleagues,

This circular letter to all IMU Adhering Organizations is mainly a reminder.

Please recall that the meeting of the IMU General Assembly is going to take place in Gyeongju, Korea, on August 10 and 11, 2014. About one third of the IMU members have nominated their delegations so far, and so this is just a reminder to all the other adhering organizations to nominate their delegates.

I attach again the circular letter IMU AO CL 1/14 for your information which describes the registration process. I also attach the IMU General Assembly guidelines that were endorsed by the IMU EC on Sep 15, 2012 and will be presented at the forthcoming GA meeting for your information. The GA organizers are executing the preparations of the GA meeting along these guidelines. Please, have a look at the guidelines and see whether you might want to suggest some changes or add certain items.

A very important issue: The suggestion of topics for the agenda of the General Assembly meeting is due by April 9, 2014. Thus, if you plan to ask the General Assembly to discuss a certain item, please, let me know by April 9 so that we can include this into the agenda and, if necessary, please formulate a resolution in case you would like to have a particular item to be voted on.

Preannouncement: A resolution is drafted that concerns the announcement of the winners of the IMU awards (Fields Medal, Nevanlinna Prize, Chern Medal, Gauss and Leelavati Prizes). The resolution will state that the names of the awardees should not be announced at the ICM opening ceremony, but a few months ahead of time. The reason is that due to modern communication it is very difficult to keep, like IMU tries to do with all possible effort, the names of the award winners confidential for about half a year.

Best regards,

Martin Grötschel IMU Secretary

# IMU AO Circular Letter 3/2014

# International Mathematical Union

April 9, 2014

IMU AO Circular Letter 3/2014

To: IMU Adhering Organizations

(Adhering Organizations of Associate Members receive this letter for information)

From: Martin Grötschel, IMU Secretary

- Postal Ballot 01/14 Application for Change of Group of Adherence of Argentina
- Postal Ballot 02/14 Application for Change of Group of Adherence of Australia
- Postal Ballot 03/14 Application for Change of Group of Adherence of Mexico
- Postal Ballot 04/14 Application for full Membership of Ecuador
- Postal Ballot 05/14 Application for Associate Membership of Gabon

Dear colleagues,

- Argentina has requested a change from Group II to Group III. The Executive Committee of the IMU recommends this change. Enclosed is the overview of the present status of Mathematics in Argentina providing some basic data regarding the development of the essential academic items in the last decade which was submitted by the Unión Matemática Argentina.
- Australia has requested a change from Group III to Group IV. The Executive Committee of the IMU recommends this change. Enclosed is a report providing an overview of mathematical sciences in Australia at present which was submitted by the National Committee for Mathematics of Australia.
- Mexico has requested a change from Group II to Group III. The Executive Committee of the IMU recommends this change. Enclosed is the overview of the present status of Mathematics in Mexico which was submitted by the Sociedad Matemática Mexicana.
- Ecuador that has been an Associate Member since 2007 has applied for full membership of the IMU. The Executive Committee of the IMU recommends to favor the application. The enclosed document which was submitted by the Sociedad Ecuatoriana de Matemática reports on the mathematical activities in Ecuador as well as on the activities organized by this mathematical society.
- Gabon has applied for associate membership of the IMU. The Executive Committee of the IMU recommends to favor the application. The enclosed document provides a description of the state of mathematics in Gabon (e.g., mathematics research and education at universities, details about mathematics education, publications).

Please vote on the applications of Argentina, Australia, Mexico, Ecuador, and Gabon through the enclosed postal ballots\* and return the ballots by mail or fax

# by May 30, 2014

to the address indicated on the ballot form.

Sincerely,

Martin Grötschel IMU Secretary

Encl.

### IMU AO Circular Letter 4/2014

votes - as has happened in the past).

# **International Mathematical Union**

May 6, 2014

IMU AO Circular Letter 4/2014

\* The postal ballot sheets are forwarded only with regular mail to the Adhering Organizations of the IMU member countries who are solely responsible for voting. If postal ballots would be sent out by e-mail (with

possibly multiple recipients) this could lead to multiple voting of one member country (with possibly contrary

To: IMU Adhering Organizations From: Martin Grötschel, IMU Secretary

# ICM 2014 Registration, GA meeting delegations

Dear colleagues,

I would like to remind all IMU Adhering Organizations of two items.

### 1. ICM 2014 Early Advance Registration

I would be very happy if you could distribute within your community (as soon as possible) an e-mail reminder that the

Early Advance Registration for ICM 2014 expires on May 10, 2014.

To benefit from the reduced registration fees it is necessary to complete the registration process by this date, see http://www.icm2014.org/en/participants/registration/information.

