Bulletins of the International Mathematical Union

Bulletin of the IMU, No. 70 (2018)

Bulletin of the International Mathematical Union

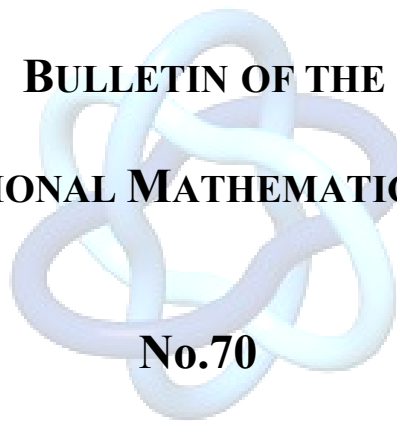*Bulletins of the International Mathematical Union, No. 70, 110 pp. (2018)*

IMU

BULLETIN OF THE

INTERNATIONAL MATHEMATICAL UNION

No.70

December 2018

Secretariat:

List of Abbreviations

AO	Adhering Organization
CDC	Commission for Developing Countries
CDE	Commission on Development and Exchange
CEIC	Committee on Electronic Information and Communication
CWM	Committee for Women in Mathematics
DCSG	Developing Countries Strategy Group
EC	Executive Committee
FIMU	Friends of the International Mathematical Union
GA	General Assembly
ICHM	International Commission on the History of Mathematics
ICM	International Congress of Mathematicians
ICM OC	ICM Opening Ceremony
ICMI	International Commission on Mathematical Instruction
ICSU/ISC	International Council for Science/International Science Council
IMU	International Mathematical Union
IUHPST	International Union for the History and Philosophy of Science and Technology

Dear Members of the International Mathematical Union

The year 2018, being the year of the ICM and the General Assembly, was a hectic year for the IMU.

The regular annual meeting of the Executive Committee (EC) of the IMU took place in March in Montreal, generously hosted by the Centre de Recherches Mathématiques. The second meeting of the EC took place in São Paulo, on the day before the General Assembly. Here the final details regarding the execution of the General Assembly were discussed.

Many important decisions were taken at the General Assembly. Thanks to the unprecedented decision by the EC to offer travel support for one delegate from each Member to attend the General Assembly, and to offer full local support for all Delegates to the GA, the General Assembly was very well attended.

Here, we will only report on some of the most important decisions made at the General Assembly.

Since January 2011, the Secretariat of the IMU has been based in Berlin, Germany, generously supported by a grant from the Federal Republic of Germany and the State of Berlin and hosted by Weierstrass Institute for Applied Analysis and Stochastics (WIAS). The financial support from Germany exceeds the total membership dues. The stable IMU Secretariat has resulted in a considerable increase in the total volume of activities of the IMU. Without the IMU Secretariat and the generous financial support from Germany, the level of activity would have to be drastically reduced.

The General Assembly of the IMU decided with overwhelming support to endorse that the current Stable Office for the International Mathematical Union, established as a cooperation between WIAS and the IMU be made permanent.

After a brief presentation by the two bidders to host the ICM 2022 in Paris and St Petersburg, respectively, the General Assembly decided to select St Petersburg as the host of the ICM 2022. The General Assembly expressed its gratitude to both bidders for presenting two very professional bids to the IMU and thereby making the selection difficult for the General Assembly.

A highlight of any General Assembly is the election of new members and officers to various positions and committees and commissions of the IMU. The results appear in the Bulletin. The IMU depends on the many volunteers that spend considerable time and energy on IMU activities for the benefit of the community. The IMU President expressed his gratitude on behalf of the IMU and the community to those members stepping down from their service and he welcomed newly elected members.

The scientific program of an ICM has by tradition been determined by the powerful Program Committee (PC), chaired for the ICM 2018 by János Kollár. Specifically, the PC has decided the sectioning of the program, the panels recommending speakers, as well as the selection of all speakers. A momentous task done in full secrecy as only the chair of the PC is known to the public. The GA decided to create an ICM Structure Committee with the task of determining the sectioning of mathematics for the ICM based on the development of contemporary mathematics. The responsibility to decide all speakers for a given structure

will continue to reside with the PC. In contrast to the PC, membership in the Structure Committee will be publicly known.

The General Assembly also decided to introduce a prize to replace the current Nevanlinna Prize, but with essentially the same statutes. The new prize will be awarded for the first time at the ICM 2022 in St Petersburg.

The complete Minutes of the General Assembly will appear separately.

The ICM 2018 in Rio de Janeiro – the first time an ICM took place in Latin-America and the first time in the Southern Hemisphere – was a great success.

At the grand opening ceremony, the recipients of the IMU awards were announced. Specifically, the winners of the Fields Medal, the Nevanlinna Prize, the Chern Medal, the Gauss Prize and the Leelavati Prize received great ovations from the audience.

The execution of a General Assembly and in particular an ICM is a major undertaking depending on the comprehensive work of many volunteers, both in Brazil and globally, necessary to make the events successful. The IMU wants to express its deep gratitude to everyone that contributed to the GA and the ICM – you all did a great service to our community. Special thanks go to Paolo Piccione and Marcelo Viana for leading the work for the GA and ICM, respectively.

The work towards the declaration of March 14 as the International Day of Mathematics (IDM) made substantial progress in 2018. An IDM Governing Body was created with Christiane Rousseau as chair. The IMU made an international call for a logo for the IDM and a separate call for a host of an IDM webpage with the URL www.idm314.org The plan is to make material, around one common theme, freely available on the website, in several different languages. The website can also be used to announce IDM events worldwide and a hub for the exchange of ideas related to the IDM. The IMU has great expectations regarding the future of the IDM.

The founding General Assembly and inauguration of the International Science Council (ISC) took place in Paris in July. The ISC is the result of a merger between the International Council for Science (ICSU) and the International Social Science Council (ISSC). The IMU has been a member of ICSU since ICSU's foundation, and a member of its predecessor, the International Research Council since IMU was founded. The new President of ISC is Daya Reddy, a mathematician from South Africa that had been nominated for this position by the IMU.

During this year, the IMU approved membership applications from the Mathematical Council of the Americas for Affiliate Membership, Bangladesh for Associate Membership, and Brazil for an upgrade of its membership to group V. (These applications were submitted in 2017.) In addition, the IMU approved applications from Morocco (for group I), Senegal (upgrade from Associate to regular member in group I), Thailand (upgrade from Associate to regular member in group I), Oman (for group I), Uzbekistan (for Associate member), Kyrgyzstan (for group I), Chile (upgrade from group II to III), and Portugal (upgrade from group II to III). We are happy to welcome you to the IMU!

During the year 2018, the IMU Secretariat in Berlin relocated its office premises to refurbished offices at Hausvogteiplatz in Berlin Mitte.

With best wishes

Helge Holden
Secretary General of the International Mathematical Union

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1. IMU Leadership and Membership Information

1.1. Executive Committee 2015-2018

INTERNATIONAL MATHEMATICAL UNION

Executive Committee

January 1, 2015 – December 31, 2018

President:	Shigefumi Mori	(Japan)
Vice-Presidents:	Alicia Dickenstein	(Argentina)
	Vaughan Jones	(New Zealand/USA)
Secretary:	Helge Holden	(Norway)
Members-at-Large:	Benedict H. Gross	(USA)
	Hyungju Park	(Korea)
	Christiane Rousseau	(Canada)
	Vasudevan Srinivas	(India)
	John F. Toland	(United Kingdom)
	Wendelin Werner	(Switzerland)
Ex-officio Member (Past President)	Ingrid Daubechies	(USA)

Meetings of the Executive Committee in 2018:

89th EC Meeting, Montreal, Canada, March 10-11, 2018

90th EC Meeting, Sao Paulo, Brazil, July 28, 2018

1.2. IMU Leadership 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
Olga Gil Medrano	CDC Secretary Policy	Spain
Srinivasan Kesavan	CDC Secretary Grants	India
Mama Foupouagnigni	CDC, African Member	Cameroon
Polly Sy	CDC, Asian Member	Philippines
Alf Onshuus	CDC, Latin American Member	Colombia
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

C. Herbert Clemens (USA), elected CDC Secretary for Policy for the term 2015-2018, retired Oct 2015.

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) 2017 – 2020

Jill Adler	ICMI President	South Africa
Abraham Arcavi	ICMI Secretary-General	Israel
Merrilyn Goos	ICMI Vice President	Australia
Luis Radford	ICMI Vice President	Canada
Anita Rampal	ICMI EC Member-at-Large	India
Jean-Luc Dorier	ICMI EC Member-at-Large	Switzerland
Binyan Xu	ICMI EC Member-at-Large	China
Yuriko Yamamoto Baldin	ICMI EC Member-at-Large	Brazil
Zahra Gooya	ICMI EC Member-at-Large	Iran
Ferdinando Arzarello	ICMI EC Ex-officio Member (ICMI President 2013-2016)	Italy
Shigefumi Mori	ICMI EC Ex-officio Member (IMU President)	Japan
Helge Holden	ICMI EC Ex-officio Member (IMU Secretary)	Norway
Alicia Dickenstein	ICMI – IMU Liaison (elected by the IMU EC)	Argentina

Committee on Electronic Information and Communication (CEIC) 2015 – 2016/2018

(CEIC terms of membership are staggered.)

James Davenport	CEIC Chair	2015 – 2018	UK
	CEIC Member	2008 – 2014	
Thierry Bouche	CEIC Member	2011 – 2018	France
Ingrid Daubechies	CEIC-IMU Liaison	2015 – 2018	USA
Tim Cole	CEIC Member	2013 – 2018	USA
Patrick Ion	CEIC Member	2015 – 2018	USA
Alf Onshuus	CEIC Member	2017 – 2020	Colombia
Victoria Stodden	CEIC Member	2015 – 2018	USA
Masakazu Suzuki	CEIC Member	2015 – 2018	Japan
Ravi Vakil	CEIC Member	2011 – 2018	USA

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
Gruber Foundation, Cosmology Prize, Selection Advisory Board	Frans Pretorius	2015 – 2020
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
CDC (IMU EC liaison)	Hyungju Park	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
IMU-Net editor	Martin Hubert Raussen	2016 – 2019
IMU-Net EC correspondent	Benedict H. Gross	2015 – 2018
Curator of the IMU archive	Guillermo Curbera	2015 – 2018

1.3. Members of the Union

The following countries were Members of IMU through December 2018:

Algeria	Hungary	Papua New Guinea*
Argentina	Iceland	Paraguay*
Armenia	India	Peru
Australia	Indonesia	Philippines
Austria	Iran	Poland
Bangladesh*	Ireland	Portugal
Belgium	Israel	Romania
Bosnia&Herzegovina	Italy	Russia
Brazil	Ivory Coast	Saudi Arabia
Bulgaria	Japan	Senegal
Cambodia*	Kazakhstan	Serbia
Cameroon	Kenya	Singapore
Canada	Korea, Republic of	Slovakia
Chile	Kyrgyzstan	Slovenia
China	Latvia	South Africa
Colombia	Lithuania	Spain
Croatia	Luxembourg	Sweden
Cuba	Madagascar*	Switzerland
Czech Republik	Malaysia	Thailand
Denmark	Mexico	Tunisia
Ecuador	Moldova*	Turkey
Egypt	Montenegro	Ukraine
Estonia	Morocco	United Kingdom
Finland	Nepal*	United States
France	Netherlands	Uruguay
Gabon*	New Zealand	Uzbekistan*
Georgia	Nigeria	Venezuela
Germany	Norway	Vietnam
Greece	Oman	
Hong Kong	Pakistan	

*Associate Member

The following organizations are Affiliate Members of IMU:

African Mathematical Union (AMU)
European Mathematical Society (EMS)
South East Asian Mathematical Society (SEAMS)
Unión Matemática de América Latina y el Caribe (UMALCA)
Mathematical Council of the Americas (MCofA)

2. Financial Information

2.1. Approved IMU Membership Dues

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 All amounts in EUR				
Year	*2015*	*2016*	*2017*	*2018*
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

For the Period 2015–2018

International Mathematical Union

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												
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												
Special Development Fund		10.000			10.000			10.000			10.000	
Donations		44.000			44.000			44.000			44.000	
Grants												
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	451.015	386.415	64.600	451.015	386.415	64.600	451.015	386.415	64.600	451.015
EXPENDITURE												
1. Commissions & Committees (C&C)												
1.1 CDC	77.283	44.000	121.283	77.283	44.000	121.283	77.283	44.000	121.283	77.283	44.000	121.283
1.2 CEIC	19.321			19.321			19.321			19.321		
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	217.887
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			19.321			19.321			19.321		
2.5 Travel Grants (Young & Senior)	27.049	10.000	37.049	27.049	10.000	37.049	27.049	10.000	37.049	27.049	10.000	37.049
2.6 ICM related admin., outreach	19.321			19.321			19.321			19.321		
ICM Expenditure	85.011	10.000	95.011	85.011	10.000	95.011	85.011	10.000	95.011	85.011	10.000	95.011
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	77.283
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			7.728			7.728			7.728		
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	9.464	3.864	5.600	9.464
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	28.785
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	5.464
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	4.864
5.3 Legal Advice, Audit Fees	7.728	1.600	9.328	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	12.392
Overhead Expenditure	27.049	5.000	32.049	27.049	5.000	32.049	27.049	5.000	32.049	27.049	5.000	32.049
TOTAL EXPENDITURE			451.015			451.015			451.015			451.015
INCOME LESS EXPENSES			**0**			**0**			**0**			**0**

2.3. Independent Auditor's Report

Audit Report

Annual Financial Statements as at 31 December 2018

International Mathematical Union
Berlin

Mazars GmbH & Co. KG
Wirtschaftsprüfungsgesellschaft
Steuerberatungsgesellschaft

79693/E

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The tables may contain rounding differences that vary from values derived from mathematical calculations.

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2.   Statement of Income and Expenditures for 2018

3.   Schedule of Member Contributions 2018

4.   Budget Comparison 2018

5.   Legal and Tax Position

      General Engagement Terms

To the International Mathematical Union, Berlin:

A.   AUDIT ENGAGEMENT

We were engaged by the Secretary General of the

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International Mathematical Union
Berlin
(hereinafter "IMU" or "Union")

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to audit and report on the annual financial statements for the reporting year ending 31 December 2018.

In performing the audit engagement awarded to us by the Secretary General, we conducted our audit of the annual financial statements as at 31 December 2018 together with the accounting system for the 2018 financial year in accordance with § 317 HGB (German Commercial Code) and the German generally accepted standards for the audit of financial statements.

In addition, we were engaged to provide an economic analysis of the net assets, financial position and results of operations of the Union in this audit report. We have presented this analysis in section D. of this audit report.

In accordance with § 321 (4a) HGB, we confirm our observance of the applicable regulations governing independence during the performance of our audit.

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 an audit of the accounts from the Executive Committee. 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.

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 Presentation of Long-form Audit Reports for the Audit of Financial Statements".

The performance of our engagement and our responsibility, also towards any third parties, are governed by the General Engagement Terms for Wirtschaftsprüfer (*German Public Auditors*) and Wirtschaftsprüfungsgesellschaften (*Public Audit Firms*) as amended on 1 January 2017, attached as an appendix. Accordingly, our liability is limited in accordance with No. 9 of the General Engagement Terms for Wirtschaftsprüfer. Towards third parties, No. 1 (2) and No. 9 of the General Engagement Terms apply.

This document is a translation of the German audit report, which is the solely legally binding version.

B.   SUBJECT, NATURE AND SCOPE OF THE AUDIT

I.   Subject of the audit

The subject of our audit was the annual financial statements (statements of assets and liabilities and income and expenditure) together with the bookkeeping system, 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 statementsincluding the bookkeeping system based on our audit.

As of 1 January 2011, the IMU has kept its permanent secretariat in Berlin which is hosted by the *Weierstraß-Institut für Angewandte Analysis und Stochastik (WIAS)*, Berlin. The Federal Republic of Germany and the State of Berlin grant annual financial support for the IMU Secretariat, in particular by assuming personnel and material costs in the amount of approximately k€ 500 borne directly by the WIAS, 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.

Pursuant to § 317 (4a) HGB the audit does not have to cover whether the Union's ability to continue as a going concern or the effectiveness and efficiency of its management can be answered.

II.   Nature and scope of the audit

Our audit was conducted analogous to § 317 HGB taking into account the German generally accepted accounting standards as promulgated by the *Institut der Wirtschaftsprüfer in Deutschland e.V. (IDW),* in particular observing IDW PS 750 "Audits of Associations".

Those standards require that we plan and perform the audit such that misstatements and violations 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.

The audit included assessing the accounting policies, measurement methods and classification principles applied and significant estimates made by management as well as critically evaluating the overall presentation of the annual financial statements.

Our audit commenced with our unqualified independent auditor's report on the prior year's financial statements for the year ended 31 December 2017. 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 2017), the preparation of a budget for the following four-year-period is anticipated. The budget for the period from 1 January 2019 to 31 December 2022 was approved by the 18th General Assembly in Sao Paulo/Brazil on 29 and 30 July 2018.

On the basis of the risk of material misstatements, we prepared a risk profile for disclosures in the accounting. For this purpose we conducted audit procedures for assessing risk and first obtained an understanding of the Union as well as an overview of its economic and legal environment. Based on this understanding, we analysed the objectives and strategies of the Union as well as their implementation in order to determine business risks that could lead to significant errors in accounting.

Based on our professional judgement, we reviewed and assessed the design of the association's internal control system and which measures the Union has taken to particularly ensure the propriety and reliability of the accounting in order to mitigate business risks, however without conducting a detailed system analysis.

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.

We refrained from obtaining balance confirmations from debtors since they exclusively involve members of the Union.

We conducted our audit, with interruptions, from March to September 2019.

Management provided us with the information and documentation we requested. In the written letter of representation provided to us, the management as the legal representative of the Union assured us that the explanations and evidence were complete. Furthermore, it stated that all business transactions had been recorded and disclosed in the annual financial statements.

C.   FINDINGS ON AND EXPLANATIONS OF THE ACCOUNTING

I.   Generally accepted accounting principles

1.   Accounting records and other documents audited

Our audit verified that the formal and material propriety of the accounting complied with German generally accepted accounting principles and other legal requirements.

The accounting records of the Union were maintained properly. The records were complete. Based on the findings of our audit, the accounting records and other documents audited complied with legal regulations in all material respects. The information extracted from other documents audited was properly reflected in the accounting records and in the annual financial statements in all material respects.

The organization of the accounting, the accounting-related internal control system, data flows and recordkeeping were fundamentally appropriate for ensuring the completeness, the accuracy, the timely and orderly recording and booking of business transactions.

2.   Annual financial statements

The annual financial statements we have audited for the financial year from 1 January 2018 to 31 December 2018 have been properly derived from the accounting records and the underlying documents of the Union in all material respects. The enclosed annual financial statements were prepared in analogous application of the regulations of the Third Book of the HGB (§§ 238 *et seq.*) in all material respects, under observance of the supplementary regulations for corporations in the Second Section (§§ 264 *et seq.*).

The opening balances were properly taken over from the prior year annual financial statements. Statutory regulations on recognition, disclosure and measurement were observed in all material respects.

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.

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 is number 68 from December 2016. Printed versions of the Bulletin are provided to members. Electronic versions are available on the homepage of the IMU (https://www.mathunion.org/membership/imu-bulletins).

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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.

II.   Overall presentation of the annual financial statements

1.   Explanations of the overall presentation

The exercise of accounting policy and measurement elective options as well as the use of discretionary judgment correspond to the prior year and do not indicate any tendency with a significant influence on the net assets, financial position and results of operations in 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.

2.   Findings on the overall presentation of the annual financial statements

On the basis of the audit we performed by executing our professional duties, we are of the opinion that the annual financial statements as a whole give a true and fair view of the net assets, financial position and results of operations of the Union in accordance with generally accepted accounting principles.

D.   OTHER CLASSIFICATIONS AND EXPLANATIONS OF THE ANNUAL FINANCIAL STATEMENTS

I.   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:

	2018		2017		Change
	k€	%	k€	%	k€
Revenues	693	100.0	499	100.0	194
Expenditures for scientific promotion and scientific activities	-949	-136.9	-349	-69.9	-600
Administrative expenses	-82	-11.8	-108	-21.6	26
Expenses	-1,031	-148.8	-457	-91.6	-574
Operating result	-338	-48.8	42	8.4	-380
Interest result	0	0.0	0	0.0	0
Result before taxes on income	-338	-48.8	42	8.4	-380
Taxes on income	0	0.0	0	0.0	0
Annual deficit/surplus	-338	-48.8	42	8.4	-380
Withdrawal from/Allocation to reserves (net)	338	48.8	-42	-8.4	380
Unallocated cash balance	0	0.0	0	0.0	0

The IMU had **revenues** of k€ 693 in the reporting year, consisting largely of member contributions. In addition, the IMU received donations which, as a rule, come from scientific organizations. The reporting year contains reimbursed expenses for the financing of the ICM and of the General Assembly in the amount of k€ 148.

Revenues are composed of the following:

	k€
Member contributions	409
Third-party contributions	246
Other income	38
	693

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

Third-party contributions are composed of the following:

	k€
Donations for the ICM and General Assembly	148
Niels Henrik Abel Board, Norway	36
Donations of Mathematical Associations	1
FIMU – IMU Breakout Fellowship	49
FIMU – IMU Volunteer Lecturer Program	4
Other donations	8
	246

Other income (k€ 38) largely involves currency rate differences (k€ 13), payments received for written-down receivables (k€ 7) as well as the overhead share of the IMU for the project ICSU Gender Gap (k€ 5).

Expenditures of k€ 1,031 (prior year: k€ 457) are shown in detail in the Statement of Income and Expenditures (Appendix 2) as well as in the Budget Comparison (Appendix 4). In particular, as a result of the ICM held every four years (most recently 2018 in Rio de Janeiro/Brazil), expenditures for scientific promotion and scientific activities have increased significantly by k€ 600.

The increase largely involved the expenses for the ICM travel expense assistance (k€ 298), conducting the ICM (k€ 223) as well as the ICMI with k€ 72.

II.   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 Dec 2018		31 Dec 2017		Change
	k€	%	k€	%	k€
A S S E T S					
Current assets					
Receivables from member contributions	60	4.1	78	4.0	-18
Other assets (including Prepaid expenses)	9	0.6	1	0.1	8
Cash and cash equivalents	1,403	95.3	1,880	96.0	-477
	1,472	100.0	1,959	100.0	-487
L I A B I L I T I E S					
Net assets (own funds)	1,355	92.0	1,693	86.4	-338
Borrowed capital					
Provisions	29	2.0	55	2.8	-26
Liabilities from restricted donations	66	4.5	160	8.2	-94
Other liabilities (incl. Deferred income)	22	1.5	51	2.6	-29
	117	8.0	266	13.6	-149
	1,472	100.0	1,959	100.0	-487

Receivables from member contributions are broken down by country as follows:

Country	Year	WD *	Amount €
Algeria	2018		1,395.00
Bosnia & Herzegovina	2018		1,395.00
Chile	2018		1,162.50
Cuba	2018	*	1,395.00
Ecuador	2018		1,395.00
Egypt	2018		2,790.00
Greece	2018		1,395.00
Iran	2018	*	11,160.00
Kazakhstan	2018		1,395.00
Kyrgyzstan	2018		581.25
Montenegro	2018	*	1,395.00
Marocco	2018		1,046.25
Oman	2018		697.50
Peru	2018		1,395.00
Portugal	2018		1,162.50
South Africa	2018		2,790.00
Ukraine	2018		2,790.00
Venezuela	2018		1,395.00
Vietnam	2018		1,395.00
			38,130.00
Algeria	2017		1,395.00
Bosnia & Herzegovina	2017		1,395.00
Cuba	2017	*	1,395.00
Iran	2017	*	11,160.00
Montenegro	2017	*	1,395.00
Peru	2017		1,395.00
Ukraine	2017		2,790.00
Venezuela	2017		1,395.00
			22,320.00
Cuba	2016	*	1,395.00
Iran	2016	*	4,128.58
Montenegro	2016	*	1,395.00
Peru	2016		1,395.00
Venezuela	2016		1,395.00
			9,708.58
Carry forward:			70,158.58

Country	Year	WD	Amount
		*	€
Carry forward:			70,158.58
Cuba	2015	*	1,395.00
Montenegro	2015	*	1,395.00
Peru	2015		1,395.00
Venezuela	2015		1,395.00
			5,580.00
Montenegro	2014	*	1,416.84
Venezuela	2014		816.00
			2,232.84
Montenegro	2013	*	1,410.42
			1,410.42
Montenegro	2012	*	1,371.85
			1,371.85
Total receivables			80,753.69
Write-downs 50 % (marked with a *)			-20,903.85
			59,849.84

At the end of 2018 the outstanding member contributions were k€ 81, of which k€ 47 were outstanding at the time of our audit. As a result of consistent non-payment of their member contributions, open receivables of the above countries marked with a star "*" were directly written down by 50 %. Receivables are measured at the period-end exchange rate.

Cash and cash equivalents, parts of which are in foreign currency, are located in accounts with the Deutsche Bank AG and are composed of the following:

	Foreign currency	€
Account in € (5113915 10)		733,246.05
Account in CHF (5113915 01)	CHF 72.250,59	64,147.20
Account in USD (5113915 00)	USD 173.888,09	151,935.00
Account in USD (5113915 06)	USD 151.755,94	132,597.00
Account in € (5113915 00)		25,342.78
Account in € (5113915 05)		183,292.90
Account in € (5113915 04)		112,375.67
Cash in €		350.09
		1,403,286.69

The conversion of foreign currency into euro occurred at the period-end exchange rate.

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

	k€	k€
Association capital (Net assets)		307
Reserves		
- Annual surplus 2007 - 2017	1.058	
- Annual deficit 2018	-338	
- ICMI and CDC (Commission Fund)	328	1.048
		1.355

The Statutes do not make reference to association capital.

Of the Net assets, € 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 IMU Secretary and of the Treasurer at the end of the reporting year. The General Assembly reaches a resolution every four years on the creation of reserves.

Reserves are allocated as follows:

	k€
Travel support	
– Fields Medal 2022	3
– ICM 2022 in Russia	5
– Project Simons Fellowships	15
Co-financing joint workshops with other ICSU members 2016-2019	4
ICMI and CDC 2019	328
ICM default reserve	436
Project Breakout Fellowship/FIMU	32
Support CWM 2019	29
IMU Internet site	13
Outreach (IDM 2020 / 100 years IMU)	2
Co-financing the 2016-2019 ICSU projekt	20
Unrestricted reserves	161
	1.048

Funds that are shown under <u>ICMI und CDC</u> (Commission Fund) 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 € 105,190.83 and for CDC to € 222,290.21.

Provisions largely involve the obligation of the IMU (k€ 20) to provide a contribution in 2019 within the framework of the ICSU joint project "Gender Gap in Mathematical and Natural Sciences".

Liabilities from restricted donations developed as follows:

	€
Special Development Fund	
Per 1 Jan 2018	61,598.65
Withdrawal for ICM 2018	-61,598.65
Per 31 Dec 2018	0.00
Simons Foundation Africa	
Per 1 Jan 2018	35,336.07
Contribution Simons Africa Award	59,812.60
Travel Fellowship for 8 mathematicians	-29,140.73
Per 31 Dec 2018	66,007.94
IMU Developing Country Fund	
Per 1 Jan 2018	63,507.31
Withdrawal for ICM 2018	-63,507.31
Per 31 Dec 2018	0.00
	66,007.94

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 collected for the congress in August 2014 in Seoul/Republic of Korea was not needed to finance the travel costs of ICM participants. They were fully used for the ICM 2018 in Brazil.

The funds provided by the Simons Foundation are designated as a Travel Fellowship for research stays of mathematicians from developing countries. The **Simons Foundation Africa Fund** is especially reserved for mathematicians from Africa.

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

Other liabilities of k€ 3 involve monies in transit within the framework of the project Gender Gap in Mathematical and Natural Sciences.

III.   Financial position

The IMU was at all times in a position to meet its payment obligations in a full and timely manner. The cash flow from current activities amounts to k€ -459 and corresponds to the change in the amount of cash between 1 January 2018 (k€ 1,567) and 31 December 2018 (k€ 1,108).

E.   AUDITOR'S REPORT

We issued the following unqualified auditor's report:

"**Independent Auditor's Report**

To the International Mathematical Union, Berlin

Audit Opinion

We have audited the annual financial statements of the International Mathematical Union, Berlin,- consisting of the statement of assets and liabilities as at 31 December 2018 and the statement of income and expenditure for the financial year from 1 January 2018 to 31 December 2018. In our opinion, on the basis of the knowledge obtained in the audit, the accompanying annual financial statements comply, in all material respects, with the requirements of German commercial law applicable to all merchants and give a true and fair view of the assets, liabilities and financial position of the Union as at 31 December 2018 and of its financial performance for the financial year from 1 January 2018 to 31 December 2018.

Pursuant to § 322 (3) sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the annual financial statements.

Basis for the Audit Report

We concluded our audit of the annual financial statements in accordance with § 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Annual Financial Statements and of the Management Report" section of our auditor's report. We are independent of the Union in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the annual financial statements.

Responsibility of the Statutory Representatives for the Annual Financial Statements

The legal representatives are responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law applicable to all merchants, and that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Union in compliance with German Legally Required Accounting Principles. In addition, the legal representatives are responsible for such internal control as they, in accordance with German Legally Required Accounting Principles, have determined necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, the legal representatives are responsible for assessing the Union's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they

are responsible for financial reporting based on the going concern basis of accounting, provided no actual or legal circumstances conflict therewith.

Auditor's Responsibilities for the Audit of the Annual Financial Statements

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error, as well as to issue an auditor's report that includes our audit opinion on the annual financial statements.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual financial statements.

We exercise professional judgment and maintain professional scepticism throughout the audit. We also:

-Identify and assess the risks of material misstatement of the annual financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.

-Obtain an understanding of internal control relevant to the audit of the annual financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems of the Company.

-Evaluate the appropriateness of accounting policies used by the legal representative and the reasonableness of estimates made by the legal representatives and related disclosures.

-Conclude on the appropriateness of the legal representatives' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Union's ability to continue association activities. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the annual financial statements or, if such disclosures are inadequate, to modify our audit opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Union to cease to be able to continue its association activities.

-Evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures, and whether the annual financial statements present the underlying transactions and events in a manner that the annual financial statements give a true and fair

view of the assets, liabilities, financial position and financial performance of the Union in compliance with German Legally Required Accounting Principles.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit."

F. FINAL REMARKS

Publication or distribution of the annual financial statements of the International Mathematical Union, Berlin, for the financial year from 1 January 2018 to 31 December 2018 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, 30 September 2019

Mazars GmbH & Co. KG
Wirtschaftsprüfungsgesellschaft
Steuerberatungsgesellschaft

Helmut Schuhmann   Ralf Bierent
Wirtschaftsprüfer   Wirtschaftsprüfer
(German Public Auditor)   (German Public Auditor)

International Mathematical Union, Berlin

STATEMENT OF ASSETS AND LIABILITIES as at 31 December 2018

ASSETS	per 31 Dec 2018 €	€	Prior Year €	€
A. Current Assets				
I. Receivables and other assets				
1. Receivables from member contributions	59,849.84		78,101.75	
2. Other assets	7,415.38		68.54	
		67,265.22		78,170.29
II. Cash-in-hand, bank balances*		1,403,286.69		1,880,569.96
B. Prepaid Expenses		1,014.00		560.05
Total Assets		1,471,565.91		1,959,300.30

LIABILITIES	per 31 Dec 2018 €	€	Prior Year €	€
A. Net Assets				
I. Association net assets	307,465.98		307,465.98	
II. Reserves	1,047,621.73		1,385,533.12	
		1,355,087.71		1,692,999.10
B. Provisions		28,925.00		55,000.00
C. Liabilities				
1. Liabilities from restricted donations	66,007.94		160,442.03	
2. Other liabilities	3,410.26		49,464.17	
		69,418.20		209,906.20
D. Deferred Income		18,135.00		1,395.00
Total Liabilities		1,471,565.91		1,959,300.30

* contained therein ICMI € 183.292,90 and CDC € 112.375,67

International Mathematical Union, Berlin

STATEMENT OF INCOME AND EXPENDITURE for 2018

				Prior Year
	€	€	€	€
Revenues			693,070.89	499,146.97
Member contributions	408,967.50			396,877.50
Donations - international	246,078.76			74,809.84
Other income	38,024.63			27,459.63
Expenses for Scientific Promotion and Scientific Activities		-948,985.41		-348,659.91
Promotion of scientific activities	-687,692.95			-310,293.56
Expenditures ICM	-261,292.46			-38,366.35
Administrative expenses		-82,007.34		-108,160.93
Reimbursement personnel expenses	-29,000.00			-23,000.00
Travel expenses	-23,018.73			-20,078.85
Audit fees	-8,925.00			-9,785.00
Member contributions	-3,821.00			-3,710.00
Postage	-377.52			-123.20
Bank fees	-753.83			-440.16
Other	-16,111.26			-51,023.72
Other Expenditures			-1,030,992.75	-456,820.84
Interest and Similar Income			88.34	91.28
Interim Result			-337,833.52	42,417.41
Other Taxes			-77.87	0.00
Annual Deficit/Surplus			-337,911.39	42,417.41
Withdrawals from Reserves			339,138.91	27,175.50
Allocation to Reserves			-1,227.52	-69,592.91
Unallocated Cash Balance			0.00	0.00

International Mathematical Union, Berlin

Schedule of Member Contributions 2018

Country	Amount EUR
Algeria	1,395.00
Argentina	5,580.00
Armenia	1,395.00
Australia	11,160.00
Austria	2,790.00
Belgium	5,580.00
Bosnia & Herzegovina	1,395.00
Brazil	16,275.00
Bulgaria	1,395.00
Cameroon	1,395.00
Canada	16,740.00
Chile	3,952.50
CMS, Beijing	10,044.00
Colombia	1,395.00
Croatia	1,395.00
Cuba	1,395.00
Czech Republic	5,580.00
Denmark	2,790.00
Ecuador	1,395.00
Egypt	2,790.00
Estonia	1,395.00
Finland	5,580.00
France	16,740.00
Georgia	1,395.00
Germany	16,740.00
Greece	1,395.00
Hong Kong	1,395.00
Hungary	5,580.00
Iceland	1,395.00
India	11,160.00
Indonesia	1,395.00
Iran	11,160.00
Ireland	2,790.00
Israel	16,740.00
Italy	16,740.00
Ivory Coast	1,395.00
Japan	16,740.00
Kazakhstan	1,395.00
Kenya	1,395.00
Korea, Republic of	11,160.00

International Mathematical Union, Berlin

Schedule of Member Contributions 2018

Country	Amount EUR
Kyrgyzstan	581.25
Latvia	1,395.00
Luxembourg	1,395.00
Lithuania	1,395.00
Malaysia	1,395.00
Marocco	1,046.25
Math Society, Taipei	6,696.00
Mexico	5,580.00
Montenegro	1,395.00
Netherlands	11,160.00
New Zealand	1,395.00
Nigeria	1,395.00
Norway	5,580.00
Oman	697.50
Pakistan	1,395.00
Peru	1,395.00
Philippines	1,395.00
Poland	11,160.00
Portugal	3,952.50
Romania	1,395.00
Russia	16,740.00
Saudi Arabia	1,395.00
Senegal	813.75
Serbia	1,395.00
Singapore	1,395.00
Slovakia	2,790.00
Slovenia	1,395.00
South Africa	2,790.00
Spain	11,160.00
Sweden	11,160.00
Switzerland	11,160.00
Thailand	813.75
Tunisia	1,395.00
Turkey	2,790.00
Ukraine	2,790.00
United Kingdom	16,740.00
Uruguay	1,395.00
USA	16,740.00
Venezuela	1,395.00
Vietnam	1,395.00
Total	**408,967.50**

Appendix 4

INTERNATIONAL MATHEMATICAL UNION

Budget Comparison 2018

	Budget 2018 EUR			Actual 2018 EUR		
	General	Special	Sum	General	Special	Sum
INCOME						
I. General						
I.a Membership Dues	386,415			408,968		
Sum General Income	386,415			408,968		
II. Special						
II.a Special Development Fund		10,000			22,731	
II.b Donations		44,000			185,123	
II.c Grants					120,768	
Sum Special Income from Third Parties		54,000			328,622	
II.d Income from IMU bank accounts		1,000			88	
II.e Other Income		9,600			38,025	
Sum Special Income from Other Sources		10,600			38,113	
TOTAL INCOME	386,415	64,600	451,015	408,968	366,735	775,703
EXPENDITURE						
1. Commissions & Committees (C&C)						
1.1 CDC	77,283	44,000	121,283	73,349	44,000	117,349
1.2 CEIC	19,321			15,250		
1.3 ICMI	57,962			103,527		
1.4 Ad hoc committees	19,321			30,789	25,000	
1.5 Special support	0			60,909	18,000	
C&C Expenditure	173,887	44,000	217,887	283,824	87,000	370,824
2. ICM						
2.1 Site Committee	3,864			0		
2.2 Program Committee	7,728			1,407		
2.3 Prize Committees	7,728			15,893		
2.4 Congress Subvention	19,321			77,284		
2.5 Travel Grants (Young & Senior)	27,049	10,000	37,049	32,854	264,735	
2.6 ICM related admin., outreach	19,321			39,921	10,000	
ICM Expenditure	85,011	10,000	95,011	167,359	274,735	442,094
3. Union Administration						
3.1 General Assembly	3,864			14,456		
3.2 President & Secretary	46,370			23,044		
3.3 Executive Committee	23,185			16,997		
3.4 Other	3,864			120,533		
Union Administration Expenditure	77,283		77,283	175,029	0	175,029
4. Outreach						
4.1 ICSU Union Member Contribution	7,728			3,821		
4.2 Awards	3,864			0		
4.3 Website Support, Media Relations	7,728			7,056		
4.4 Bulletin	0			0		
4.5 Other	3,864	5,600	9,464	0		
4.6 Scientific activity support	0			0		
Outreach Expenditure	23,184	5,600	28,785	10,877	0	10,877
5. Overhead						
5.1 Office Expenses	3,864	1,600	5,464	7,699	1,600	
5.2 Bank Charges	3,864	1,000	4,864	314	440	
5.3 Legal Advice, Audit Fees	7,728	1,600	9,328	7,325	1,600	
5.4 Other	11,592	800	12,392	11,908	1,360	
Overhead Expenditure	27,048	5,000	32,049	27,246	5,000	32,246
TOTAL EXPENDITURE			451,015			1,031,072
Transfer to liabilities from donations not yet spent						-82,543
Interim Result			0			-337,912
Draw from Reserves			0			339,139
Return to Reserves			0			-1,228
Result			0		EUR	0

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.

Since 1 January 2011 the permanent Secretariat of the Union is located in Berlin/Germany.