# 2. Nomination of Delegates for the meeting of the IMU General Assembly, Gyeongju, Korea, August 10 - 11, 2014

At this moment in time only about one half of the IMU members have nominated their delegations for the meeting of the IMU General Assembly in Gyeongju, on August 10 and 11, 2014.

Please consider making the nominations as soon as possible!

Details about the GA and registration for the GA can be found in my circular letters 1/2014 and 2/2014 and the attachments which you can find at: http://www.mathunion.org/Publications/cl/.

Sincerely,

Martin Grötschel IMU Secretary

### IMU AO Circular Letter 5/2014

# **International Mathematical Union**

May 9, 2014

IMU AO Circular Letter 5/2014

To: IMU Adhering Organizations and all

registered participants (delegates and observers,...)

of the IMU General Assembly

From: Martin Grötschel, IMU Secretary

# **GA** Agenda and further **GA** information

Dear colleagues,

This letter provides information about the meeting of the IMU General Assembly in Gyeongju, Korea on August 10 and 11, 2014. It covers the following topics:

- 1. GA Agenda
- 2. Password Protected GA Server
- 3. No Printed Documents for the GA Meeting
- 4. Slates for the IMU Offices
- 5. Nominated IMU President and Secretary
- 6. GA Registration, etc.

Please read with care.

# 1. GA Agenda

According to item 39. of the By-Laws of the IMU Statutes, the agenda for the meeting of the General Assembly has to be dispatched to the Adhering Organizations at least three months before the meeting. The Statutes (in the last version of the year 2010) are at:

http://www.mathunion.org/organization/statutes.

Item 39 of the By-Laws also stresses that "a question which has not been put on the agenda may be discussed, but shall not be put to the vote unless a proposal to that effect be approved by the majority of the total number of votes assigned to the members." Thus, any further issue that an Adhering Organization wants to be put up for vote needs special treatment at the GA agenda.

In the attachment, please find the proposal of the Executive Committee for the agenda for our meeting in Gyeongju. We will have a very tight schedule, so there is not much room for "ad-hoc topics" proposed at the GA meeting itself. Please keep this in mind.

This agenda is close to but not yet final, since there are still a few items for which it is not clear at what point in time and under which topic or whether at all they will appear on the agenda. So please consult the server mentioned below (before you leave for Gyeongju) for the last version.

#### 2. Password Protected GA Server

The IMU Secretariat in Berlin has established a further password protected Web site at which all documents that are relevant for the General Assembly will be available for download. The URL is the following:

http://www.mathunion.org/GA2014/

The user name and the password can be obtained from the IMU Secretary.

We will upload GA relevant documents to this GA Server as soon as such material becomes available.

# 3. No Printed Documents for the GA Meeting

No printed material will be distributed to the delegates at the meeting in Gyeongju. We expect all delegates and observers to select from the material on the Password Protected GA Server those documents that they find necessary to have at the meeting of the General Assembly itself, to print them, and to bring them to Gyeongju.

Please also bring a printed copy of the latest version of the GA agenda (made available briefly before the meeting) along.

### 4. Slates for IMU Offices

Slates for all IMU officers are currently prepared by the Nominating Committee (NC) - chaired by former EC member Ragni Piene. The slates will be distributed, according to our "Procedures for Election", see the 2010 version: <a href="http://www.mathunion.org/organization/ec/procedures-for-election/">http://www.mathunion.org/organization/ec/procedures-for-election/</a> by June 10, 2014.

# 5. Nominated IMU President and Secretary

The Chair of the NC has allowed me to announce, at this moment in time, the names of the mathematicians the NC is going to propose as next IMU President and Secretary. The nominated colleagues are:

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IMU President 2015-2018: Shigefumi Mori (Japan) IMU Secretary 2015-2018: Helge Holden (Norway).
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More information (including CVs) will be mailed to you in one month.

### 6. GA Registration, etc.

To all IMU Adhering Organizations who have not nominated their delegates: Please do so soon.

To all nominated delegates and observers, who have not registered for the GA or have not booked a hotel room:

Please do that soon.

The attachments to IMU CL 2/2014, see <a href="http://www.mathunion.org/Publications/cl/">http://www.mathunion.org/Publications/cl/</a>, provide full information about the time and location, registration, etc.

Best regards

Martin Grötschel IMU Secretary

Attachments: (preliminary) GA Agenda

### IMU AO Circular Letter 6/2014

# **International Mathematical Union**

June 6, 2014

IMU AO Circular Letter 6/2014

To: IMU Adhering Organizations and all

Delegates and Observers of the IMU

General Assembly in Gyeongju

From: Martin Grötschel, IMU Secretary

# Dear colleagues,

According to the IMU Statutes, the Adhering Organizations and Delegates of the General Assembly (GA) have to be informed two months in advance of the meeting of the GA about all candidates for positions within IMU committees and commissions to be elected at the next General Assembly. This letter provides complete information about the persons running for the various IMU offices.

According to the "Procedures for the Election...", see

http://www.mathunion.org/organization/ec/procedures-for-election/,

the IMU Nominating Committee has the task to select, from all persons nominated, see my Circular Letters 10/2012 and 02/2013 which can be found at

http://www.mathunion.org/Publications/cl/,

the slates to be considered at the GA meeting.

The IMU Nominating Committee consists of

- Ragni Piene, Norway (chair)
- Ingrid Daubechies, USA
- Michel Jambu, France
- Masaki Kashiwara, Japan
- Gaven Martin, New Zealand
- M S Raghunathan, India
- Joan Solà-Morales Rubió, Spain

This Nominating Committee has selected (from all nominations received, making use of its right to search for potential candidates on its own, and taking into account regional distribution, adequate representation of mathematical fields, etc.) slates for

- the IMU Executive Committee (EC),
- the Commission for Developing Countries (CDC), and
- the International Commission on the History of Mathematics (ICHM),

following the rules defined in the Procedures for Election.

According to item 5. a. of the Procedures for Election the chair of the Election Committee (who will be elected on the first day of the GA meeting) will present the slates at the GA in Gyeongju.

You find the lists of nominated persons in the appendix below and as a PDF file in the attachment. At the end of each slate, persons who have been nominated but have not been chosen by the Nominating Committee are listed. These (not selected) persons, if the General Assembly wishes so, can be added to the slates at the General Assembly according to item 5.c. of the Procedures for Election.

All candidates have declared their willingness to serve on the commissions or committees for which they have been nominated. All candidates have also provided a two pages curriculum vitae (CV). In order not to overload this e-mail with attachments, we have made the CVs available on the IMU GA 2014 Web site at

http://www.mathunion.org/GA2014/

with the user name and password distributed to all GA participants and all IMU Adhering Organizations.

We urge all delegates of the General Assembly to make themselves familiar with the candidates and their CVs. Not all candidates will actually be present at the GA for personal discussion. Considering the large number of candidates, the time available at the GA will not suffice to discuss the qualifications of all the persons in too much detail. So, please try to make up your mind about the candidates before the GA. If you feel you need additional information you are, of course, free to contact the candidates directly.

Best regards

Martin Grötschel

### IMU AO Circular Letter 7/2014

# **International Mathematical Union**

June 16, 2014

IMU AO Circular Letter 7/2014

To: IMU Adhering Organizations

(Adhering Organizations of Associate Members receive this letter for information)

From: Martin Grötschel, IMU Secretary

- Postal Ballot 01/14 Change from group II to group III of Argentina

- Postal Ballot 02/14 Change from group III to group IV of Australia

- Postal Ballot 03/14 Change from group II to group III of Mexico

- Postal Ballot 04/14 Admittance as full Member of Ecuador

- Postal Ballot 05/14 Admittance as Associate Membership of Gabon

NEW: Postal Ballot 06/14 Application for Change of Group of Adherence of Iran

Dear colleagues,

- The vote on Argentina's request to change from group II to group III yielded a positive result. As of June 2014, Argentina adheres to Group III.
- The vote on Australia's request to change from group III to group IV yielded a positive

result. As of June 2014, Australia adheres to Group IV.

- The vote on Mexico's request to change from group II to group III yielded a positive result. As of June 2014, Mexico adheres to Group III.
- The vote on Ecuador's application for full IMU Membership yielded a positive result. As of June 2014, Ecuador is a Member of the International Mathematical Union. For more information on Ecuador's Adhering Organization see <a href="http://www.mathunion.org/members/countries/list/sorted-by-names/ecuador/">http://www.mathunion.org/members/countries/list/sorted-by-names/ecuador/</a>.
- The vote on Gabon's application for Associate Membership yielded a positive result. As of June 2014, Gabon is an Associate Member of the IMU. For more information on Gabon's Adhering Organization see <a href="http://www.mathunion.org/members/countries/list/sorted-by-names/gabon/">http://www.mathunion.org/members/countries/list/sorted-by-names/gabon/</a>.
- Iran has requested a change from Group III to Group IV. The Executive Committee of the IMU recommends this change. Enclosed is a report providing an overview on the development of history of the Iranian Mathematical Society, the ranking of Iran in mathematical sciences, the number of societies related to mathematical sciences, etc. which was submitted by the Iranian Mathematical Society.