Place of Management

IMU Secretariat, Hausvogteiplatz 11A, 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 16th General Assembly. The amendments included article 28 (Treasurer) and article 29 (Legal Domicile). A certified German translation is on file.

Objectives of the Association

According to Article 1 of the Statutes:

"(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 2018, the IMU had 79 regular members (voting), 9 associate members (non-voting) and 5 affiliate members (non-contributory and non-voting).

Executive Committee, Representatives

Since 1 January 2015, the Executive Committee consists of the following persons:

- Shigefumi Mori, Japan (President)

- Helge Holden, Norway (Secretary General)

- 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 (Member of the Executive Board ex-officio because she is the former President of the IMU)

As of 1 January 2019, the members of the Executive Committee are the following persons:

- Carlos E. Kenig, USA (President)

- Helge Holden, Norway (Secretary General)

- Nalini Joshi, Australia (Vice-President)

- Loyiso G. Nongxa, South Africa (Vice-President)

- Luigi Ambrosio, Italy (Member-at-Large)

- Andrei Okounkov, Russia (Member-at-Large)

- Paolo Piccione, Brazil (Member-at-Large)

- R .T. Ramadas, India (Member-at-Large)

- Gang Tian, China (Member-at-Large)

- Günter M. Ziegler, Germany (Member-at-Large)

- Shigefumi Mori, Japan (Member of the Executive Committee ex-officio because he was the President of the IMU in the last term of office)

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.

General Assembly

The following was resolved during the last General Assembly in São Paulo/Brazil in July 2018:

- The "Stable Office" of the IMU, established in cooperation between the WIAS and the IMU, should remain permanently in Berlin.

- Adoption of the annual financial statements of 2014 to 2017 and development of financial reserves from the annual surpluses, corresponding to the respective Statement of Income and Expenditures.

- Release from liability of the IMU Executive Committee and IMU Treasurer for the years from 2014 to 2017

- Budget for the time between 2019 and 2022

- Increase in member contributions between 2019 and 2022 to € 1,430.00 per unit (unit contribution)

- Appointments to various committees and commissions

- The next General Assembly will take place in 2022 in Saint Petersburg/Russia.

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.

The Finanzamt für Körperschaften I issued a notice of exemption for 2012 to 2014, 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 2019. The IMU is entitled to issue donation confirmations.

General Engagement Terms
for
Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften
[German Public Auditors and Public Audit Firms]
as of January 1, 2017

1. Scope of application

(1) These engagement terms apply to contracts between German Public Auditors (*Wirtschaftsprüfer*) or German Public Audit Firms (*Wirtschaftsprüfungsgesellschaften*) – hereinafter collectively referred to as "German Public Auditors" – and their engaging parties for assurance services, tax advisory services, advice on business matters and other engagements except as otherwise agreed in writing or prescribed by a mandatory rule.

(2) Third parties may derive claims from contracts between German Public Auditors and engaging parties only when this is expressly agreed or results from mandatory rules prescribed by law. In relation to such claims, these engagement terms also apply to these third parties.

2. Scope and execution of the engagement

(1) Object of the engagement is the agreed service – not a particular economic result. The engagement will be performed in accordance with the German Principles of Proper Professional Conduct (*Grundsätze ordnungsmäßiger Berufsausübung*). The German Public Auditor does not assume any management functions in connection with his services. The German Public Auditor is not responsible for the use or implementation of the results of his services. The German Public Auditor is entitled to make use of competent persons to conduct the engagement.

(2) Except for assurance engagements (*betriebswirtschaftliche Prüfungen*), the consideration of foreign law requires an express written agreement.

(3) If circumstances or the legal situation change subsequent to the release of the final professional statement, the German Public Auditor is not obligated to refer the engaging party to changes or any consequences resulting therefrom.

3. The obligations of the engaging party to cooperate

(1) The engaging party shall ensure that all documents and further information necessary for the performance of the engagement are provided to the German Public Auditor on a timely basis, and that he is informed of all events and circumstances that may be of significance to the performance of the engagement. This also applies to those documents and further information, events and circumstances that first become known during the German Public Auditor's work. The engaging party will also designate suitable persons to provide information.

(2) Upon the request of the German Public Auditor, the engaging party shall confirm the completeness of the documents and further information provided as well as the explanations and statements, in a written statement drafted by the German Public Auditor.

4. Ensuring independence

(1) The engaging party shall refrain from anything that endangers the independence of the German Public Auditor's staff. This applies throughout the term of the engagement, and in particular to offers of employment or to assume an executive or non-executive role, and to offers to accept engagements on their own behalf.

(2) Were the performance of the engagement to impair the independence of the German Public Auditor, of related firms, firms within his network, or such firms associated with him, to which the independence requirements apply in the same way as to the German Public Auditor in other engagement relationships, the German Public Auditor is entitled to terminate the engagement for good cause.

5. Reporting and oral information

To the extent that the German Public Auditor is required to present results in writing as part of the work in executing the engagement, only that written work is authoritative. Drafts are non-binding. Except as otherwise agreed, oral statements and explanations by the German Public Auditor are binding only when they are confirmed in writing. Statements and information of the German Public Auditor outside of the engagement are always non-binding.

6. Distribution of a German Public Auditor's professional statement

(1) The distribution to a third party of professional statements of the German Public Auditor (results of work or extracts of the results of work whether in draft or in a final version) or information about the German Public Auditor acting for the engaging party requires the German Public Auditor's written consent, unless the engaging party is obligated to distribute or inform due to law or a regulatory requirement.

(2) The use by the engaging party for promotional purposes of the German Public Auditor's professional statements and of information about the German Public Auditor acting for the engaging party is prohibited.

7. Deficiency rectification

(1) In case there are any deficiencies, the engaging party is entitled to specific subsequent performance by the German Public Auditor. The engaging party may reduce the fees or cancel the contract for failure of such subsequent performance, for subsequent non-performance or unjustified refusal to perform subsequently, or for unconscionability or impossibility of subsequent performance. If the engagement was not commissioned by a consumer, the engaging party may only cancel the contract due to a deficiency if the service rendered is not relevant to him due to failure of subsequent performance, to subsequent non-performance, to unconscionability or impossibility of subsequent performance. No. 9 applies to the extent that further claims for damages exist.

(2) The engaging party must assert a claim for the rectification of deficiencies in writing (*Textform*) [Translators Note: The German term "Textform" means in written form, but without requiring a signature] without delay. Claims pursuant to paragraph 1 not arising from an intentional act expire after one year subsequent to the commencement of the time limit under the statute of limitations.

(3) Apparent deficiencies, such as clerical errors, arithmetical errors and deficiencies associated with technicalities contained in a German Public Auditor's professional statement (long-form reports, expert opinions etc.) may be corrected – also versus third parties – by the German Public Auditor at any time. Misstatements which may call into question the results contained in a German Public Auditor's professional statement entitle the German Public Auditor to withdraw such statement – also versus third parties. In such cases the German Public Auditor should first hear the engaging party, if practicable.

8. Confidentiality towards third parties, and data protection

(1) Pursuant to the law (§ [Article] 323 Abs 1 [paragraph 1] HGB [German Commercial Code: *Handelsgesetzbuch*], § 43 WPO [German Law regulating the Profession of Wirtschaftsprüfer: *Wirtschaftsprüferordnung*], § 203 StGB [German Criminal Code: *Strafgesetzbuch*]) the German Public Auditor is obligated to maintain confidentiality regarding facts and circumstances confided to him or of which he becomes aware in the course of his professional work, unless the engaging party releases him from this confidentiality obligation.

(2) When processing personal data, the German Public Auditor will observe national and European legal provisions on data protection.

9. Liability

(1) For legally required services by German Public Auditors, in particular audits, the respective legal limitations of liability, in particular the limitation of liability pursuant to § 323 Abs. 2 HGB, apply.

(2) Insofar neither a statutory limitation of liability is applicable, nor an individual contractual limitation of liability exists, the liability of the German Public Auditor for claims for damages of any other kind, except for damages resulting from injury to life, body or health as well as for damages that constitute a duty of replacement by a producer pursuant to § 1 ProdHaftG [German Product Liability Act: *Produkthaftungsgesetz*], for an individual case of damages caused by negligence is limited to € 4 million pursuant to § 54 a Abs. 1 Nr. 2 WPO.

(3) The German Public Auditor is entitled to invoke demurs and defenses based on the contractual relationship with the engaging party also towards third parties.

(4) When multiple claimants assert a claim for damages arising from an existing contractual relationship with the German Public Auditor due to the German Public Auditor's negligent breach of duty, the maximum amount stipulated in paragraph 2 applies to the respective claims of all claimants collectively.

(5) An individual case of damages within the meaning of paragraph 2 also exists in relation to a uniform damage arising from a number of breaches of duty. The individual case of damages encompasses all consequences from a breach of duty regardless of whether the damages occurred in one year or in a number of successive years. In this case, multiple acts or omissions based on the same source of error or on a source of error of an equivalent nature are deemed to be a single breach of duty if the matters in question are legally or economically connected to one another. In this event the claim against the German Public Auditor is limited to € 5 million. The limitation to the fivefold of the minimum amount insured does not apply to compulsory audits required by law.

(6) A claim for damages expires if a suit is not filed within six months subsequent to the written refusal of acceptance of the indemnity and the engaging party has been informed of this consequence. This does not apply to claims for damages resulting from scienter, a culpable injury to life, body or health as well as for damages that constitute a liability for replacement by a producer pursuant to § 1 ProdHaftG. The right to invoke a plea of the statute of limitations remains unaffected.

10. Supplementary provisions for audit engagements

(1) If the engaging party subsequently amends the financial statements or management report audited by a German Public Auditor and accompanied by an auditor's report, he may no longer use this auditor's report.

If the German Public Auditor has not issued an auditor's report, a reference to the audit conducted by the German Public Auditor in the management report or any other public reference is permitted only with the German Public Auditor's written consent and with a wording authorized by him.

(2) If the German Public Auditor revokes the auditor's report, it may no longer be used. If the engaging party has already made use of the auditor's report, then upon the request of the German Public Auditor he must give notification of the revocation.

(3) The engaging party has a right to five official copies of the report. Additional official copies will be charged separately.

11. Supplementary provisions for assistance in tax matters

(1) When advising on an individual tax issue as well as when providing ongoing tax advice, the German Public Auditor is entitled to use as a correct and complete basis the facts provided by the engaging party – especially numerical disclosures; this also applies to bookkeeping engagements. Nevertheless, he is obligated to indicate to the engaging party any errors he has identified.

(2) The tax advisory engagement does not encompass procedures required to observe deadlines, unless the German Public Auditor has explicitly accepted a corresponding engagement. In this case the engaging party must provide the German Public Auditor with all documents required to observe deadlines – in particular tax assessments – on such a timely basis that the German Public Auditor has an appropriate lead time.

(3) Except as agreed otherwise in writing, ongoing tax advice encompasses the following work during the contract period:

a) preparation of annual tax returns for income tax, corporate tax and business tax, as well as wealth tax returns, namely on the basis of the annual financial statements, and on other schedules and evidence documents required for the taxation, to be provided by the engaging party

b) examination of tax assessments in relation to the taxes referred to in (a)

c) negotiations with tax authorities in connection with the returns and assessments mentioned in (a) and (b)

d) support in tax audits and evaluation of the results of tax audits with respect to the taxes referred to in (a)

e) participation in petition or protest and appeal procedures with respect to the taxes mentioned in (a).

In the aforementioned tasks the German Public Auditor takes into account material published legal decisions and administrative interpretations.

(4) If the German Public auditor receives a fixed fee for ongoing tax advice, the work mentioned under paragraph 3 (d) and (e) is to be remunerated separately, except as agreed otherwise in writing.

(5) Insofar the German Public Auditor is also a German Tax Advisor and the German Tax Advice Remuneration Regulation (*Steuerberatungsvergütungsverordnung*) is to be applied to calculate the remuneration, a greater or lesser remuneration than the legal default remuneration can be agreed in writing (*Textform*).

(6) Work relating to special individual issues for income tax, corporate tax, business tax, valuation assessments for property units, wealth tax, as well as all issues in relation to sales tax, payroll tax, other taxes and dues requires a separate engagement. This also applies to:

a) work on non-recurring tax matters, e.g. in the field of estate tax, capital transactions tax, and real estate sales tax;

b) support and representation in proceedings before tax and administrative courts and in criminal tax matters;

c) advisory work and work related to expert opinions in connection with changes in legal form and other re-organizations, capital increases and reductions, insolvency related business reorganizations, admission and retirement of owners, sale of a business, liquidations and the like, and

d) support in complying with disclosure and documentation obligations.

(7) To the extent that the preparation of the annual sales tax return is undertaken as additional work, this includes neither the review of any special accounting prerequisites nor the issue as to whether all potential sales tax allowances have been identified. No guarantee is given for the complete compilation of documents to claim the input tax credit.

12. Electronic communication

Communication between the German Public Auditor and the engaging party may be via e-mail. In the event that the engaging party does not wish to communicate via e-mail or sets special security requirements, such as the encryption of e-mails, the engaging party will inform the German Public Auditor in writing (*Textform*) accordingly.

13. Remuneration

(1) In addition to his claims for fees, the German Public Auditor is entitled to claim reimbursement of his expenses; sales tax will be billed additionally. He may claim appropriate advances on remuneration and reimbursement of expenses and may make the delivery of his services dependent upon the complete satisfaction of his claims. Multiple engaging parties are jointly and severally liable.

(2) If the engaging party is not a consumer, then a set-off against the German Public Auditor's claims for remuneration and reimbursement of expenses is admissible only for undisputed claims or claims determined to be legally binding.

14. Dispute Settlement

The German Public Auditor is not prepared to participate in dispute settlement procedures before a consumer arbitration board (*Verbraucherschlichtungsstelle*) within the meaning of § 2 of the German Act on Consumer Dispute Settlements (*Verbraucherstreitbeilegungsgesetz*).

15. Applicable law

The contract, the performance of the services and all claims resulting therefrom are exclusively governed by German law.

2.4. IMU Special Development Fund

Contributions to the IMU Special Development Fund.

2018

Heidelberg Laureate Forum Foundation, Germany	3,000.00 EUR
London Mathematical Society, UK	4,074.51 EUR
Mathematical Society of Japan, Japan	15,656.93 EUR

2.5. Third-Party Donations (monetary contributions)

2018

American Mathematical Society, US	4,427.95 EUR
FIMU, US	51,641.25 EUR
Mathematical Society of Japan, Japan	1,124.95 EUR
Niels Henrik Abel Board, Norway	36,024.30 EUR
Simons Foundation, US	59,812.60 EUR
Simons Foundation, US	4,886.15 EUR

2.6. IMU Bank Accounts

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

Deutsche Bank
Otto-Suhr-Allee 6-16, D-10585 Berlin, Germany

BIC (SWIFT) code: DEUTDEDB110

EUR transfer to account No.: IBAN code: DE85100708480511391500	USD transfer to account No.: IBAN code: DE85100708480511391500	CHF transfer to account No.: IBAN code: DE58100708480511391501

3. Commissions and Committees

3.1. International Commission on Mathematical Instruction (ICMI)

https://www.mathunion.org/icmi

Activity Report 2018

Schematic presentation of the ICMI Organization
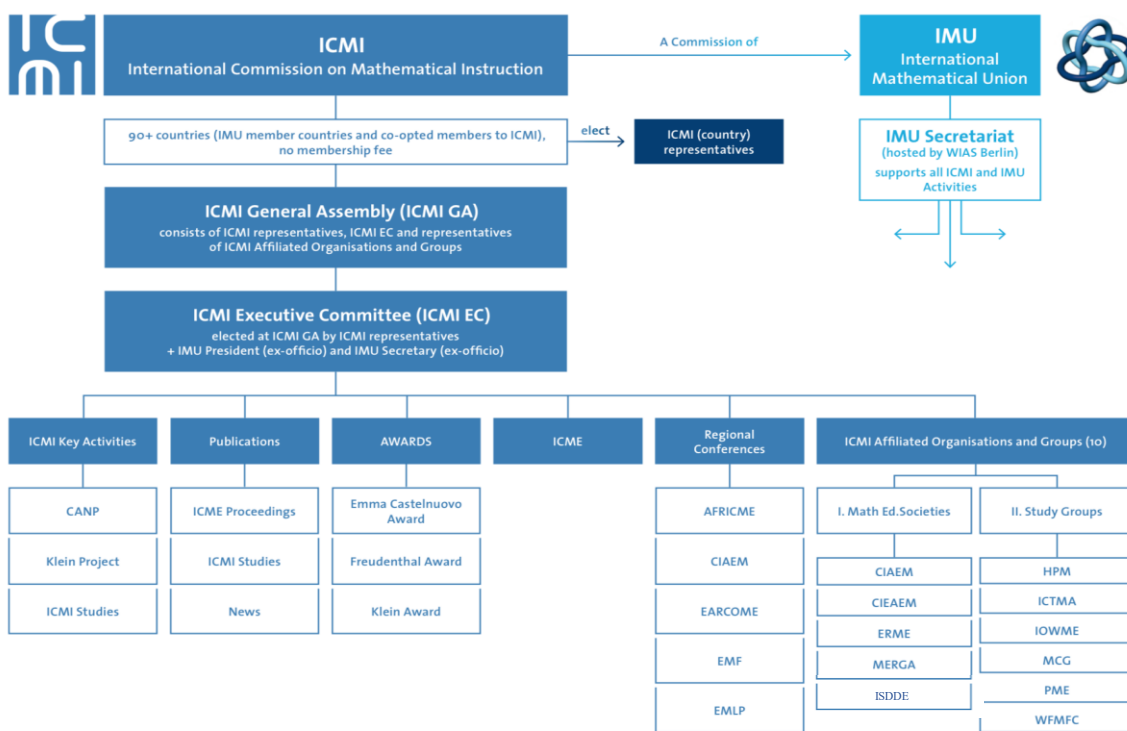
2018 Key activities and overview:

Administration and Governance

- The ICMI Executive Committee (term in office 2017-2020) held its second annual meeting from May 11th - 13th, in Taipei, Taiwan.

- Ex officio members of the ICMI EC, Shigefumi Mori (IMU President) and IMU Liaison Person Alicia Dickenstein (IMU Vice President) ended their term in the IMU EC, and thus ended their membership in the ICMI EC. Carlos Kenig, IMU President since January 1, 2019, has thus become a new ex officio member of the ICMI EC.

- The Nominating Committee for constituting the slate for the election of the ICMI EC, which will serve during 2012-2024 was formed and has started its work.

- Calls for nominations for President, Vice Presidents, Secretary General and members at large for the upcoming EC were issued.

- ICMI Member-at-large Jean-Luc Dorier was appointed as CDC member (2019-22).

- ICMI President, Jill Adler, and ICMI Secretary General, Abraham Arcavi attended the IMU General Assembly in Sao Paulo, Brazil on July 29-30.

- With the help of IMU Secretary, a substantial effort was devoted to renew the appointments of representatives and/or appoint new ones. In 2018, ICMI had 97 member countries, 85 are also members of the IMU.
- ICMI continues to maintain its close relations with its Affiliated Organizations and Study Groups.

ICMI Regional Conferences

The following regional/international conferences by associations affiliated with ICMI were held:

- EARCOME8 (May 7-11, Taipei, Taiwan)
- ADiMA (August 16-18, Dangbo, Bénin)
- AFRICME5 (August 29-31, Dar es Saalam, Tanzania)
- EMF (October 22-26, Paris France)

ICME-14

Preparations for ICME 14 in Shanghai in 2020 are ongoing. The second IPC meeting is planned for March 27-19, 2019, in Shanghai, China.