Please vote on the application of Iran through the enclosed postal ballot\* and return the ballot

by mail, e-mail or fax

### by July 31, 2014

to the address indicated on the ballot form.

Sincerely,

Martin Grötschel IMU Secretary

# IMU AO Circular Letter 8/2014

# **International Mathematical Union**

July 10, 2014

**IMU AO Circular Letter 8/2014** 

To: IMU Adhering Organizations and all

registered participants (delegates and observers,...)

of the IMU General Assembly

From: Martin Grötschel, IMU Secretary

# GA Agenda and further GA information, part II

Dear colleagues,

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<sup>\*</sup> The postal ballot sheets are forwarded only with regular mail to the Adhering Organizations of the IMU member countries who are solely responsible for voting. If postal ballots would be sent out by e-mail (with possibly multiple recipients) this could lead to multiple voting of one member country (with possibly contrary votes – as has happened in the past).

Please, find in the attachment a new version of the agenda of the General Assembly meeting. The agenda is still not final, since new aspects are coming up, certain persons are suddenly able (or not) to make presentations, and as usual, there are last-minute changes to be considered.

These remarks also apply to the documents that IMU is going to make available to all delegates of the General Assembly. It is not as easy as one would think to get all these documents in their final version in time and as early as one would like to have them. But there must be some deadline, and, within the IMU Secretariat, we have just discussed a deadline for the submission of documents, etc. to be made available at the GA meeting. The procedure is as follows:

# Document upload, mailing and availability

IMU will begin to upload the documents for the meeting of the General Assembly in the last week of July (starting July 28). We plan to e-mail important documents to all Adhering Organizations and to participants of the General Assembly on July 30 so that all participants can get these documents directly by e-mail without having to access the GA server. We will try our best to finish the upload of material on July 31.

# Documents will not be printed

Please note that no printed documents will be made available at the meeting of the General Assembly. We ask every participant to print out whatever he/she is interested in or needs in printed version and bring these paper documents along to Gyeongiu.

### **Documents on USB sticks**

However, at the registration for the General Assembly on site, IMU will provide a USB stick for every participant with the final version of the agenda and all accompanying documents so that everyone will have the documents electronically available. We are expecting that every participant will have a laptop available at the General Assembly meeting to be able to read and search in these documents. Access to WLAN and electricity supply will be guaranteed. In a final letter to all participants we will provide more details of that type (type of plugs, etc.).

IMU is aware that we have holiday time (at least in the Northern hemisphere) and that a significant part of the GA participants may be on vacation in July. That is why we are sending out this "warning" at this moment in time. Please, check your e-mail account at the end of July so that you can retrieve the most important documents for the General Assembly meeting from your e-mail account.

# A few more issues:

- 1. IMU will give countries interested in organizing ICM 2018 the possibility to announce their plans to (potentially) bid for the ICM in four years, see item 18.5 of the agenda. Therefore, we ask those countries who are contemplating a bid to prepare a few words about their intentions.
- 2. There are still some countries who have nominated delegates, but where the delegates have not registered for the General Assembly. We ask all Adhering Organizations to check the registration status of their delegates. (See 3. below and the attachment)

- 3. The IMU Secretariat has received a number of requests for making the names of the participants of the GA meeting public. (Many colleagues just want to know whether some of their friends are coming.) IMU was not intending to make the list of GA participants openly available on the Internet without asking every GA participant for permission. However, we decided to make the current list of all those persons, who have registered so far, available to the Adhering Organizations and the participants themselves. In the attachment you will find a PDF file listing all persons who have registered by July 10 for the meeting of the General Assembly. Please, do not distribute this list to others.
- I would like to alert those Members who are in arrears with IMU membership 4. dues payment for two and more years. Statute 32. of IMU reads: "Any Adhering Organization which is in arrears with its contributions for two years shall be warned and shall be deprived of its voting rights. Any Adhering Organization which is in arrears for four years shall cease to be an adherent of the Union. In any case, before taking action, the Executive Committee shall submit the question to the Members of the Union by postal ballot or at a meeting of the General Assembly who under special circumstances may waive these provisions by a two-thirds majority of the total number of votes assigned to the Members." Reminders to pay have repeatedly been forwarded to the countries concerned. At the beginning of the GA meeting, according to item 2.1 of the agenda, the credentials committee will determine if all delegates are entitled to exercise their voting rights in accordance with Statute 32. If necessary, the GA may decide on denying Adhering Organizations to vote. Please make sure that your member country is entitled to vote (which means that any payments outstanding for more than two years should be transferred immediately).
- 5. I would like to also make you aware of further information concerning travel possibilities to Gyeongju and kindly ask you to read the attached file on flight information, welcome desk, ground transportation, shuttle service, travel option from Gyeongju to Seoul and emergency issues.

Best regards

Martin Grötschel IMU Secretary

# IMU AO Circular Letter 9/2014

# **International Mathematical Union**

July 31, 2014

IMU AO Circular Letter 9/2014

To: IMU Adhering Organizations and all

registered participants (delegates and observers,...) of the IMU General Assembly in Gyeongju, Korea

From: Martin Grötschel, IMU Secretary

GA Agenda and further GA information, part III

### Dear colleagues,

This is (most likely) the final letter to the IMU Adhering Organizations and participants (delegates and observers,...) of the meeting of the IMU General Assembly on August 10 and 11, 2014 in Gyeongju, Korea.

(Be aware: The material provided contains so much information that you will probably have no time to watch a movie on your long-distance flight to Korea if you intend to arrive prepared for the GA, ©).

### 1. Final GA meeting Agenda

The attachment contains the final agenda of the GA meeting. Names (marked green) behind a topic indicate who will present the item. In very few cases final decisions have not been made yet.

This agenda can still be modified at the beginning of the meeting, and topics may be shifted if that appears sensible (e.g., for timing reasons).

### 2. Bulletin No. 64 and its Appendices I and II

For many of the agenda topics, documents have been prepared that are the basis of the discussion or presentation. These documents (and additional information about IMU and its members) are contained in IMU Bulletin No. 64 which has 2 appendices.

This Bulletin and the appendices will be made available by August 1, 2014 on the IMU GA 2014 Web site (briefly GA server) at

### http://www.mathunion.org/GA2014/

The user name and the password can be obtained from the IMU Secretary.

The Bulletin and its appendices will not be distributed in print (please print yourself whatever you need in printed form), but every GA participant will get a USB stick containing these data at the On-Site GA Registration Desk

(on August 9 in Hyundai and Commodore Hotel,

on August 10 and 11 in Hyundai Hotel).

Please note that, for every agenda item which is accompanied by a document, the agenda contains a pointer (marked brown) to the related document in the Bulletin or its appendices.

Important: The information about the slates and the CVs of the candidates for IMU positions are confidential and are not contained in the Bulletin or its appendices. They can be found on the GA server, see above.

### 3. Appendix I of Bulletin No. 64

- 3.1. Appendix I contains items that may need discussion at the GA meeting. That is why we have separated these from the Bulletin and distribute App. I as pdf-document in the attachment. There are, in particular, various guidelines that are presented for the approval of the GA. These guidelines, as the Executive Committee hopes, are supposed to provide the rules (or form the bases) of various IMU activities. Guidelines are presented for:
- Joint commissions with other Unions
- The organization of General Assembly meetings
- Bidding for the organization of an ICM
- Handling of conflicts of interest
- Archiving of IMU material
- IMU membership applications.
- 3.2 Moreover, Appendix I contains the proposal of the IMU EC for the membership of the committees that have to be set up at the beginning of the GA meeting (Credentials, Tellers,...). The EC members responsible for the proposals have made a joint effort to suggest committees that are well-balanced with respect to various criteria.

3.3 Appendix I also contains the document "Recommendation on the evaluation of individual researchers in the mathematical sciences" which is meant to provide some guidelines about the way mathematicians are supposed to be evaluated as individuals and discusses the pros and cons involved.

### 4. New Associate IMU Members

Papua New Guinea and Senegal have applied for Associate Membership. The application material is contained in Bulletin 64. The IMU Executive Committee recommends acceptance. The applications are up for vote at the GA meeting (see agenda item 16). Please make yourself familiar with these cases.

### 5. GA meeting Participants

The list of GA participants (registered by July 25) is also attached.

# 6. Technical Information about the GA meeting

The local GA organizing committee has provided an information sheet with many of the details about the "technical GA aspects" you probably want to know. Please study the attached document before you start your trip to Gyeongju. The travel information may be of particular importance.

Looking forward to seeing you in Gyengju very soon, and please make yourself familiar with the material presented in Bulletin No. 64 and its two appendices!

Best wishes

Martin Grötschel

#### P.S.:

- (a) I assume that most GA participants will attend the ICM Opening Ceremony on August 13. Please do not forget to bring your passport along.
- (b) You may know that the IMU CDC organizes the MENAO Symposium in Seoul on August 12, see <a href="http://www.mathunion.org/cdc/menao/">http://www.mathunion.org/cdc/menao/</a>, but I would also like to point you to <a href="http://www.mathunion.org/cdc/research-and-useful-links/">http://www.mathunion.org/cdc/research-and-useful-links/</a> where yesterday new "Regional Studies" on Challenges and Opportunities for Mathematics in Africa, Southeast Asia, and Latin America and the Caribbean have been released.