ICME-15

Three sites submitted a full bid for hosting ICME 15 in 2024: Sydney (Australia), Prague (Czech Republic) and Bangkok (Thailand).

ICM 2018

ICMI participated in organizing the panel on Mathematics Education and Popularization of Mathematics.

ICMI Studies

- The ICMI Study 23 volume titled "Primary Mathematics Study on Whole Numbers" was published as open access.
- The Study Conference of ICMI Study 24 ("School Mathematics Curriculum Reforms: Challenges, Changes, Opportunities" was held on November 25-30, Tsukuba, Japan.
- The IPC for ICMI Study 25 ("Mathematics Teachers Working and Learning in Collaborative groups") was constituted and started to plan and work.
- It was decided by the EC that future ICMI Studies will be initiated only by the upcoming EC (2021-2024).

ICMI Awards

Calls for the 2020 Hans Freudenthal, Felix Klein and Emma Castenuovo Awrads were made. The deadline for submission of candidacies is March 31, 2019.

Outreach to Developing Countries

- A two-day workshop with two representatives of each of the five CANPs was held in May 7-9 in Taipei, attached to EARCOME8. A fund was established to support follow up activities.

- The CANP5 book, "Mathematics Teacher Education in the Andean region and Paraguay, A Comparative Analysis of Issues and Challenges" was published.

Klein Project

Hans-Georg Weigand, the contact person of the Klein Project group and the maintenance of the Klein Project blog, is in ongoing contact regarding planning and implementation of future activities.

Outreach, Dissemination of Information, Archiving and Reporting

- ICMI Newsletter
- ICMI Website
- ICMI Facebook
- A section in the Newsletter of the European Mathematical Society
- ICMI Archive (based in the IMU Archive in Berlin/IMU Secretariat)
- ICMI Posters and other materials
- Reports to IMU, ICMI GA and the general public
- ICMI Digitization Program

AMOR (Awardees Multimedia Online Resources Project)

Development of the AMOR Project is ongoing both in France/Switzerland and in Israel.

2018 in detail

Administration and Governance

ICMI Executive Committee

The quadrennial periods of the Executive Committees of IMU and ICMI do not fully overlap (the four-year terms in office of the ICMI ECs start in January 1 of years 4n+1 and IMU ECs in January 1st of years 4n+3). Thus, at the midterm of an ICMI EC, the IMU president changes, the IMU Secretary General may change (if not re-elected) as well as the ICMI Liaison Person. On December 31, 2018, IMU President Shigefumi Mori and Vice President Alicia Dickenstein (IMU liaison person) ended their term. Carlos Kenig, IMU President since January 1, 2019, became ex-officio member of the ICMI EC and a new IMU Liaison Person has still to be appointed.

The EC members for the remaining years of the present term in office (2019-2020) are:

Position		Country (place of work)
President	Jill Adler	South Africa
Secretary-General	Abraham Arcavi	Israel
Vice Presidents	Merrilyn Goos	Ireland
	Luis Radford	Canada
Member-at-large	Yuriko Baldin	Brazil
	Jean-Luc Dorier	Switzerland
	Anita Rampal	India
	Binyan Xu	China
	Zahra Gooya	Iran

Ex officio members	Ferdinando Arzarello, Past President of ICMI	Italy
	Carlos Kenig, President of IMU	USA
	Helge Holden, Secretary of IMU	Norway

The ICMI Executive Committee held its second annual meeting on May 11 - 13, in Taipei, Taiwan. The committee discussed, made decisions and established item actions on the main following topics: the future of CANPs, finances, ICMI Studies, future ICMEs, the Klein Project, the Database Project, the archives and more. In the following, some of these items will be described in detail and others can be found in the minutes (available to IMU EC members upon request). It was decided to hold the next ICMI EC meeting in Montevideo, Uruguay, on May 1-3, 2019, to coincide with two important events in Latin America:

- The National Meeting on Mathematics Education (CUREM8, see https://curem.semur.edu.uy/) to which two EC members were invited as plenary speakers, and thus their travel expenses and accommodation are covered by the hosts; and
- The Inter-American Conference on Mathematics Education (XV CIAEM) to be be held in Medellin immediately after the EC meeting, to which two ICMI EC members were invited as planetary speakers, and thus parts of their travel expenses are covered by the hosts. For details see http://ciaem-redumate.org/conferencia/index.php/xvciaem/xv

ICMI Nominating Committee

According to the ICMI statutes (see https://www.mathunion.org/icmi/organizationicmi-executive-committee/nomination-members-icmi-ec-2021-2024), the composition of the Nominating Committee (NC) was completed. The NC is in charge of the composition of the slate, which is presented towards the election of the ICMI EC (which will serve in 2021-2024) at the ICMI General Assembly on July 11th, 2020 (one day before the beginning of ICME14) in Shanghai. The Chair of the NC is Michèle Artigue, past President of ICMI. The two other core members of the NC are Jill Adler, ICMI President and Carlos Kenig, IMU President. The names of the remaining three members of the NC remain undisclosed. The NC will begin its work of collecting nominations for the slate during 2019 – the call for such nominations was already made in November.

CDC

ICMI EC member-at-large Jean-Luc Dorier was selected as a CDC member for the period 2019-2022. ICMI thanks Jean-Luc for accepting this responsibility and IMU Secretary Helge Holden for his kind assistance during the selection process.

IMU General Assembly

ICMI President, Jill Adler and ICMI Secretary General, Abraham Arcavi attended the sessions of the IMU General Assembly, which took place in Sao Paulo, Brazil on July 29-30. Both ICMI officers experienced, first-hand, the functioning of the IMU as ICMI's parent organization and reflected about how some of its ways of conducting business are (or still can be) adapted to ICMI. Jill Adler reported on this experience in an editorial (November 1, 2018, issue of the ICMI Newsletter). For the full text, please see https://www.mathunion.org/fileadmin/ICMI/ICMINewsletter/ICMI%20Newsletter%20November%201.2018%20small.pdf

ICMI Member Countries

In 2018 ICMI had 97 member countries, 85 are also members of IMU. The full list is at https://www.mathunion.org/icmi/organisation/our-members/member-countries
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 electing the ICMI Executive Committee (ICMI EC). The ICMI representatives also inform the national communities of

developments within ICMI. The ICMI EC, in particular the Secretary General and the ICMI Administrative Manager, support its member countries and IMU adhering organizations to re-elect ICMI representatives after their 8-year tenure. The ICMI Representatives are informed about ICMI activities and developments via a mailing list. Guidelines describing the role of ICMI representatives (representing their countries in ICMI, especially in the GA and representing ICMI in their countries) can be found on page 9, March 1, 2017 issue of the ICMI News, https://www.mathunion.org/fileadmin/ICMI/files/News/ICMI_Newsletter_March_2017.pdf

ICMI Affiliate Organizations and Study Groups

ICMI's organizational outreach includes eleven multi-national organizations and international study groups in mathematics education, which have obtained affiliation with ICMI. These organizations are independent and self-financed. They collaborate with ICMI on specific activities, such as the ICMI Studies or CANP. The Affiliate Organizations present activity reports to the General Assembly of ICMI.

The following organizations are currently affiliated with ICMI:

- CIAEM: Inter-American Committee on Mathematics Education (affiliated in 2009) http://ciaem-redumate.org/ciaem/?q=en/principal
- CIEAEM: International Commission for the Study and Improvement of Mathematics Teaching (affiliated in 2010)   http://www.cieaem.org/
- ERME: European Society for Research in Mathematics Education (affiliated in 2010) www.mathematik.uni-dortmund.de/~erme/index.php
- MERGA: Mathematics Education Research Group of Australasia (affiliated in 2011) https://www.merga.net.au//
- ISDDE: International Society for Design and Development in Education (affiliated in 2017) http://www.isdde.org/isdde/index.htm

The following six Study Groups are currently affiliated with ICMI:

- HPM: The International Study Group on Relations between the History and Pedagogy of Mathematics (since 1976)   http://www.clab.edc.uoc.gr/HPM/
- ICTMA: The International Study Group for Mathematical Modelling and Applications (since 2003)   http://www.ictma15.edu.au
- IOWME: The International Organization of Women and Mathematics Education (since 1987) https://www.mathunion.org/icmi/organisation/affiliated-organisations/iowme
- MCG: The International Group for Mathematical Creativity and Giftedness (since 2011) http://www.igmcg.org/
- PME: The International Group for the Psychology of Mathematics Education (since 1976) http://igpme.org/
- WFNMC: The World Federation of National Mathematics Competitions (since 1994) http://www.wfnmc.org

For further details see:
https://www.mathunion.org/icmi/organisation/affiliated-organizations

ICMI Regional Conferences

Launched in the mid-seventies, ICMI Regional Conferences aim to facilitate wide exchanges at the regional level. In 2018, the following conferences took place:

- **EARCOME8** (May 7-11, Taipei, Taiwan): The ICMI - East Asia Regional Conferences on Mathematics Education are held every three years (sometimes every two years, not to conflict with ICMEs). The theme of the conference was "Flexibility in Mathematics Education". The conference was attended by hundreds of participants. ICMI held both the CANP workshops (see below) and its annual EC meeting attached to the conference. Several ICMI officers were invited speakers at the conference. For details see http://earcome8.math.ntnu.edu.tw/

- **ADiMA** (August 16-18, Dangbo, Bénin): ADiMa (Association des Didacticiens des Mathématiques d'Afrique) was created as a regional network for mathematics education within French speaking Africa. ADiMa emerged from the meeting of the first CANP in Mali in 2011. The general theme of this conference was "The place of research in didactics of mathematics in teacher training in Africa: State of the art, challenges and perspectives". The conference was attended by participants from 14 different countries and the program included more than 60 presentations. ICMI member-at-large Jean-Luc Dorier wrote a detailed report on this conference, which can be found in page 8 of the November 1st issue of the ICMI Newsletter, at https://www.mathunion.org/fileadmin/ICMI/ICMINewsletter/ICMI%20Newsletter%20November%201.2018%20small.pdf

- **AFRICME5** (August 29-31, Dar es Saalam, Tanzania): The Africa Regional Congress on Mathematical Education was launched in 2005 and aims at offering a forum for African mathematics educators. The 5th Congress was hosted by The Aga Khan University (AKU), in Dar es Salaam, Tanzania from August 29-31, 2018. The program included keynote lectures, panel and round table discussions, paper presentations, workshops, and displays of local teaching learning materials and posters. ICMI member-at-large Jean-Luc Dorier wrote a detailed report, which can be found in pages 9-10 of the November 1st issue of the ICMI Newsletter, see https://www.mathunion.org/fileadmin/ICMI/ICMINewsletter/ICMI%20Newsletter%20November%201.2018%20small.pdf The ICMI president, Jill Adler, also attended the conference and

- **EMF** (October 22-26, Paris France): L'Espace Mathématique Francophone was created to promote reflections and exchanges within the French speaking communities on the vital issues of mathematics education at all levels. The EMF meetings are held every three years since 2000. Conference venues are chosen to respect a geographical balance and to encourage wide participation. ICMI Vice President, Luis Radford, who is francophone, supported the organization of the conference as ICMI Liaison Person and attended the meeting. For details, see http://emf.unige.ch/index.php/emf-2018/

ICME 14

The 14th International Congress on Mathematical Education will be held in Shanghai, China on July 12th-19th, 2020 (see http://www.icme14.org/static/en/index.html). The major components of the program have been organized, with all the invitations already issued and accepted (invited plenary speakers, panelists, chairs of Topic Study Groups). The second IPC meeting will take place in Shanghai on March 27-29 to finalize the details and to launch the second announcement.

ICME 15

By November 1, 2018, the deadline for bids submissions, three full bids were submitted to host ICME 15 in 2024: in Sydney (Australia), Prague (Czech Republic) and Bangkok (Thailand). Two of them fulfilled the required criteria for a bid (Sydney and Prague) and one (Bangkok) was turned down. ICMI President, Jill Adler' ICMI Secretary General, Abraham Arcavi, ICMI Member-at-Large Jean Luc Dorier and ICMI Administrative Manager Lena Koch will conduct site visits (Prague, February 14-15, 2019 and Sydney, April 1 and 2, 2019). During the upcoming EC meeting in May 2019, they will report on their visits and submit a recommendation for the site to the EC for approval.

ICM 2018

ICMI organized the panel on Mathematics Education and Popularization of Mathematics, at the ICM 2018 in Rio de Janeiro Brazil, chaired by Cheryl Praeger (former ICMI Vice President). Several ICMI colleagues actively participated. The program included plenary speakers and panelists (see invited section lectures #18 at http://www.icm2018.org/portal/en/invited-section-lectures-speakers).

ICMI Studies

A major ICMI program 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 (IPC) selected by the ICMI EC. Built around an international conference, an ICMI Study is directed towards the preparation of a published volume to promote discussion and action at the international, regional and/or institutional level. 23 volumes have been published between 1986 and 2018. The series editors 2017-2020 are the ICMI President and the Secretary General. The ICMI Studies Guidelines (recently updated) are aimed at potential proposers of a study as well as acting IPCs. For details see
https://www.mathunion.org/fileadmin/ICMI/ICMI%20studies/ICMI_Studies_Revised_Jan2018.pdf

The following were the main activities regarding ICMI Studies during 2018:
- **ICMI Study 23 "Building the Foundation: Whole Numbers in the Primary Grades"**
  The Study Volume was published by Springer as open access in order to make it available to all at no cost. Printed copies can be ordered at a discounted price. See
  https://www.springer.com/gp/book/9783319635545

- **ICMI Study 24 "School Mathematics Curriculum Reforms: Challenges and Changes"**
  The 24th ICMI Study Conference took place at the University of Tsukuba, Japan (26-30.11.2018), details can be found at http://www.human.tsukuba.ac.jp/~icmi24/   The writing of the volume has started on the basis of the discussions and conclusions by the Working Groups during the conference. It is expected that the volume will be ready for presentation at ICME14 in Shanghai. ICMI is currently updating the Database Project to serve as a resource for the ICMI Study (https://www.mathunion.org/icmi/activities/icmi-database-project).

- **ICMI Study 25 "Mathematics Teachers Working and Learning in Collaborative Groups"**
  The EC agreed on this new study at its meeting in May 2018 and selected a group of international scholars with experience in this theme to constitute the IPC for this new ICMI Study. All the invitees accepted, and the first IPC meeting will be conducted in Berlin at the IMU Secretariat on February 11-13, 2019. Discussions online among the IPC members has begun and a draft of the Discussion Document is already in place. This document includes the detailed description of the theme and its subthemes, which are the basis for the structure of the Study Conference and subsequently the structure of the Study Volume. The Discussion Document also includes a call for papers for the Study Conference planned to take place in January 2020.

- **Future Studies**
  The EC decided not to undertake additional new ICMI Studies during the present term of office. The main reason for this decision is demands of the production process and for resources which are very difficult to allocate when two studies are currently in process. In addition, there is no obvious theme that is timely and appropriate to pursue now. Hence, our recommended that the identification and launch of a new study should be the prerogative of the upcoming EC as most of the work and resources needed for this will be during its term.

ICMI Awards

ICMI honors outstanding scholars in mathematics education with three awards:

- The Felix Klein Award for life-time achievement in mathematics education research, https://www.mathunion.org/icmi/awards/felix-klein-award-life-time-achievement-mathematics-education-research

- The Hans Freudenthal Award for outstanding contributions of an individual's theoretically well-conceived and highly coherent research program, https://www.mathunion.org/icmi/awards/hans-freudenthal-award-outstanding-contributions-individuals-theoretically-well

- The Emma Castelnuovo Award for excellence in the practice of mathematics education
  https://www.mathunion.org/icmi/awards/icmi-emma-castelnuovo-award-excellence-practice-mathematics-education

The calls for nominations for the 2019/20 ICMI awards were distributed. The deadline for submission of nominations is March 31st, 2019.

Anna Sfard (Israel), an ICMI awardee herself (recipient of the 2007 Hans Freudenthal Award) is the present chair of the Awards Committee in charge of both the Hans Freudenthal and the Felix Klein Awards. Konrad Krainer (Austria) chairs the Emma Castelnuovo Award Committee. The names of the members of these committees remain undisclosed as long as they are in office.
The names of the awardees will be announced in 2019.

Outreach to Developing Countries

Capacity and Networking Project (CANP)
CANP was established with the goal of enhancing 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. Five successful CANPs were conducted during the last 6-7 years (Sub-Saharan Africa, Central America and the Caribbean, South East Asia, East Africa and Andean Region and Paraguay). Lena Koch undertook a thorough evaluation of all the CANPs showing very encouraging results as well as lessons to be learned (see full evaluation report at
https://www.mathunion.org/fileadmin/ICMI/Activities/CANP/CANP%20Review/Full%20Report%20CANP%20Evaluation%20including%20Addendum.pdf).

ICMI decided to conduct a two-day intensive workshop with two representatives of each CANP in order to discuss the results of the evaluation and to brainstorm about future steps. The workshop was conducted in Taipei, May 7-9, 2018 attached to EARCOME8. As a result, ICMI decided to allocate funds to support activities to continue the CANP activities and to consolidate regional partnerships. These funds would be allocated on the basis of submitted proposals to be reviewed by the ICMI EC. All the CANPs submitted proposals, which are now being evaluated.

The CANP5 book, "Mathematics Teacher Education in the Andean region and Paraguay, A Comparative Analysis of Issues and Challenges" was published. This book synthetizes the preparation of pre- and in-service teachers in Bolivia, Ecuador, Peru and Paraguay. It shows similarities and differences from several perspectives. For details, see
https://www.springer.com/gp/book/9783319975436

The Klein Project

In 2008, this project began as an IMU/ICMI joint activity, with the aim of producing mathematics resources for secondary teachers on contemporary mathematics. It was inspired by Felix Klein's book *Elementary Mathematics from an Advanced Standpoint*, first published 100 years earlier. A Design Group of 8 people (mathematicians and educators) was established in 2008, and started to create "vignettes". A vignette is a short, readable piece on a topic of contemporary mathematics targeted for school teachers. As vignettes began to be produced and tested amongst teacher readers, the "Klein Vignette Style" evolved, and in 2011 it was decided to establish a Blog (http://blog.kleinproject.org) as a means of distribution. It was also decided to make vignettes available in as many languages as possible. By December 2018, a total of 23 vignettes, all available in English, and many translated into Arabic, French, German, Italian, Spanish, Portuguese, Khmer and Mandarin, where published on the blog. The Blog also has a "Book of the Month" and "Site of the Month" entries, the former featuring books of general mathematical interest for teachers first published more than ten years ago. There is an

active "Klein community" of volunteer translators. The Klein Blog received an average of 100-200 hits per day and it is growing, with an all-time total of over 118,000 hits. While this may be small by web standards, it represents at least 50 vignettes being read by teachers every day, after accounting for accidental and non-teacher hits.

In 2017, it was decided to continue the Klein Project focusing on the further development of the blog and possibly a new Klein website following the relaunch of the ICMI and IMU websites. Hans-Georg Weigand was appointed as the new contact person. ICMI EC members-at-large Yuriko Baldin (ICMI liaison person) and Ferdinando Arzarello support Hans-Georg Weigand in taking the Project forward. During 2018, ICMI President Jill Adler followed the project closely regarding future plans (i.e setting up a conference, how to maintain and expand the project, etc.).