### IMU AO Circular Letter 10/2014

# **International Mathematical Union**

August 27, 2014

IMU AO Circular Letter 10/2014

To: IMU Adhering Organizations and all

registered participants (delegates and observers,...)

of the meeting of the IMU General Assembly in Gyeongju, Korea

From: Martin Grötschel, IMU Secretary

# - Information about the Gyeongju General Assembly meeting and its results

### - Iran upgrade

Dear colleagues,

This message is aimed at providing you with information about the meeting of the IMU General Assembly that took place in Gyeongju, Republic of Korea, on August 10 and 11, 2014. More details will be contained in the Bulletin that is under preparation and which will appear by the end of this year.

In order not to overload this e-mail with many attachments, the documents that contain the information announced above and which are listed below have been uploaded to the GA Web site (briefly GA server) at

### http://www.mathunion.org/GA2014/

The user name and the password can be obtained from the IMU Secretary.

On the GA server you will find:

### 1. Slides shown at the GA meeting

The PDF version of the PowerPoint file shown during the General Assembly meeting documents the state of the presentation at the end of the GA meeting.

This file contains the GA meeting agenda and all slides of all persons who made a presentation during the GA meeting. More than 30 persons were on the stage, the associated presentations have been collected in one big PowerPoint file of more than 600 slides. The PDF version of this file provides a faithful documentation of the material that supported the various presentations during the GA meeting. In some cases the results of discussions and votes were added to the document while the GA meeting was running.

### 2. List of GA meeting participants

The final list of participants of the 17th IMU General Assembly (in PDF and Excel).

### 3. Resolutions

You will also find a list of the resolutions that were voted on during the General Assembly meeting (the list is just as I received it from the resolutions committee which was set up at the GA meeting). All resolutions were endorsed by the GA.

### 4. New IMU leadership 2015-2018

The list of IMU officers elected during the General Assembly (IMU Executive Committee, Commission for Developing Countries, IMU members of the International Commission on the History of Mathematics) can be retrieved from the GA server.

### 5. ICM 2014 Opening Ceremony Presentation

I have also uploaded the presentation (PDF) that I gave at the opening ceremony of ICM 2014, providing a report (very brief due to time limitations) about the activities of IMU in the last four years. (I made one correction. I forgot to mention three countries that became IMU Associate Members during 2011-2014 - due to a copy paste mistake. The three countries are now mentioned in the final version.)

Thanks again to all participants of the General Assembly meeting. I am aware that these were two very long days but I do hope, though, that this "administrative business" was not too boring and that all participants got more familiar with the broad work portfolio of IMU and its commissions and committees.

### Application of Iran to change group adherence

Finally, let me formally announce that the application of Iran to change membership adherence from group III to group IV yielded a positive result. Iran is a group IV member as of August 2014.

Best regards

Martin Grötschel

### IMU AO Circular Letter 11/2014

# International Mathematical Union

September 3, 2014 IMU AO Circular Letter 11/2014

To: IMU Adhering Organizations and all

registered participants (delegates and observers)

of the meeting of the IMU General Assembly in Gyeongju, Korea

From: Martin Grötschel, IMU Secretary

- Elections at the ICSU General Assembly
- ICSU report on open access

Dear colleagues,

At their presentations at the IMU General Assembly in Gyeongju, John Ball and Manuel de León reported on the work of the International Council for Science (ICSU) and the involvement of IMU in ICSU activities.

ICSU's 31st General Assembly (in Auckland, New Zealand) ended today. IMU was represented at this GA by its Vice President Christiane Rousseau and its EC members Manuel de León and Cheryl Praeger. Several of the decisions made at the ICSU GA are of importance for mathematics.

 Professor Daya Reddy from South Africa, who was an invited speaker at ICM 2014, became the new President-elect of the International Council for Science. Reddy will take over from the current ICSU President, Gordon McBean, in October 2017, see the press release

http://www.icsu.org/news-centre/news/top-news/south-african-mathematician-elected-as-next-president-of-the-international-council-for-science

for details (including further election results). Congratulations to Daya on the election!