Outreach, Dissemination of Information, Archiving and Reporting

- **ICMI Newsletter**
  Like in previous years, three issues of the ICMI Newsletter were published and distributed (March 1, July 1 [and] November 1). The Editors are Abraham Arcavi, Merrilyn Goos and Lena Koch. See
  https://www.mathunion.org/icmi/publications/icmi-newsletter/icmi-newsletter-archive-starting-july-2014

- **ICMI Website**
  The new ICMI website https://www.mathunion.org/icmi is fully operational since December 2017. The editors were Jaime Carvalho e Silva (former ICMI Secretary General) and Lena Koch. Occasional "bugs" are being fixed as they emerge during the use of the site. They receive technical support from the IMU technician Frank Kloeppel.

- **ICMI Facebook**
  The ICMI Facebook page was established in 2011 and has more than 5,500 subscribers (fans). The editors are Jaime Carvalho e Silva (former ICMI Secretary General) and Lena Koch. See https://www.facebook.com/icmi.math.edu/

- **L'Enseignement Mathématique and the Newsletter of the EMS (European Mathematical Society)**
  The regular columns on ICMI News were published in the journal L'Enseignement Mathématique (historically connected to ICMI) and the Newsletter of the European Mathematical Society. The editor is ICMI EC member-at-large Jean-Luc Dorier.

- **ICMI Archive**
  Preservation of ICMI historical documents is ongoing under the joint coordination of former ICMI Secretary General Bernard Hodgson and IMU archivist Birgit Seeliger.

- **ICMI Materials**
  ICMI materials were distributed at various conferences and events.

- **Reports**
  Each spring ICMI submits to the IMU EC an activity and financial report on the preceding calendar year (similar to the present one).

- **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 first five ICMI Studies (and the corresponding Discussion Documents), ICMI Bulletins, proceedings of various meetings and conferences and other relevant documents are available for perusal and free download from https://www.mathunion.org/icmi/publications/icmi-digital-library-project

AMOR (Awardees Multimedia Online Resources Project)

With the encouragement and support of IMU Past President Ingrid Daubechies, the ICMI EC started to explore in 2013 the role and potential of MOOCs (Massive Open Online Courses) in mathematics education. In 2014 ICMI EC member-at-large Jean-Luc Dorier developed the idea of creating MOOCs around the ICMI Awardees and a project has been launched to develop MOOCs for mathematics education graduate students and young career fellows. The project is named "Awardees Multimedia Online Resources (AMOR)" and it started in cooperation with French colleagues, among them Michèle Artigue and Claire Margolinas. Currently there are draft versions of part of at least three series of lectures by awardees from France and Israel.

Financial Summary

ICMI's principal source of income is the annual grant from the International Mathematical Union (IMU). Another key source of financial support for ICMI activities comes from academic institutions all over the world that support their faculty members to attend ICMI meetings and organize ICMI activities (EC meetings, ICME and all related costs, ICMI Studies IPC meetings and conferences, ICMI Regional Conferences, CANPs etc.).

ICMI Administrative Manager and ICMI Secretary General prepare the budget annually and submit it to the ICMI EC for comments and approval. The funds are transferred from the IMU Secretariat in Berlin.

The ICMI EC would like to thank IMU, the IMU Secretariat and its host institution WIAS in Berlin and all institutions who financially and administratively supported ICMI activities in 2018.

The ICMI EC would also like to highlight the work of all individuals who are actively involved in ICMI activities and without whom ICMI activities and outreach would not be possible.

Jill Adler, ICMI President
Abraham Arcavi, ICMI Secretary-General
Lena Koch, ICMI Administrative Manager, IMU Secretariat

February 2019.

3.2. Commission for Developing Countries (CDC)

https://www.mathunion.org/cdc

Report on the Activities of the IMU Commission for Developing Countries (CDC) January 1, 2018 –December 31, 2018

The Commission for Developing Countries (CDC) is a ten-member commission. Its members are elected or appointed for a four-year term by the IMU General Assembly.

The CDC members 2015-2018 are:
- Wandera Ogana (Kenya) - CDC President
- Olga Gil Medrano (Spain) - CDC Secretary for Policy (since 1.1.2016)
- Srinivasan Kesavan (India) - CDC Secretary for Grant Selection

- Alf Onshuus (Colombia) - Latin American Member
- Angel Pineda (USA/Honduras) - CDC member appointed by the IMU Executive Committee
- Angel Ruiz (Costa Rica) - CDC member appointed by the ICMI Executive Committee
- Budi Nurani Ruchjana (Indonesia) - CDC member appointed by the IMU Executive Committee
- Mama Foupouagnigni (Cameroon) - African Member
- Polly Sy (Philippines) - Asian Member
- Shigefumi Mori (Japan) - IMU President (2015-2018) and Ex-officio CDC Member

Hyungju Park is the CDC liaison Executive Committee member.

The applications to the various CDC grant programs are evaluated and selected by CDC and additional committees including members external to CDC.

The CDC and all CDC related activities are supported by staff members from the IMU Secretariat in Berlin, Germany who manage most of the administration of the CDC in addition to the many volunteers who support CDC activities worldwide. The programs IMU Breakout Graduate Fellowships (BGF) and Graduate Research Assistantships in Developing Countries (GRAID) are mainly administrated outside the IMU Secretariat, but receive support by staff members of the IMU Secretariat.

During 2018 the Commission for Developing Countries (CDC) has continued to use the funds it receives from the International Mathematical Union (IMU) and various donors 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 2018 for the following purposes:

Conferences and Projects

A) Conference Support Program (CSP)
The Conference Support Program gives partial support to conferences organized in developing and economically disadvantaged countries. The **maximum amount** that is awarded is EUR 3,500. In case the funds are granted they are usually in the range of **EUR 1,000 - EUR 3,000.** The Program also supports a few major international conferences occurring in developed countries. The 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. 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; it is a seven-member committee, chosen and supervised by the CDC and chaired by the CDC Secretary for Grants Selection. Four of its seven members are not CDC members.

B) Project Support Program (PSP)
Under the Project Support Program the CDC supports capacity building projects and programs in mathematics and mathematics education, be they international, regional or local initiatives in developing countries. The CDC members evaluate and select the grant recipients.

Lecturing and Mentoring

C) Volunteer Lecturer Program (VLP)
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. The **maximum amount** that is awarded for each visit is EUR 4,400. The program is partially supported by the American Mathematical Society (AMS) and the Niels Henrik Abel Board (Norway). A five members CDC subcommittee, chaired by the CDC Secretary for Policy, evaluates the applications.

D) African Diaspora Mathematicians Program (ADMP)
In 2016 the CDC initiated and launched the African Diaspora Mathematician Program. ADMP will run as a pilot program in Africa for two years (May 2017 - June 2019) and offers three partnerships to be established between a mathematician originally from Africa and now living and working outside of Africa and a mathematics department based in Africa. Besides the travel and living cost for the volunteers to spend 3 to 6 weeks in Africa, the amount of EUR 1,000 per year can be spend by the Diaspora Mathematician to cover the cost of educational material such as books, software, journals and other learning material. CDC President is the chair of the ADMP Selection Committee consisting of four members, one of them not being a CDC member. Initially the program was administrated in Kenya, since the selection of the projects the IMU Secretariat administers the program.

Individual Research Visits

E) Abel Visiting Scholar Program (AVSP)
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 **maximum amount** that is awarded for each visit is USD 5,000 and 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. The committee consists of three members: one member chosen by the Abel board (since July 2016 chosen by IMU EC), one member chosen by CDC and one member chosen by the IMU EC.

F) IMU-Simons African Fellowship Program (SAFP)
The program supports research sabbaticals for mathematicians from African developing countries employed in Africa to travel to an internationally known mathematical centre of excellence (worldwide) for collaborative research. The program will run for five years until September 2021 and receives 50.000 USD per year from the Simons Foundation, NY (USA). All travel and living expenses of the grantees are covered by the fellowship up to USD 5.000. The CDC Grant Selection Committee (GSC) described in A) selects the grant recipients.

G) Individual Research Travel Program (IRTP)
The program supports travel costs for research visits (minimum stay is four weeks) by mathematicians based in developing countries to an international centre of excellence. The CDC Grant Selection Committee (GSC) selects the grant recipients.

Graduate Support Programs

H) IMU Breakout Graduate Fellowship Program (BGFP)
In 2016 IMU has launched a new Program funded by the generous donations of all the winners of the Breakthrough Prizes in Mathematics. This fellowship program aims to support postgraduate studies, in a developing country, leading to a PhD degree in the mathematical sciences. The IMU Breakout Graduate Fellowships offer a limited number of grants for excellent students from developing countries. The program is developed with the assistance of the Friends of IMU (FIMU) and The World Academy of Sciences (TWAS). Applications are evaluated by the Breakout Selection Committee that

consists of five voting members: four CDC members and one member appointed by TWAS. The Committee is chaired by the CDC Secretary for Policy and includes CDC Administrator as a non-voting member. The program is mainly administered by TWAS, supported by the Breakout Selection Committee and the IMU Secretariat.

I) **Graduate Research Assistantships in Developing Countries (GRAID) Program**
The Program was launched in 2017 and provides research assistantships to graduate – PhD and Master – students of emerging research groups working in a developing country listed in Priority 1 or 2 of the IMU CDC Definition of Developing Countries. It provides modest support for emerging research groups, making it possible for them to fund their most talented students as graduate research assistants (PhD or Master Students), thereby fostering the growth of a mathematics community. The GRAID Program is funded by voluntary donations from mathematicians or mathematical institutions worldwide. Applications are evaluated and recipients selected by the GRAID Selection Committee that consists of five voting members, two of them are not CDC members. The Committee is chaired by the CDC President, the Secretary, proposed by the AMS, is a non-voting member and also includes CDC Administrator as a non-voting member. The program is administrated by the GRAID Selection Committee, supported by the AMS.

Other activities

J) **Library Assistance Scheme**
The IMU- CDC Library Assistance Scheme matches donors of mathematical materials with libraries in universities/research institutions in developing countries where there is a need for mathematical research literature. CDC offers limited financial support for shipment costs for individual scientists or institutions wishing to donate books in the mathematical sciences to libraries in developing countries. The shipments are organised by the donors of the mathematical materials.

K) CDC Panel and Poster Session during the ICM 2018
In 2018 CDC has organized a panel discussion and poster session on *Strengthening Mathematics in the Developing World* during the ICM2018.

L) CDC Website
The CDC website is hosted by WIAS Berlin and maintained by IMU Staff. All updates, programs and information about all CDC programs can be found on the CDC website: www.mathunion.org/cdc

CDC Activities in 2018 in Detail

Conferences and Projects

A) Conference Support Program.
During 2018 **28 conferences** taking place in the following developing countries received a conference grant award:

Country	Name/ Duration	Amount (Euro)
Armenia	Emil Artin International Conference, 27.05.2018 - 02.06.2018	1,000.00
Botswana	conference Southern Africa Mathematical Sciences Association (SAMSA) Annual Conference, 19.11.2018 - 22.11.2018.	1,000.00
Cuba	EMALCA Cuba, 05.11.2018 - 16.11.2018	1,500.00
Colombia	Dias de Combinatoria (DIAS2019),	1,500.00

	15.07.2019 - 26.07.2019	
	Quantum Symmetries 24.06.2019 – 05.07.2019	1,500.00
El Salvador	Emalca El Salvador, 01.07.2018 - 13.07.2018	1,500.00
Haiti	CIMPA Research School "Cryptography, theoretical and computational aspects of algebraic number theory and algebra", 05.12.2018 - 11.12.2018	1,500.00
India	International Conference on Class Groups of Number Fields and Related Topics-2018, 08.10.2018 – 08.10.2018	1,000.00
	International Conference on Recent Trends in Graph Theory and Combinatorics, 26.04.2018 – 29.04.2018	1,000.00
Iran	Isfahan School and Conference on Representations of Algebras, 16.04.2019 - 19.04.2019	1,000.00
	TMU-ICTP School and Conference on Dynamical Systems and Ergodic 05.05.2018 - 10.05.2018	1,000.00
Iraq	WAMS2017:Control and Optimization with Industrial Applications, 22.12.2018 - 31.12.2018	1,500.00
Laos	International Conference on Mathematics and Mathematics Education in Developing Countries, 31.102018 - 01.11.2018	1,000.00
Madagascar	CIMPA Research School 2019 -- "Approches algorithmiques et statistiques de l'apprentissage." Antananarivo, 16.07.2019 - 25.07.2019	1,500.00
Malaysia	SEAMS School 2018 on Dynamical Systems and Bifurcation Analysis (DySBA), 06.08.2018 – 13.08.2018	1,500.00
Mexico	CIMPA Research School on Commutative Algebra with Applications to Statistics and Coding Theory, 25.07.2018 – 06.08.2018	1,500.00
Morocco	3rd International Congress Algebra, Number Theory and Applications, 24.04.2019 - 27.04.2019	1,000.00
	CIMPA Research School entitled: "Modélisation, Analyse Mathématique et Calcul Scientifique dans la Gestion des Déchets Ménagers", 03.07.2019 - 13.07.2019	1,500.00
Pakistan	International Conference on Recent	1,000.00

Country	Name/ Duration	Amount (Euro)
	Advances in Applied Mathematics, 20.02.2019 - 19.04.2019	
Senegal	Statistics and data science summer school for young French speaking African researchers, 01.07.2019 – 05.07.2019	1,000.00
South Africa	34th Summer Conference on Topology and its Applications, 01.07.2019 – 04.07.2019	1,000.00
Romania	Géométrie Algébrique en Liberté (GAeL) 17.06.2019 - 21.06.2019	1,000.00
Togo	Research School of CIMPA of Lomé 03.09.2018 – 15.09.2018	1,500.00
Tunisia	11th European-Maghrebian Workshop on Semi-group Theory, Evolution Equations and Applications, 03.09.2018 - 07.09.2018	1,000.00
	New Trends in Topology and in Geometry 09.07.2018 - 13.07.2018	1,000.00
Uzbekistan	Nonassociative algebras and applications, 10.09.2018 – 21.09.2018	1,500.00
Vietnam	Conference Quantum Topology and Hyperbolic Geometry, 27.05.2019 – 07.06.2019	1,000.00
	Hyperplane Arrangements : recent advances and open problems, 11.03.2019 - 22.03.2019	1,500.00
Total	**28**	**34,500.00**

Conferences in Developed Countries

Support was granted in **8 cases** to conferences taking place in the following developed countries, for conference participation of developing country mathematicians:

Country	Name/ Duration	Amount (Euro)
Argentina	Algebraic and geometrical methods in string theory, 28.10.2019 - 08.11.2019	1,000.00
	Quantum 60 - Colloquium on Algebras and Representation Theory, 10.12.2018 - 14.12.2018	1,500.00
	K-theory conference, 16.07.2018 - 27.07.2018	1,000.00
Brazil	International Workshop on Partial Differential Equations and Complex Analysis - ICM 2018 Satellite Conference, 13.08.2018 – 17.08.2018.	1,000.00
	ICM 2018 Satellite conference on Nonlinear Partial Differential Equations,	1,000.00

	23.07.2018 - 27.07.2018.	
Russia	International School-Conference "Sobolev Readings", 10.12.2018 - 16.12.2018	1,000.00
Uruguay	CIMPA School "Elliptic Curves: Arithmetic and Computation" 11.02.2019 – 22.02.2019	1,500.00
Venezuela	Emalca, 02.09.2018 - 07.09.2018	1,500.00
Total	**8**	**9,500.00**

B) Project Support Program

Mentoring African Research in Mathematics (MARM)
CDC agreed in 2015 to support MARM 2016/2018 with a grant of 28,000 €. This grant has been transferred in two instalments in 2016 and 2018.
The program of the London Mathematical Society links African academics with their UK and European counterparts via professional mentoring partnerships. Each partnership has collaboratively defined its own objectives and priorities specific to the needs of the African institution, as well as its own methods of accomplishing these. Activities undertaken in 2016 have included: Exchange visits, lectures, seminars and workshop series at African institution, joint PhD supervision, mentoring and support for African postgraduate students with respect to wider academic and life skills, mentoring African early careers staff in research and other skills and developing of research contacts and networking. More information can be found on the program website.
www.lms.ac.uk/grants/mentoring-african-research-mathematics.

New 2018 Call
A new call for project support was opened in 2018 with deadline for applications September 10. By the end of this deadline CDC has received a total of 24 complete applications requesting a total amount of 139.418 €. Between October and November the projects have been evaluated in a three steps process involving all CDC members. CDC has reached unanimously the agreement about the distribution of the allocated 25.000 € into 6 projects.

- Establishing Platforms for South African Women in Mathematics
- Cross-Pollination of Maths Education Initiative
- Mentoring African Research In Mathematics
- Madagascar Algebra Project
- Open Educational Resources for Statistics. Problem-Solving Project
- Project on Fostering Mathematics Teacher's Ability in Introducing Elementary Algebra

Lecturing and Mentoring Program

C) Volunteer Lecturer Program (VLP)
During 2018 a total of **11** courses in **8** countries were supported.

Year	Volunteer	University Visited
2018	Joaquim Correia (Portugal)	Silpakorn Univeristy (Thailand)
2018	Fernando Pestana da Costa (Portugal)	National University (Laos PDR)
2018	Christopher Thron (USA)	University of Ilorin (Nigeria)
2018	Christopher Thron (USA)	University of Lagos (Nigeria)
2018	Laura Geatti (Italy)	Tribhuvan University in Kirtipur (Nepal)
2018	Sylvia Wiegand (USA)	Tribhuvan University in Kirtipur (Nepal)
2018	Franck Adekambi (South Africa)	University of Abomey-Calavi (Bénin)
2018	Youcef Mammeri (France)	Caraga State University (Philippines)

2018	Fabrizio Ruggeri (Italy)	Kwame Nkrumah University of S&T (Ghana)
2018	Ihsen Yengui (Tunisia)	Université d'Oran1 Ahmed Benbella (Algeria)
2018	Tevian Dray (USA)	University of Abomey-Calavi, (Benin)

D) African Diaspora Mathematicians Program (ADMP)
Three projects were awarded in April 2017 for the period 2017-2019 and have continued their cooperation during 2018.

- Shiferaw Berhanu (Department of Mathematics, Temple University, Philadelphia, USA) cooperates with the Department of Mathematics at Addis Ababa University, Addis Ababa, Ethiopia,
- Miranda Teboh-Ewungkem (Department of Mathematics at Lehigh University, Bethlehem, USA) cooperates with the Department of Mathematics, University of Buea, Cameroon in 2018.
- Anotida Madzvamuse (Department of Mathematics at University of Sussex, Brighton, United Kingdom) cooperates with the University of Zimbabwe

Programs to support Individual Research Visits

E) Abel Visiting Scholar Program
The funds for the Abel Visiting Scholar Program (USD 15,000 per year) are not included in the general CDC budget, but kept as a separate budget. Four (**4**) fellowships were granted in 2018.

Name, Instituiton, Country	Host, Host Institution, Country
Abror Khudoyberdiyev, National University of Uzbekistan	Manuel Ladra, University of Santiago de Compostela, Spain
Octavio Alberto Agustín, Mixteca Technological University at Oaxaca, Mexico	Michael Kim, School of Music of the University of Minnesota at Minneapolis, USA
Bac Trong Nguyen ,Thai Nguyen University of Economics and Business Administration, Vietnam	Hai Q. Dinh, Department of Mathematical Sciences of Kent State University, USA
Neda Khodabakhshi, Amirkabir University of Technology (Tehran Polytechnic), Iran	Andrei Korobeinikov, Centre de Recerca Matemàtica at Bellaterra, Spain.

F) IMU-Simons African Fellowship Program (duration 2017-2021)
The funds for the IMU-Simons African Program (USD 50,000 per year) are not included in the general CDC budget, but kept as a separate budget. Eight (**8**) fellowships were granted in 2018.