- 2. Former IMU President John Ball and current IMU EC member Manuel de León were elected Ordinary Members of the ICSU Executive Board (John is going to serve his second term on the Board). Congratulations as well! Thus, mathematics will play an increasingly important role within ICSU.
- At the IMU GA, John Ball reported about the ICSU document "Open access to scientific data and literature and the assessment of research by metrics"

to be discussed at the ICSU GA. On September 2, 2014 this report was endorsed by the ICSU General Assembly, see various related Web sites and the press release:

http://www.icsu.org/news-centre/news/top-news/international-council-for-science-endorses-open-access-to-scientific-record-cautions-against-misuse-of-metrics;

http://www.icsu.org/general-assembly/news/press-release-2013-international-council-for-science-endorses-open-access-to-scientific-record-cautions-against-misuse-of-metrics;

http://www.icsu.org/general-assembly/news/ICSU%20Report%20on%20Open%20Access.pdf.

Please distribute this information.

#### 4. Correction:

In my e-mail "IMU AO CL 10/2014: 2014 GA results & Iran upgrade" of August 27, 2014 I reported under topic 3. that "All resolutions were endorsed by the GA." This is incorrect. Upon the proposal of the resolutions committee, the GA did not vote on the last resolution (no 14). So this resolution was not endorsed. The corrected summary of the resolutions can be found at:

http://www.mathunion.org/fileadmin/IMU/Organization/GA/Resolutions/RESOL2014.pdf.

Best regards

Martin Grötschel

### IMU AO Circular Letter 12/2014

# **International Mathematical Union**

November 11, 2014 IMU AO Circular Letter 12/2014

To: IMU Adhering Organizations

From: Martin Grötschel, IMU Secretary

- IMU Bulletin No. 63, December 2013
- IMU Bulletin No. 64, July 2014

Dear colleagues,

- IMU Bulletin No. 63, December 2013

Attached hereto is IMU Bulletin No. 63 reporting about the IMU activities in 2013. A printed copy will be forwarded by postal mail to the Adhering Organizations.

Bulletin No. 63 is also available on the IMU Web server at <a href="http://www.mathunion.org/publications/bulletins/archive/">http://www.mathunion.org/publications/bulletins/archive/</a>.

# - IMU Bulletin No. 64, July 2014

IMU Bulletin No. 64 which is composed of 3 parts (Bulletin, Bulletin-Appendix 1, Bulletin-Appendix 2) is available on the IMU Web server at

http://www.mathunion.org/publications/bulletins/archive/.

Bulletin No. 64 will not be distributed in print.

This bulletin including appendices has been provided on August 1 (on the protected IMU GA server http://www.mathunion.org/GA2014/) to the IMU Adhering Organizations and all registered General Assembly participants. Please note: The information about the slates and the CVs of the candidates for IMU positions are confidential and are not contained in the Bulletin or its Appendices. They can be found on the GA server.

With best wishes

Martin Grötschel IMU Secretary

# IMU AO Circular Letter 13/2014

# International Mathematical Union

November 20, 2014 IMU AO Circular Letter 13/2014

To: IMU Adhering Organizations

From: Martin Grötschel, IMU Secretary

### Call for applications for the Heidelberg Laureate Forum 2015

Dear colleagues,

The first two Heidelberg Laureate Forums (HLF) which took place in September 2013 and 2014, turned out to be very successful events. They brought together outstanding students in mathematics and computer science with winners of the most prestigious awards in these two disciplines:

Abel, Fields, Nevanlinna, and Turing Laureates.

The Heidelberg Laureate Forum was started by the Klaus Tschira Stiftung and is being organized by the Heidelberg Laureate Forum Foundation in cooperation with

- The Norwegian Academy of Science and Letters
- The Association for Computing Machinery

- The International Mathematical Union

which are the awarders of the prizes mentioned.

Detailed information about the Heidelberg Laureate Forum can be found at <a href="http://www.heidelberg-laureate-forum.org/">http://www.heidelberg-laureate-forum.org/</a>.

Preparations for the 3rd HLF are well underway. Effective November 17, the online application tool is up and running. The press information released on November 17, 2014, announcing the start of the application period for the 3rd Heidelberg Laureate Forum (HLF), can be found below. The HLF application poster and fact sheet are attached and available for download at:

http://www.heidelberg-laureate-forum.org/download-area/.

We would greatly appreciate if you could help spread the word. Please feel free to forward the press release and the attached information to all interested parties.

Best regards

Martin Grötschel IMU Secretary

Encl.: HLF Press release

#### PRESS RELEASE

PLEASE SPREAD THE WORD

We would like to ask you to forward this information to potential candidates and anyone else who might be interested:

**Seeking Outstanding Young Researchers!** 

The application process for the 3rd Heidelberg Laureate Forum is up and running.