Name, Instituiton, Country	Host, Host Institution, Country
Hassane Bouzahir, Ibn Zohr University, Agadir, Morocco	Alessandro N. Vargas, Federal University of Technology, Parana, Brazil
Patrice Ntumba, University of Pretoria, Hatfield, South Africa	Anne Queguiner-Mathieu, Universite Paris 13, Villetaneuse, France
Fortuné Massamba, University of KwaZulu-Natal, Pietermaritzburg, South Africa	Joel Tossa, Institut de Mathematiques et de Sciences Physiques, Porto-Novo, Bénin
Yuliya Zelenyuk, University of the Witwatersrand, Johannesburg, South Africa	Fedor Sukochev, The University of New South Wales, Sydney, Australia
Job Bonyo, Maseno Univesity, Maseno, Kenya	Aristomenis G. Siskakis, Aristotle University of Thessaloniki, Thessaloniki, Greece
Ihsen Yengui, University of Sfax, Sfax, Tunisia	Annick Valibouze, LIP6- Sorbonne Universités, Paris, France
Bernadette Faye, University Gaston Berger of Saint Louis (UGB), Mbour, Senegal	Alain Togbe, Purdue University, NorthWest, Westville, USA
Franck Adekambi, University of Johannesburg,	Runhuan Feng, University Illinois at Urbana-

Johannesburg, South Africa	Champaign, Urbana, USA

G) Individual Research Travel Program
In 2018 three (**3**) mathematicians received support through this program.

Name, Instituiton, Country	Host, Host Institution, Country
Maliheh Hosseini , K. N. Toosi University of Technology, Tehran, Iran.	Juan J. Font, Universitat Jaume I, Castellon, Spain
Rafael Reno Cantuba, De La Salle University, Manila, Philippines	Sergei D. Silvestrov at the Mälardalen University, Västerås, Sweden
Haider Ali Biswas, Khulna University, Khulba, Bangladesh	Onesimo Hernandez-Lerma at the Mathematics Department, CINVESTAV-IPN, Mexico

Graduate Support Programs

H) IMU Breakout Graduate Fellowship Program
The funds for the IMU Breakout Fellowship Program are not included in the general CDC budget, but kept as a separate budget.

2016 Call awardees updates:
Abebe R. Tufa received one of the three IMU Breakout Graduate Fellowships awarded in 2016 to complete a research that was already in progress. He has obtained his Ph. D. in June 2018 with a thesis on Approximating Solutions of Fixed Point, Variational Inequality and Hammerstein Type Equation Problems, developed in the Department of Mathematics of the University of Botswana, Gaborone, supervised by Prof. Habtu Zegeye Hailu (Botswana International University of Science and Technology) and co-supervised by Dr. Mosalagae Thuto (University of Botswana). After a four years period of study in Botswana he is now back at his home University at Bahir Dar in Ethiopia where he is working as Assistant Professor.

Maria Alejandra Ramírez-Luna provided the report of her second year in the PhD program during September 2018, which was considered positive by the BGF Committee.

The third student, Do Thai Duong is in the middle of the second year of his PhD program. The report is due by April 2019.

Preparation of the 2019 Call: A new call will be open from February 11 to May 31, 2019, so that the decision could be communicated to the awardees by the end of September 2019.

Donation:
Vincent Lafforgue (France) has been awarded the 2018 Breakthrough Prize and as previous winners he has donated the amount of 100.000 USD for the program.

I) Graduate Research Assistantships in Developing Countries (GRAID) Program
The funds are not budgeted to the general CDC budget, but kept in the FIMU account and are transferred by the American Mathematical Society to the grantees. The GRAID Program has received 5 applications for the deadline of 15th of March 2018 and granted one of them. The team awarded is leaded by Principal Investigator David Ssevviiri (Makerere University in Uganda) and International Partner Michael Wemyss (University of Glasgow, UK). Two students (Caroline Namanya and Brian Makonzi) from the Makerere University in Uganda will be funded each for up to four years, subject to positive evaluation of annual reports. The funding for each student is USD 2868.41 per year.

The five students awarded in 2017 have provided their annual reports and received the grant for the second year.

Other activities

J) Library Assistance Scheme
In 2018 CDC has not received book donation proposals.

K) CDC Panel and Poster Session during the ICM 2018
The Commission for Developing Countries (CDC) organized a panel discussion and poster session on *Strengthening Mathematics in the Developing World* on Tuesday August 7, 2018 from 6 pm – 8 pm in Rio de Janeiro, Brazil during the ICM 2018. A CDC subcommittee, chaired by Angel Pineda and including Mama Foupouagnigni and Polly Sy, was in charge of the organization with the support of the CDC Administrator Lena Koch and Local Organizers of the ICM2108.

Panel Discussion
The goal of the panel was to share information about mathematical development activities with mathematicians at the ICM and to serve as a catalyst for interactions between mathematicians, organizations and funding agencies. The panel composition and structure as approved by the Local Organizing Committee of the ICM was:
Moderator: IMU CDC (Angel Pineda)
Panelists:
• IMU-CDC President (Wandera Ogana): Presenting IMU (CDC, ICMI, CEIC) Activities
• IMU-CWM Chair (Marie-Françoise Roy): Presenting CWM Activities
• Representative from Simons Foundation (Yuri Tschinkel): Funding Agency's Perspective
• Representative from Brazilian Mathematical Community (Paolo Piccione, President of the Brazilian Mathematical Society): Brazilian Activities
• President of the Southeast Asian Mathematical Society (Jose Maria Balmaceda): Activities in Asia (including India & Central Asia)
• President of the African Mathematical Union (Nouzha El Yacoubi): Activities in Africa
• Secretary of UMALCA (Alejandro Jofre): Activities in Latin America

Poster Session
After the panel discussion a poster session was held at which panelists and approx. 20 different organizations and institutions presented posters with more information about their development efforts and organizations. The poster session was about 45 minutes long immediately following the panel discussion in large open area next to room 101 D. The following organisations and institutions have participated in the poster session:

• African Institute for Mathematical Sciences (AIMS)
• African Mathematical Union (AMU)
• African Mathematics Millennium Science Initiative (AMMSI)
• Brazilian Mathematical Society
• Centre International de Mathématiques Pures et Appliquées (CIMPA)
• Heidelberg Laureate Forum
• IMU Commission for Developing Countries (IMU-CDC)
• IMU Committee for Women in Mathematics (IMU-CWM)
• International Centre for Theoretical Physics (ICTP)
• International Commission on Mathematical Instruction (ICMI)
• International Science Programme (ISP), Uppsala University
• London Mathematical Society (LMS)
• Research in Germany
• Simons Foundation, NY
• Southeast Asian Mathematical Society (SEAMS)
• The European Mathematical Society Committee for Developing Countries (EMSCDC)
• Unión Matemática de América Latina y el Caribe (UMALCA)

A video about Strengthening Mathematics in the Developing World was created during the ICM with some participants (Polly Sy, Nouzha El Yacoubi, Wandera Ogana and Angel Pineda) of the CDC

Panel.

For more information see:
https://www.mathunion.org/cdc/cdc-panel-discussion-and-poster-session-during-icm-2018

Administrative Costs

Administrative costs are kept to less than 10% of the CDC operating budget. The administrative costs for CDC consisted primarily bank transfer cost. Most of the administrative work was paid by various institutions: The CDC Administration was managed (part-time) by Lena Koch, a staff member from the IMU Secretariat (WIAS Berlin) and was supported (part-time) by the IMU project assistant (Theresa Loske). The financial transactions were carried out by the IMU Accountant. Additional support came for the IMU Secretariat Manager (Sylwia Markwardt) and the IMU Technician (Frank Klöppel). The salaries of the IMU Secretariat staff are covered from the grant the Secretariat receives from the City of Berlin and the German Ministry of Education and Research. The IMU Secretariat is hosted by the *Weierstrass Institute for Applied Analysis and Stochastics* (WIAS) in Berlin, Germany. The IMU staff members are employed at WIAS. The costs of the website and all technical costs are mainly covered by the IMU Secretariat funds (WIAS). The IMU Secretariat has received from the Simons Foundation USD 5,000 in 2018 to cover basic administrative costs of the IMU-Simons African Fellowship program. The GRAID program is administrated by the GRAID Selection Committee, supported by AMS and FIMU. The Breakout Fellowship Program is supported by IMU Secretariat and TWAS (The World Academy for Science). TWAS has received in 2018 USD 5.000 from FIMU. The administration cost of ADMP was budgeted at Euro 2,535 in 2017 but the actual administration cost was incurred by AMMSI with the funds to be transferred to AMMSI by IMU in 2018.

CDC Income 2018

Many of the CDC programs are funded by the generous donations of individual mathematicians and organizations, as it has been described above. Apart from these donations, 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. The Income part of the Financial Statement attached includes besides the IMU year grants to CDC, the support (additional to the grant for the Abel Visiting Scholar Program) received during 2018 from Niels Henrik Abel Board, the donations from the American Mathematical Society (AMS), the US National Committee for Mathematics, the Japanese Mathematical Society and the Swiss Mathematical Society.

The Commission for Developing Countries would like to express its profound thanks to all institutions and individuals supporting CDC and its activities. Furthermore CDC would like to extend its thankfulness to all volunteers. We are truly appreciative of those individuals who dedicate their time to support all CDC activities: as members of evaluation committees, as Volunteer Lecturers, as donors of mathematical materials and as organizers of CDC activities and who help current and future generations both at home and within the mathematical community abroad. CDC is looking forward to future collaboration with all its supporters, cooperation partners and volunteers.

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

Olga Gil Medrano, CDC Secretary for Policy.

Report on the Finances of the IMU Commission for Developing Countries (CDC)
January 1, 2018 –December 31, 2018

INCOME 1.1.2018-31.12.2018			
Savings previous year (bank account status as of 31.12.2017)	106.012,88 €		
Return of Funds to Conference Support Grants (unspent funds)	2.876,50 €		
Annual IMU Grant	77.283,00 €		
Additional IMU Grant	11.600,00€		
Abel Board Grant to CDC	24.146,00 €		
Swiss Mathematical Society Donation	980,00 €		
Japanese Mathematical Society Donation	1.223,85 €		
AMS and USNC/Math Donation to CDC Volunteer Lecturer Program FIMU transfer	8.559,39 €		
Total Income and Savings	**232.681,62 €**		
SPENDING by Category	**Details**	**Transferred in 2018**	**Accruals (Grants awarded 2016-2018 but not yet transferred)**
Administration 2018		- €	
Bank Transfer Costs 2018		748,07 €	
PR Material for ICM 2018		871,89 €	
Participation of CDC members in CDC Panel and Poster Session ICM 2018		600,00 €	
Grants for Conferences		42.500,00 €	1.000,00 €
Project Support Call 2015-16	MARM (2016-2018)	14.000,00 €	
Project Support Call 2018		18.000,00 €	7.000,00 €
Individual Research Travel Program		3.789,52 €	
Volunteer Lecture Program		27.012,93 €	13.456,00 €
African Diaspora Mathematicians		12.783,54 €	24.162,46 €
ADMP (Administration in Kenya)			5.170,00 €
Total Expenditure in 2018		**120.305,95 €**	
CDC Bank Account Statement (Savings) as of 31.12.2018		**112.375,67 €**	

Total Accruals for 2019			50.788,46 €

Lena Koch, CDC Administrative Manager

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

https://www.mathunion.org/ichm

Report IMU 2018

by June Barrow-Green (Chair)

1. Commission organization

a. List officers and members of governing body, and governance procedures

The Executive Committee of the ICHM consists of the following members:

Chair
June Barrow-Green (School of Mathematics & Statistics, Faculty of STEM, Open University, Milton Keynes, UK) June.Barrow-Green@open.ac.uk

Vice-chair
Niccolò Guicciardini (University of Bergamo, Italy) niccolo.guicciardini@fastwebnet.it

Secretary
Sloan Despeaux (Western Carolina University, USA) despeaux@email.wcu.edu

Treasurer
Henrik Kragh Sørensen (University of Copenhagen, Denmark) henrik.kragh@ind.ku.dk

Members-at-Large

Thomas Archibald (Canada) tarchi@sfu.ca
Abdelmalek Bouzari (Algeria) bouzari@ens-kouba.dz, malek_bouzari@yahoo.fr
Michela Malpangotto (France) michela.malpangotto@obspm.fr
Volker Remmert (Germany) remmert@uni-wuppertal.de
Clara H. Sánchez (Colombia) chsanchezb@unal.edu.co
Galina Sinkevich (Russia) galina.sinkevich@gmail.com
GUO Shirong (China) guoshirong1959@163.com, gsr@imnu.edu.cn

IMU Representatives

Isobel Falconer (School of Mathematics and Statistics, University of St Andrews, Scotland) ijf3@st-andrews.ac.uk
Catherine Goldstein (Institut de mathématiques de Jussieu-Paris Rive gauche, Paris, France) catherine.goldstein@imj-prg.fr

Ex-Officio

Craig Fraser (Canada) craig.fraser@utoronto.ca (immediate past chair)
Reinhard Siegmund-Schultze (Norway) reinhard.siegmund-schultze@uia.no (editor *Historia Mathematica*)
Nathan Sidoli (Japan) sidoli@waseda.jp (editor *Historia Mathematica*)

The Executive Council of the ICHM had three electronic meetings (E-meetings) in 2018.

b. Sub-committees and their functions, with brief details of activities

A sub-committee has been struck to make proposals for ICHM activities at the ICM 2022 in St Petersburg. The committee is meeting by e-mail and will present its proposals to the local organising committee of the ICM in spring 2019.

c. Details of membership of the Commission

There are 43 National Members of the ICHM: Algeria, Australia, Austria, Belgium, Brazil, Canada, China, Costa Rica, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Guatemala, Iceland, Iran, Israel, Italy, Japan, Kazakhstan, Korea, Luxemburg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Russia, Saudi Arabia, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Syria, Tunisia, Turkey, United Kingdom, USA.
Individuals are listed at http://www.mathunion.org/ichm/about-us/members

d. URL of Commission website

http://www.mathunion.org/ichm. It is updated at least four times annually.

2. Activities

a. Activities undertaken or sponsored by the Commission in the last year

ICHM Co-Sponsored *AMS-MAA Special Sessions on History of Mathematics* (San Diego, California, USA, January 10-13, 2018).

ICHM Co-Sponsored 14th Austrian Symposium on History of Mathematics *Neglected parts of mathematics and their history* (Miesenbach, Austria, April 29-May 5, 2018).

ICHM Sponsored the Montucla Prize Lecture at the 2018 International Congress of Mathematicians (ICM, Rio de Janeiro, Brazil, August 23-29, 2018).

ICHM organised a *History of Mathematics Symposium* at the International Congress of Mathematicians (ICM, Rio de Janeiro, Brazil, August 23-29, 2018). Four lectures, including the Montucla Prize Lecture, were given.

ICHM Co-Sponsored the conference *Mathematical Communities in the Reconstruction after the Great War (1914-1918)* (Luminy, Marseilles, France, Austria, November 12-16, 2018).

ICHM Co-sponsored 29th Novembertagung on the History of Mathematics (Institute of Mathematics of the University of Sevilla, Spain, November 28-30, 2018.). This meeting is for, and organised by, young scholars in history of mathematics.

b. Publications arising from the work of the Commission in the last year.

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 Nathan Sidoli (Waseda University, Tokyo) and Reinhard Siegmund-Schultze (University of Adger, Norway). It is published by Elsevier Science and is available electronically to subscribers of ScienceDirect.

c. Other activities supported in the last year.

The ICHM maintains an international e-mail list. This list serves to send out information from the ICHM to historians of mathematics internationally. Any historian of mathematics may become part of this e-list simply by contacting the Secretary of the ICHM.

d. Changes to the governance or organisation structure of the Commission

None

3. Future plans

a. Activities planned for the next year.

ICHM Co-Sponsored *AMS-MAA Special Sessions on History of Mathematics* (Baltimore, USA, January 16-19, 2019). No financial aid is requested.

Funds will be made available to support the 2019 Novembertagung, the meeting for young scholars in history of mathematics, to be held in Strasbourg, France.

4. Financial report

Expenditure for 2018: administration (US$52), prizes and travel for recipients (US$8586)).

Income for 2018:   DHST grant US$1668; Elsevier Honoraria US$5000.
Conference organizers submit reports on their conferences that are published on the ICHM website. The financial assistance is offered to the conference organizer in the form of a grant. Although a summary of how the funds are used is required, the ICHM does not currently employ detailed accounting procedures involving scans of receipts.

For 2019 we are budgeting for US$75 (administrative costs) and US$5000 (conference support). The conference funds will contribute support for the Novembertagung to be held in Strasbourg in November 2019. In addition to this, there are other conferences in 2019 that the ICHM will consider for co-sponsorship.

The financial position of the ICHM is currently good.

3.4. Committee on Electronic Information and Communication (CEIC)

https://www.mathunion.org/ceic

CEIC Activity Report 2018

1 Global Digital Mathematics Library

Background. On August 17, 2014, in conjunction with the International Congress of Mathematicians in Seoul, South Korea, the IMU and CEIC hosted a meeting of a select group of 21 experts plus at least eight remote participants 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, CEIC), Thierry Bouche (France, CEIC), 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.

Remit

- To advise the IMU on aspects of its operations related to information and communication, including technical, legal and financial implications, and keep it informed of new developments.

- To review the development of electronic information, communication, publication, instruction, and archiving so as to keep the IMU abreast of current and emerging issues.

- To advise the IMU about potential opportunities to endorse standards and articulate best practice recommendations on issues related to the field, as well as potential opportunities to foster the growth and development of electronic infrastructure.

2 Other Business

CEIC considered various other issues.

Activities: GDML
(Global Digital Mathematics Library)

- ICM 2014: Expert Group meets.

- 8-person WG (chair: Patrick Ion) formed

- Fields Institute workshop 2016

- Outreach at several mathematics meetings (ECM, JMM)

- Legal structure established: International Mathematical Knowledge Trust (a Canadian charity), supported by, but legally and financially independent of, IMU. Will establish subsidiaries in other tax jurisdictions (standard format)

- Find out more: Panel at ICM (7 August)

Activities: IMU operations

- IMUNet: articles in most issues

- Archiving of electronic material — now stable but needs continuous watch as technologies change

- ICSU (ISC) World Data System — issues of reproducibility, software citation etc.

- IMU — publishing and Digital Object Identifiers, also recommendations for ICM publishing, etc.

Activities: keeping abreast

CEIC has produced various "best practices" documents, which are being updated to track:
- Developments in Open Access and funder requirements, contrasted with developments in commercial publishing

- Access by the visually impaired

- Developments in overlay journals (requirements for indexing etc., "what is an article"?)

- Developments in research assessment and the (mis)use of metrics (a particular challenge for smaller systems)

3 Membership

- Thierry Bouche, Université de Grenoble, France

- Tim Cole, University of Illinois, USA

- James Davenport, University of Bath, UK (Chair)

- Patrick Ion, Mathematical Reviews (Emeritus), USA

- Alf Onshuus, Universidad de los Andes, Colombia

- Victoria Stodden, University of Illinois, USA

- Masukazu Suzuki, Kyushu University, Japan

- Ravi Vakil, Stanford University, USA

- Ingrid Daubechies, Duke University, USA (CEIC-IMU Liaison)

3.5. Committee for Women in Mathematics (CWM)

https://www.mathunion.org/cwm

Report of the IMU Committee for Women in Mathematics in 2018

Committee Members
Marie-Françoise Roy, France (Chair); Caroline Series, UK, (Vice Chair); Carolina Araujo, Brazil; Bill Barton, New Zealand; Ari Laptev, UK and Sweden; Kristin Lauter, USA; Sunsook Noh, S. Korea;

Marie-Françoise Ouedraogo, Burkina Faso; Sujatha Ramdorai, Canada; Betül Tanbay, Turkey. Non-voting IMU EC Liaison: John Toland, UK. CWM also had two associate members Neela Nataraj (IIT Mumbai - Coopted for coordinating grant reports) and Petra Bonfert-Taylor (Dartmouth College, USA - Coopted for website).

Activities funded by CWM 2018 call

The CWM 2018 call for Networks and Schools received 55 applications of which CWM decided to support 12 for a total of €28, 792, with most grants ranging from €2,000 to €3,000. A total of about 1450 participants, with about 2/3 women, attended the various meetings supported by CWM.
Most grants were for developing regional networks for Women in Mathematics, in Africa, Latin America, and Asia. Often the initiatives took the form of a meeting with both a mathematical and a career development part. This was the case for two regional meetings of the African Women in Mathematics Association (AWMA), one in Addis Ababa (Ethiopia) for East Africa and one in Ibadan (Nigeria) for West Africa, and also for the second Central Asia Women in Mathematics Association meeting in Uzbekistan. The Indian Women in Mathematics association won support for the participation of women from the South Asian Association for Regional Co-operation at their meeting at Shiv Nadar University in Uttar Pradesh. The first workshop of "Women in mathematics in the Balkan region" took place in Skopje (Macedonia) and involved several neighbouring countries. A Workshop in El Salvador (supported by the Vice Minister of Science and Technology and the ICSU Regional Office of Latin America and the Caribbean) was focussed on less developed Central American countries. The Gender Equality Commissions of the Colombian and Mexican Societies of Mathematics invited a plenary speaker followed by a discussion during the first joint meeting between the Mathematical Societies of Colombia and Mexico. An activity inspired by the series of meetings "Women in ..." (see for example "Women in numbers") held at the Banff International Research station, took place for the first time in South America, in Uruguay. The African Women in Mathematics Association wrote portraits of African women mathematicians, both to post on AWMA website and to publish as a booklet to be used for promoting mathematics among young African women. Two further events took place in Europe, an ICTP school in Trieste (Italy) on Dynamical Systems, with all female organizers and lecturers, and the European Women in Mathematics General Meeting which took place in Graz (Austria). In both cases the CWM grant was used to support the attendance of women from developing countries.

A short film for International Women's Day 2018, Faces of Women in Mathematics, was proposed by Eugenie Hunsicker, Chair of the London Maths Society Women in Maths Committee, and Irina Linke, a filmmaker. The aim was to create a 3 minute film featuring women mathematicians from around the world. It consists of an edited sequence of film clips of women or girls saying into the camera "I am (name) from (country), and I am a mathematician!" in the language of their choice. The project was sent to CWM ambassadors and 146 clips were received, with 243 women appearing, from 36 different countries speaking 31 different languages. The final film is 14 minutes long. There have been about 34700 viewings of the film and also more than 300 followers on the Facebook page. CWM decided to use a small part of its budget for editing the clips. The film can be found at https://vimeo.com/259039018. For more information on the activities supported by CWM 2018 call, see Annex A.

Journeys of Women in Mathematics

With the help of a recommendation from Ingrid Daubechies, CWM proposed making a short film "Journeys of Women in Mathematics" to the Simons Foundation. Micro-Documentaries was been selected by the Simons Foundation to create the film. (Micro-Documentaries is the company which created the short films on the Fields Medal winners in Seoul and they made similar films for the Fields Medal winners in Rio.)

The focus is the diversity and common passion of women mathematicians worldwide. Rather than showcasing "famous women mathematicians", the first version (premiered at (WM)², the World Meeting for Women Mathematicians, see below) presented three women active in organizing regional and trans-national networks : Carolina Araujo (Rio), a CWM member, the (WM)² main organizer and

also an ICM lecturer and member of the local ICM organising committee; Neela Nataraj (Mumbai), CWM associate and active member of Indian Women in Mathematics; and Amina Pecha (Yaounde, Cameroon), the founding chair of the Cameroon Women in Mathematics Association. Micro-Documentaries met them in their home countries. A grant given by the Simons Foundation to CWM made it possible for the three of them to attend (WM)² .They appear together in the final version of the film which gives a lively presentation of the atmosphere at (WM)² and features interviews of six women in mathematics from Latin America: the three invited lecturers from the region at (WM)², Salome Martinez (Chile), Alicia Dickenstein (Argentina), Maria Eulalia Vares (Brazil) as well as Natalia Garcia (Mexico), Jaqueline Godoy Mesquita (Brazil) and Carolina Neira Jiménez (Colombia).

The 20 minute film can be found at https://www.youtube.com/watch?v=uNJ7riiPHOY, with nearly 9000 views. The film is also posted on IMAGINARY's platform https://imaginary.org/fr/node/1491. It should be soon directly available from CWM website https://www.mathunion.org/cwm.

IMU GA (WM)² and CWM panel at ICM Rio

The CWM report for the IMU GA in Sao Paulo (July 29 - 30, 2018) was prepared by MFR and CS, then discussed and approved by CWM. The report was presented by CS. The reactions from the GA with respect to CWM achievements were very positive. There was special very complimentary mention of CWM in the overall report to ICM by Secretary General Helge Holden.

The World Meeting for Women in Mathematics (WM)², a CWM initiative, was a satellite event for ICM 2018, held in Rio on Sunday July 31st, 2018. It was an international meeting with a Latin-American focus. CA was the main organizer (and also on the local organizing committee for ICM 2018). The scientific committee chaired by Georgia Benkart (University of Wisconsin-Madison) selected a key-note lecturer (Monique Laurent), three invited lecturers (Alicia Dickenstein, Salome Martinez, Maria Eulalia Vares) and a public lecturer (Maria Esteban). The program included group discussions, posters (both mathematical and on women in mathematics), and a tribute to Maryam Mirzakhani. In particular, the Maryam Mirzakhani Memorial exhibition opened during (WM)² and remained open during the ICM (more details below).

(WM)² had a total of 296 registered participants, mostly women, plus around 50 guest participants (accompanying people and participants of ICM 2018). Many of them were OpenArms grantees, with free registration offered by CWM. Registered participants came from 51 different countries. Over lunch, about 200 participants divided up into 15 small discussion groups. Each group focused on one topic and used a common language of their choice (one of Arabic, English, French, Portuguese or Spanish). The discussions lasted for about one hour, and were moderated by one or two people per group, who had previously volunteered as facilitators. At the end of the discussion, each group was invited to formulate a proposition or a question. The conclusions were presented during the panel discussion at the end of the program and are included in the report.

During the ICM itself, CWM organized a panel discussion "The gender gap in mathematical and natural sciences from a historical perspective", followed by a reception, on 2 August 2018. A brief description of IMU-CWM by MFR was followed by presentations by June Barrow Green (Open University, UK): Historical context of the gender gap in mathematics and Silvina Ponce-Dawson (University Buenos Aires, Argentina): The International Union of Pure and Applied Physics Working Group on Women in Physics: activities and perspectives. The panel was chaired by CS. Attended by about 190 people, with a reasonable gender balance (1/4 men, 3/4 women), it ended with a very lively discussion. Its report is included in the ICM 2018 Proceedings. For detailed information about (WM)² and the CWM panel, see Annexes B and C.

New CWM

The composition of CWM 2019-2020 was decided by the IMU EC before ICM. Its members are
   -Marie-Françoise Roy, Université de Rennes 1, France, Chair
   -Carolina Araujo, IMPA, Rio de Janeiro, Brazil, Vice Chair
   -Alejandro Adem, University of British Columbia, Canada

-Petra Bonfert-Taylor, Dartmouth College, USA (web management)
-Tony Ezome, USTM, Franceville, Gabon
-Josephine Kagunda, University of Nairobi, Kenya
- Neela Nataraj, IIT Bombay, India (grant management)
- Mokoto Kotani, Tohoku University, Japan
-Ekin Ozman, Bogazici University, Turkey
-Cheryl Praeger, University of Western Australia, Australia (reports management)
-Carlos Kenig, University of Chicago, USA (IMU EC liaison)
-Betul Tanbay, Bogazici University, Turkey, is an associate member (Women in Mathematics Day).

CWM electronic meeting from the London Mathematical Society
A CWM meeting by video conference, to which all past and future CWM members (including associate members and the IMU EC liaison JT) were invited, took place at the London Mathematical Society premises in London on 12 September 2018. Six people were present in person and ten more attended electronically, with three apologies. One major decision was to launch a new CWM call in 2019, with deadline December 15.

During the meeting, (past and future) CWM members expressed a wish to draw the attention of IMU EC to the following points:

-Serious disquiet has been expressed inside CWM about the results of the IMU EC elections producing only one woman on the new IMU EC.
-There is also disquiet inside CWM about the failure to award any prize to any woman at 2018 ICM.
-CWM noted that both items were of concern to many at the GA and ICM.
-CWM past and future ask the new IMU EC note the above and that the medal committees be made aware of this general concern.

For a detailed report of the CWM Electronic Meeting see Annex D.

Activities supported in 2019
The CWM 2019 call for Networks and Schools received 41 applications. It was made very explicit that proposals for individual travel or research were not welcome and, in contrast with preceding years, none were received.

CWM decided to support 7 applications for a total of €15000. In the selection of grants, priority has been given to projects developing regional networks for Women in Mathematics, in Africa, Latin America, and Asia. Grants have been awarded in Cameroon, Argentina, Dominican Republic, India, Indonesia, South Africa and Tunisia.

More detailed information on the 7 projects granted is at https://www.mathunion.org/cwm/events/cwm-sponsored-events/2019. For the text of the CWM 2019 call see Annex E.

Gender Gap
The project "A Global Approach to the Gender Gap in Mathematical, Computing and Natural Sciences: How to Measure It, How to Reduce It?" led by the IMU and the International Union of Pure and Applied Chemistry (IUPAC), was approved by ICSU on 7 February 2017 (with a budget from ICSU of €100 000 per year in 2017, 2018 and 2019). There are 9 other partners in the project, see https://icsugendergapinscience.org/.: International Union of Pure and Applied Physics (IUPAP), International Astronomical Union (IAU), International Council for Industrial and Applied Mathematics (ICIAM), International Union of Biological Sciences (IUBS), International Union of History and Philosophy of Science and Technology (IUHPST), United Nations Educational, Scientific and Cultural Organization (UNESCO), Gender in Science, Innovation, Technology and Engineering (GenderInSITE), Organization of Women in Science for the Developing World (OWSD), Association for Computing Machinery (ACM).

The project is now entering in its third and final year. We have in particular collected about 32000 responses to the Global Survey of Scientists. The response from the mathematical community was very satisfactory, with nearly 6000 respondents, thanks to the efforts of IMU and ICIAM, two of the eleven partners in the project.

The proportion of answers by geographical zone is as follows: 4.57% of the answers are from Africa, 20.22% from Asia, 4.29% from Eastern Europe, 17.56% from Latin-America, 12.16% from North America, 3.92% from Oceania and 33.54% from Western Europe. The proportion of these answers from men and women in the various zones is not the same: the proportion of answer by women is around 38% for Asia, 43% for Oceania, 47% for Europe and Latin America, 50% in North America and 59% in Africa, the average being 44%.

The third year (2019) will be devoted to analyzing the results from the Global Survey of Scientists and the Joint data-backed Study on Publication Patterns, and to formulate recommendations to be proposed for implementation to the partners of the project.
 More information can be found at https://gender-gap-in-science.org/
 See Annex F with the report of the second year, already approved by ICSU.

The final conference of the project will take place 4- 8 November 2019. ICTP Trieste has agreed to host a jointly sponsored conference, with the following programme:

- Report on the findings and achievements of the project.
- Discussion and evaluation of the results of the project.
- Formulation of recommendations and discussion of new initiatives.

More information can be found at http://indico.ictp.it/event/8731/
See Annex G for the poster of the meeting at ICTP.

Remember Maryam Mirzakhani
As a tribute to Maryam Mirzakhani, CWM created the Remember Maryam Mirzakhani Memorial Exhibition with 18 original A0 posters portraying Maryam Mirzakhani, two volumes containing her mathematical work, one volume with articles about her, and a book of condolences for visitors to sign. The exhibition was created by Thaís Jordão (curator) and Rafael Meireles Barroso (designer). It was inaugurated at the (WM)² and remained open during the ICM 2018.

The following rules have been agreed for further displays of the exhibition. The materials are all held electronically by CWM, under the copyright of the IMU. Any institution, group of institutions, or venue interested in hosting the exhibition must obtain the agreement of CWM. A letter describing the context, the location and the dates must be provided. There must be a designated person in charge whose name must be forwarded to and agreed by CWM. This person is responsible for making sure that all the rules set by CWM are fulfilled. CWM provides the electronic files and each venue is in charge of printing them. Several copies of the exhibition can be shown simultaneously.

In 2018, CWM made an agreement with the following institutions:
- The Stanford Mathematics Department, where Maryam Mirzakhani held a professorial chair. One copy of the exhibition will be permanently posted at various places in the mathematics building.
- The Fields Institute, during the Fields Medal Symposium 2018 in honor of Maryam Mirzakhani and the current and future impact of her work. The exhibition was shown 5-9 November at the Fields Institute and on 5 November at the MaRS Discovery Center during the Symposium Public Opening.
- The III Brazilian Congress of Young Research in Pure and Applied Mathematics and Statistics (III CBJME) in Curitiba, Brazil, 12-14 December 2018.

In 2019, the Association for Women in Mathematics (AWM) Research Symposium, April 6-7, 2019 at Rice University in Houston, Texas will host the exhibition. See Annex H for the Rules for hosting the *Remember Maryam Mirzakhani Exhibition*

May 12, the *Women in Mathematics Day*

The *Women in Mathematics Day* will be celebrated for the first time in 2019, on May 12th.

Ashraf Daneshkhah from the Women's Committee of the Iranian Mathematical Society, presented the participants of (WM)2 a proposal that Maryam Mirzakhani's birthday – May 12th – be recognized and supported as the annual Women in Mathematics Day. The date would be celebrated every year inside the mathematical community, encouraging women from all over the world to advance their achievements in the field. This was approved by a vast majority of (WM)2 participants. We note that it has been made clear that this is an event internal to the mathematics community, and is not to be confused with any `day' with official international recognition.

 For the Proposal of the Women's Committee of the Iranian Mathematical Society, see Annex I.

Future CWM meeting

A physical CWM meeting will take place on 9 and 10 November 2019 at ICTP, just after the final meeting of the Gender Gap in Science Project, which several CWM members will attend. It is expected that all CWM members, and the IMU EC liaison Carlos Kenig, will attend. One special topic of interest will be how to implement the recommendations of the Gender Gap in Science project within the mathematical community in general, and IMU in particular.

CWM ambassadors

CWM has compiled and contacted a list of about 130 so-called CWM Ambassadors, each of whom has the job of disseminating information such as CWM funding calls in her geographical or mathematical neighborhood, and equally of keeping CWM informed about relevant activities or initiatives. The list is posted on the CWM website. For the current list of CWM Ambassadors, see Annex J.

CWM website and publicity

The CWM website http://www.mathunion.org/cwm/ has been updated on a regular basis by CS, PBT and MFR with input from CWM members and ambassadors. In particular details of relevant events are posted.

We note the increasing number of countries which now have some form of organization for female mathematicians, see www.mathunion.org/organizations/by-country/. CWM is the only organization gathering such information internationally.

The IMU has entirely redesigned its entire website and the CWM pages in particular; CS was involved in this process. The new website is much easier to work with and PBT has taken over from CS as the CWM pages main editor.

CWM flyer, poster, roll-up

The CWM flyer and poster have been distributed through CWM Ambassadors and organizers of CWM funded events. A CWM roll-up for use in displays was designed in the same style. Three posters (one for Africa, one for Asia, one for Latin-America) reporting on CWM funded activities since ICM Seoul have being designed for display at (WM)² and ICM. The planning and implementation was all done by BT and her designer.

CWM operation mode and Liaison with EC

With the exception of the electronic meeting described above, most of CWM's work has been done by email. Skype and phone calls have also been used. The liaison with EC through JT has been regular and very helpful. We would like to thank Sylwia Markwardt and all the other members of the IMU office staff who have consistently been very helpful.

Report by Marie-Françoise Roy and Caroline Series, Chair and Vice Chair of CWM

Annexes
A) Report of the CWM call 2018
B) Report of (WM)²
C) Report of the CWM panel
D) Report of the CWM electronic meeting
E) CWM Call 2019
F) Report of the Gender Gap 2nd year
G) Poster of the meeting at ICTP
H) Rules for hosting the Remember Maryam Mirzakhani Exhibition
I) Proposal of the Women's Committee of the Iranian Mathematical Society for May 12, Women in Mathematics Day
J) List of CWM ambassadors

CWM Expenditure 2018

	expenses			
	CWM funded activities		28 792,40 €	51,74%
	(WM)² and CWM panel in Rio		26 590,44 €	47,78%
	coordination expenses		264,26 €	0,47%
	TOTAL		55 647,10 €	
	income			
	remainder from 2017		8 482,22 €	16,72%
	IMU CWM 2018		39 321,00 €	77,49%
	Friends of IMU		2 938,03 €	5,79%
	Simons Foundation		4 876,16 €	9,61%
	TOTAL		50 741,25 €	

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

IMU AO Circular Letter 1/2018

International Mathematical Union
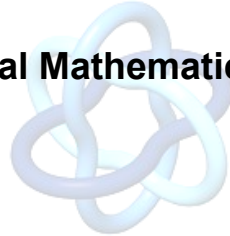
January 3, 2018
IMU AO Circular Letter 1/2018

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Updated contact information

Dear colleagues,

I will shortly send out individual emails to all IMU members regarding your contact information for the IMU.

It is particularly important this year as we are organizing our General Assembly in 2018, and all information regarding the GA will be conveyed electronically using the information that you have provided.

The most recent contact information regarding the IMU members can be found at

https://www.mathunion.org/membership/imu-members

We will send you the email addresses that we use when we contact your country. Please take time to check if you want us to update them.

Please reply to me with Cc to manager@mathunion.org
- Confirming that the information above is correct, or
- Sending corrected/updated information.

Thank you

Sincerely

Helge Holden

Secretary of the International Mathematical Union
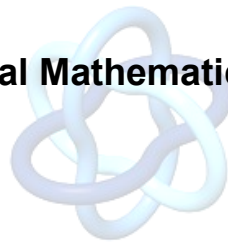
International Mathematical Union

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Advice regarding contact information

Dear colleagues,

Yesterday I sent about 90 individual emails to all our members. In doing so, I discovered that many countries have contact information that is very unstable, and that many members run the risk of not receiving any emails from the IMU. Since the IMU is almost exclusively connecting with its members using email, it is imperative that the system is made more reliable and sustainable.

In order to establish and maintain reliable and sustainable connections with the IMU, the following steps are recommended:

1. Create generic addresses like "president@mathsociety.country", which will remain unchanged. Emails to this address can be forwarded to the person(s) holding the office.

2. Emails sent from the IMU should be received by at least two different recipients.
I received countless "I am away from my email" yesterday, often covering long time periods of absence.

3. Give us at least two different email addresses, preferably using different mail servers. If we have only one email address for a country, and that addresses ceases to work, we will not be able to contact you, or discover that you did not receive our email.

4. Please try to maintain the email addresses you give us – send us emails updating the data. We will reserve the right to remove addresses that constantly bounce from our AO recipients.