Beginning November 17, young computer scientists and mathematicians from all over the world can apply for one of the 200 coveted spots to participate in Heidelberg Laureate Forum (HLF), an annual networking event. The HLF offers all accepted young researchers the great opportunity to personally meet the winners of the most prestigious prizes in their fields. For one week, the recipients of the Abel Prize, the ACM A.M. Turing Award, the Fields Medal, and the Nevanlinna Prize engage in a cross-generational scientific dialogue with young researchers in Heidelberg, Germany. Applications must be submitted online at <a href="http://application.heidelberg-laureate-forum.org">http://application.heidelberg-laureate-forum.org</a> by February 28, 2015. For more information, please visit: <a href="http://application.heidelberg-laureate-forum.org">www.heidelberg-laureate-forum.org</a>.

The 3rd HLF will take place from August 23 to 28, 2015. This high-profile event combines scientific, social and outreach activities in an informal atmosphere, and is fueled by comprehensive exchange and scientific inspiration. "The HLF is a unique opportunity for two hundred ambitious young researchers to meet some of the most successful scientists in their fields", says Klaus Tschira, founder and chairperson of the Heidelberg Laureate Forum Foundation (HLFF), which organizes the HLF every year.

During the HLF week, young researchers will be given the exclusive possibility to profoundly connect with their scientific role models and find out how they made it to the top of their fields. 24 laureates attended the 2nd HLF, including Martin Hairer and Manjul Bhargava, both 2014 Fields Medalists, and Leslie Lamport, the current winner of the ACM A.M. Turing Award. Together with their fellow laureates, they shared their knowledge with 200 outstanding young researchers from nearly 60 different countries. "A once-in-a-lifetime experience to engage with some amazing people. I thoroughly enjoyed not just the thrill of meeting these 'greats' but being free to pick their brains, learn their wisdom and even to debate with them. I am coming away from the Forum, inspired and motivated in general, but also with fresh research ideas and insight into my own area of work. For this I am extremely grateful", writes one young researcher of the 2nd HLF.

Young researchers at all levels, from undergrad and PhD to postdoc, are encouraged to apply for one of the limited spots until February 28, 2015.

Successful candidates will be selected by an international committee of experts to ensure that only the most qualified candidates are invited. There are 100 spaces available for each discipline of mathematics and computer science. Successful applicants will be notified by April 15, 2015.

For more information, please go to: www.heidelberg-laureate-forum.org

### **Background**

The Heidelberg Laureate Forum Foundation (HLFF) annually organizes the Heidelberg Laureate Forum (HLF), which is a networking event for mathematicians and computer scientists from all over the world. The 3rd Heidelberg Laureate Forum will take place from August 23 to 28, 2015, with the dates alternating each year between August and September. The HLF was initiated by the German foundation Klaus Tschira Stiftung (KTS), which promotes natural sciences, mathematics and computer science, and the Heidelberg Institute for Theoretical Studies (HITS). The Forum is organized by the HLFF in cooperation with KTS and HITS as well as the Association for Computing Machinery (ACM), the International Mathematical Union (IMU), and the Norwegian Academy of Science and Letters (DNVA).

### **HLF Images**

http://www.flickr.com/groups/heidelberg-laureate-forum/

#### To the Editors

With this press release, we would like to extend an invitation to attend the 3rd Heidelberg Laureate Forum as well as to report on the event.

### **Press Inquiries/Contact for Journalists**

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If you do not wish to receive any further press releases from the Heidelberg Laureate Forum Foundation, please send an e-mail with "Cancel Press Releases" in the subject line to <a href="media@heidelberg-laureate-forum.org">media@heidelberg-laureate-forum.org</a> Should you prefer that your contact details be erased

completely from our data base, please send an e-mail with "Delete Data" in the subject line to the above e-mail address.



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Join us on **Facebook**, **Twitter** and **YouTube!** 

The 3rd Heidelberg Laureate Forum (HLF) will take place from August 23 until August 28, 2015.

# 5. The IMU Secretariat

Since January 2011, the Secretariat of the International Mathematical Union has been permanently based in Berlin, Germany, at the Weierstrass Institute. (<a href="http://www.wias-berlin.de/imu/index.jsp">http://www.wias-berlin.de/imu/index.jsp</a>).

Under the supervision of the IMU Executive Committee, the Secretariat runs IMU's day-to-day business and provides support for many IMU operations, including administrative assistance for the International Commission on Mathematical Instruction (ICMI) and the Commission for Developing Countries (CDC) as well as mainly technical assistance for the Committee on Electronic Information and Communication (CEIC).

The IMU Secretariat also hosts the IMU archive.

The IMU Secretariat is supported by a grant of about half a million euros per year provided by the German Federal Ministry of Education and Research (BMBF) and the Berlin Senate. A Memorandum of Understanding and a Cooperation Agreement provide the legal basis of the relationship of IMU and WIAS.



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# 6. Impressum

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