5. Please create a stable URL for your Adhering Organization.
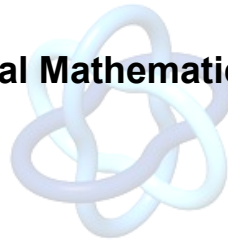
Regards

Helge Holden

Secretary of the International Mathematical Union

International Mathematical Union

January 19, 2018
IMU AO Circular Letter 2/2018

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Result of applications from Bangladesh and Brazil

Dear colleagues,

I am happy to report about the outcome of the postal ballots on the applications from Bangladesh and Brazil, see IMU AO Circular Letter 14/2017.

The vote on Bangladesh's application for Associate Membership yielded a positive result. As of February 2018, Bangladesh will be an Associate Member of the IMU.

The vote on Brazil's request to change from group IV to group V yielded a positive result.

As of February 2018, Brazil will adhere to group V of the IMU.

Thank you for your contributions.

Sincerely

Helge Holden
Secretary of the International Mathematical Union

International Mathematical Union
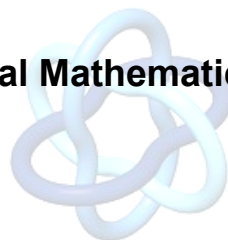
January 19, 2018
IMU AO Circular Letter 3/2018

To: The Adhering Organizations of the International Mathematical Union (IMU)
         (Adhering Organizations of Associate Members receive this letter for information)

From: Helge Holden, IMU Secretary

Postal Ballot 01/18 – Application for Membership of Morocco

Dear colleagues,

− Morocco has applied for full membership in group I of the IMU. The Executive Committee of the IMU unanimously recommends the application. The enclosed document which was submitted by the Centre de Recherches Mathématiques de Rabat, Morocco, reports about the state of mathematics in Morocco.

Postal ballot sheets will be sent to the Adhering Organizations by regular mail.

Please vote on the application from Morocco using the postal ballots, and return the ballots by mail, email or fax

by March 18, 2018

to the address indicated on the ballot form.

[Ballots are sent by regular mail only, as ballots sent out by email (with possibly multiple recipients) could lead to conflicting votes of one member country.]

Sincerely

Helge Holden
Secretary of the International Mathematical Union

Encl.

IMU AO Circular Letter 4/2018

International Mathematical Union
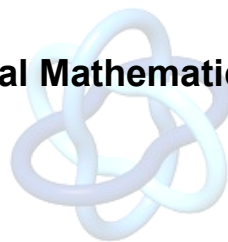
February 10, 2018
IMU AO Circular Letter 4/2018

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

IMU General Assembly meeting São Paulo (No 1)

Dear colleagues,

This is the first announcement about the next IMU General Assembly (GA) meeting.

1. Time and Location

The next GA meeting of the IMU will take place on 29–30 July 2018 in São Paulo, Brazil. The venue of the GA meeting will be the Sheraton WTC Hotel in São Paulo.

Delegates are expected to arrive on 28 July. The GA meeting ends in the evening of 30 July.
On 31 July, the GA organizers offer to all registered GA participants and accompanying persons attending the ICM, a bus tour from São Paulo to Rio de Janeiro that will include a guided visit to Paraty.

2. The General Assembly (basic information)

The role of the GA is described in the IMU Statutes, in particular, in Articles 18–24, and 41.

3. Delegations

For each GA meeting, each IMU Member Adhering Organization (AO) 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 IMU Member Countries for information about the Groups.

I would like to ask all AOs to start selecting their delegates for the IMU GA meeting in São Paulo and to nominate the delegations in an email to me at <secretary@mathunion.org>.

This request applies to:

-all IMU Members
-all IMU Associate Members, and
-all IMU Affiliate Members

Please note, however, that only the Delegates of IMU Members have voting rights at the GA. 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.

In case it turns out that a formally nominated Delegate will be unable to participate in the GA and the AO wishes to nominate a substitute, you are asked to contact me by email 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 GA meetings that the gender distribution was not well-balanced. I urge the AOs to consider gender distribution as one criterion when they choose the Delegates for the GA meeting in São Paulo.

4. Other GA participants

The IMU Executive Committee (EC) will invite further persons to the GA meeting. Among these are:

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

No person in any of the categories mentioned here has a voting right at the GA. Note that no person will be allowed to participate in the GA without a formal approval or invitation from me.

5. Accommodation and travel reimbursement

All registered GA Participants at the GA meeting will get their hotel accommodation at the Sheraton WTC Hotel, São Paulo, covered for the period 28–31 July (three nights, single room rate).
IMU will cover the accommodation for Delegates, Representatives of Associate and Affiliate Members, IMU EC Members, IMU Representatives (invited by the IMU President), Observers.
The hotel rooms will be charged to IMU directly. Any additional expenses must be paid individually. This offer does not extend to other people, e.g., accompanying persons.

In addition, one Delegate or Representative from each IMU Member, i.e., full IMU Member, Associate Member and Affiliate Member, will receive travel support in order to attend the GA meeting in São Paulo. The conditions for the GA travel support are as follows:

-One (-1-) GA travel grant will be given per member of the IMU.
-In very special cases, an AO may request travel support for more than one delegate. Well-documented applications have to be sent to <secretary@mathunion.org> by 1 March 2018.
-It is the responsibility of the IMU member (AO) to nominate to the IMU Secretary who will be the recipient of the GA travel grant (name of the person selected).
-GA travel grant implies that IMU will reimburse travel expenses up to a maximum amount per grant, which depends on the geographical region of the member country. The maximum amounts per region and country are specified in the table below.
-Only round trips from the country of Delegate or Representative (country–São Paulo–country or country–São Paulo–Rio de Janeiro–country) are eligible for reimbursement.
-Eligible travel expenses are: Basic economy class airfare, reasonable expenses to travel from home to the airport and back.
- Reimbursement for travel expenses is subject to the presentation of the following documents/receipts upon on-site registration in São Paulo:

- Copy of passport
- Summary of the travel expenses which are claimed to be reimbursed (note that there is a maximum amount), including travel support received from any other source, if applicable
- Ticket, originals of boarding pass and any other receipts for travel expenses
- Estimate of travel expenses to travel home
- Travel insurance (if no coverage from other sources and only for the travel to the GA meeting)
- Bank information (printed), if not provided online at the time of registration. A form is available on the online registration.

Travel reimbursement will only take place when the required documents have been presented by the grant recipient in São Paulo and will only be by bank transfer. In exceptional cases, for instance if bank transfer to the country is not possible, reimbursement will be in cash (in EUR only). This requires a request in advance to the IMU Secretary and his approval.

If you are eligible for GA travel grant you will, during the online registration process, be asked to provide your bank information. A form will be offered where you can fill in your data. The form will be stored at a secure server. After the GA meeting the forms will be deleted. It is recommended to provide the information electronically, as this will facilitate the bank transfer.

If a Delegate or Representative selected for GA travel grant gets travel support from any other source, this will be counted against the GA travel grant.

If a Delegate or Representative selected for GA travel grant who has a valid ticket, but cannot attend the GA meeting because of disease or an act of force majeure, travel expenses (or part thereof) may be reimbursed if the disease or the act of force majeure is duly certified and the travel expenses (or part thereof) are not refundable from other sources.

It will be appreciated if IMU Members will cover the travel expenses of all of their Delegates or Representatives to the GA meeting from own sources.

Maximum amounts of GA travel grants per region and country of the AO
(see Member Countries by Continent):

Region A: Africa
Maximum amount granted for reimbursement of travel expenses: **1,150 EUR**

Algeria, Cameroon, Egypt, Gabon, Ivory Coast, Kenya, Madagascar, Nigeria, Senegal, South Africa, Tunisia, AMU.

Region B: America
Maximum amount granted for reimbursement of travel expenses: **650 EUR**

Argentina, Brazil, Canada, Chile, Colombia, Cuba, Ecuador, Mexico, Paraguay, Peru, United States of America, Uruguay, Venezuela, MCofA, UMALCA.

Region C: Asia, Australia&Oceania
Maximum amount granted for reimbursement of travel expenses: **1,400 EUR**

Armenia, Australia, Bangladesh, Cambodia, China, Georgia, Hong Kong, India, Indonesia, Iran, Israel, Japan, Kazakhstan, Korea, Malaysia, Nepal, New Zealand, Oman, Pakistan, Papua New Guinea, Philippines, Saudi Arabia, Singapore, Thailand, Vietnam, SEAMS.

Region D: Europe
Maximum amount granted for reimbursement of travel expenses: **900 EUR**

Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, EMS.

6. Web server, formal registration process, hotel booking

The local organizing committee in São Paulo has set up a Web server with information about the GA:
    http://www.icm2018.org/portal/en/imu-assembly.
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 GA Participants informed.

Details of the online registration process for the IMU GA in São Paulo
After the nomination of the delegations by the AOs in a letter to me, the approved persons will receive from me a GA Registration Code that has to be used for the registration. All GA Participants are required to register for the GA meeting on the website
    http://www.icm2018.org/portal/en/imu-assembly.
In order to start the registration process, you will need the GA Registration Code. Once in the system, you have to provide your basic personal data (contact phone numbers, email, etc.), as well as information about any accompanying person, the arrival and departure from São Paulo, and your participation in the social events. In addition, you need to confirm that you have a valid travel insurance. If you have been selected for GA travel grant, you will need to include some bank information. Please also indicate whether you get additional travel support from any other source.
After the registration, you will receive a confirmation message from the organization. The GA Registration Code should be kept, as it may be used at some later time to update the registration data, if needed.

If you need assistance concerning the registration, please write to
<imu_ga@icm2018.org>.
The GA Participants are requested to submit their registration by **20 May 2018**.

7. Letter of invitation and visa issues

If you need a letter of invitation to attend the GA meeting, please go to the website http://www.icm2018.org/portal/en/imu-assembly. You can only apply for an invitation letter after you have registered for the GA.
Regarding visa issues, please consult the website http://www.icm2018.org/portal/en/imu-assembly.

For further assistance in these matters, please send an email to <imu_ga@icm2018.org>.

8. Items for the Agenda

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 topic for the GA agenda, please send your request to me by email to <secretary@mathunion.org> by **29 March 2018.**
-Expect to receive the GA agenda by **29 April 2018.**
-Expect to receive the EC report (IMU Bulletin 70) by **10 July 2018.**

9. Local contact in São Paulo

If you have any questions about the local arrangements for the GA meeting in São Paulo or need assistance, please contact <imu_ga@icm2018.org>.

I look forward to seeing you all in São Paulo!

Regards

Helge Holden
Secretary of the International Mathematical Union
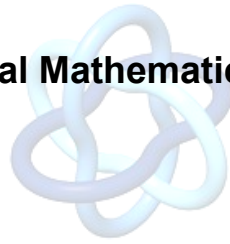
International Mathematical Union

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

IMU General Assembly meeting São Paulo (No 2)

Dear colleagues,

This circular letter to all IMU Adhering Organizations (AOs) serves mainly as a reminder.

Please recall that the meeting of the IMU General Assembly (GA) is going to take place in 29–30 July, 2018 in São Paulo, Brazil.
All information regarding the GA can be found in the Circular Letter
https://www.mathunion.org/fileadmin/IMU/Publications/CircularLetters/2018/IMU%20AO %20CL%204_2018.pdf.

In order to participate at the GA, you need to nominate your delegates, request personal registration codes from me, and register at the GA website. As of today, I have sent out 93 individual codes, but only 50 persons have registered. The participants who qualify for a travel grant, need to submit the requested bank information form (attached to this email). Only 5 forms have been submitted by now.

The deadline for registration for the GA is **20 May 2018**.

A very important issue: The suggestion of items for the agenda of the GA meeting is due by **29 March 2018**. Thus, if you plan to ask the GA to discuss a certain item, please let me know by 29 March so that we can include it into the agenda, and, if necessary, please formulate a resolution in case you would like to have a particular item to be voted on.

I look forward to seeing you all in São Paulo!

Regards

Helge Holden
Secretary of the International Mathematical Union

International Mathematical Union

<div align="right">

April 1, 2018
IMU AO Circular Letter 6/2018
</div>

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Result of application from Morocco

Dear colleagues,

I am happy to report about the outcome of the postal ballot on the application from Morocco, see IMU AO Circular Letter 3/2018.

The vote on Morocco's application for IMU Membership yielded a positive result.

As of April 2018, Morocco is a Member in group I of the IMU.

Thank you for your contribution.

Regards

Helge Holden
Secretary of the International Mathematical Union

International Mathematical Union

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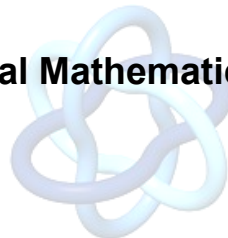
April 5, 2018
IMU AO Circular Letter 7/2018
</div>

To: The Adhering Organizations of the International Mathematical Union (IMU)
        (Adhering Organizations of Associate Members receive this letter for information)

From: Helge Holden, IMU Secretary

-Postal Ballot 02/18: Application for full Membership of Senegal
-Postal Ballot 03/18: Application for full Membership of Thailand

Dear colleagues,

- Senegal that has been an Associate Member since 2014, has applied for full membership of the IMU. The Executive Committee of the IMU unanimously recommends the application. The enclosed document which was submitted by the Société de Mathématiques du Sénégal (SMS) reports on the mathematical activities in Senegal.

- Thailand that has been an Associate Member since 2009, has applied for full membership of the IMU. The Executive Committee of the IMU unanimously recommends the application. The enclosed document which was submitted by the Mathematical Association of Thailand reports on the mathematical activities in Thailand.

Postal ballot sheets will be sent to the Adhering Organizations by regular mail.

Please vote on the application from Senegal and Thailand using the postal ballots, and return the ballots by mail, email or fax

by May 30, 2018

to the address indicated on the ballot form.

[Ballots are sent by regular mail only, as ballots sent out by email (with possibly multiple recipients) could lead to conflicting votes of one member country.]

Sincerely

Helge Holden
Secretary of the International Mathematical Union

Encl.

IMU AO Circular Letter 8/2018

International Mathematical Union
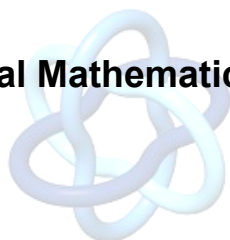
April 24, 2018
IMU AO Circular Letter 8/2018

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

IMU General Assembly Agenda and further GA information (No 3)

Dear colleagues,

This letter provides information about the meeting of the IMU General Assembly (GA) on 29–30 July, 2018 in São Paulo, Brazil. It covers the following topics:

1. GA Agenda
2. Papers for the GA meeting
3. Slates for the IMU offices
4. Nominated IMU President and Secretary
5. GA registration, etc.

Please read with care.

1. GA Agenda

According to Article 39 of the By-Laws of the IMU Statutes, the agenda for the meeting of the
GA has to be dispatched to the Adhering Organizations (AOs) at least three months before the meeting. The Statutes are at: http://www.mathunion.org/organization/statutes.

The AOs were asked in Circular Letter 4/2018 to propose by 29 March items for the agenda. No proposals were received. The attached GA Agenda was decided by the Executive Committee at its meeting in March 2018.

Article 39 of the By-Laws says 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 AO wants to be put up for vote, needs special treatment at the GA meeting.

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.

The attached agenda is close to but not yet final, since there are still a few items that are pending, and it remains to determine if and how they will appear on the agenda.

The GA will decide on the host for the ICM in 2022, see item 7 of the agenda.

The IMU will give countries interested in organizing the ICM in 2026 the possibility to pre-announce at this GA their plans to bid, see item 19.1 of the agenda. Therefore, we ask countries that are contemplating to do so, to send an email to the IMU Secretary by 1 June. A country can still make a formal bid when the official call is announced without having pre-announced it at this GA.

2. Papers for the GA meeting

The IMU Secretariat in Berlin will prepare all the papers for the GA meeting for easy download from a password protected web site.
Further information will follow in due time.

No printed material will be distributed to the delegates at the meeting in São Paulo. We expect all participants to print those documents that they find necessary to have at the GA meeting and to bring them to São Paulo.

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

3. Slates for the IMU offices

Slates for all IMU offices are currently being prepared by the Nominating Committee (NC) – chaired by former IMU Secretary Martin Grötschel. The slates will be distributed, according to
our Procedures for Election, see:
https://www.mathunion.org/fileadmin/IMU/EC/Procedures_for_Election_2016-04-22.pdf
by 29 May 2018.

4. Nominated IMU President and Secretary

As communicated in Circular Letters 6 & 9/2017, the NC has nominated
IMU President 2019–2022: Carlos Kenig (USA/Argentina)
IMU Secretary 2019–2022: Helge Holden (Norway) (incumbent).

5. GA registration, etc.

All IMU Adhering Organizations that have not nominated their delegates are strongly encouraged to do so *now*. The deadline for registration is 20 May.

The IMU CL 4/2018, see https://www.mathunion.org/membership/circular-letters-adhering-organizations, provides full information about the time and location, registration, etc.
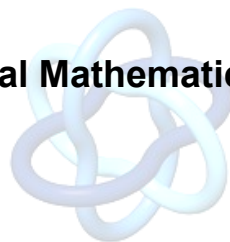
I look forward to seeing you in São Paulo!

Regards

Helge Holden
Secretary of the International Mathematical Union

IMU AO Circular Letter 9/2018

International Mathematical Union
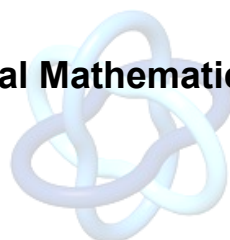
To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Change of address for the IMU Secretariat

Dear colleagues,

This is to inform you that as of May 1, 2018, the IMU Secretariat in Markgrafenstr. in Berlin has been relocated.

The new address reads:

> The International Mathematical Union
> Secretariat
> Hausvogteiplatz 11A
> 10117 Berlin
> Germany

Phone numbers and email addresses remain the same. The new premises are in the vicinity of the previous location.

Regards
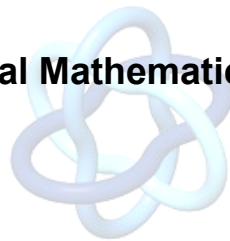
Helge Holden
Secretary of the International Mathematical Union

IMU AO Circular Letter 10/2018

International Mathematical Union
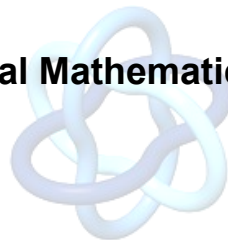
May 3, 2018
IMU AO Circular Letter 10/2018

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

IMU General Assembly meeting São Paulo (No 4)

Dear colleagues,

This circular letter to all IMU Adhering Organizations (AOs) serves as the final reminder regarding registration for the IMU General Assembly (GA), which is going to take place on 29–30 July 2018 in São Paulo, Brazil.

The deadline for registration for the GA meeting is 20 May 2018.

The web page for registration will be closed after the deadline has expired, and you will not be able to register after that, even if you have received your personal registration code. This deadline is due to the contract we have made with the GA venue, granting the IMU special rates for the accommodation for GA Delegates which is covered by IMU, and also for the accommodation for Observers.

Thus, if you have received your personal code, and have yet to register, please do so **now**.

If you want to attend the GA meeting and have yet to request your personal code, please request your personal code **now**.

All information regarding the GA can be found in the Circular Letter https://www.mathunion.org/fileadmin/IMU/Publications/CircularLetters/2018/IMU%20AO%20CL%204_2018.pdf.

I hope to see you all in São Paulo!

Regards

Helge Holden
Secretary of the International Mathematical Union

IMU AO Circular Letter 11/2018

International Mathematical Union

<div align="right">

May 4, 2018
IMU AO Circular Letter 11/2018

</div>

To: The Adhering Organizations of the International Mathematical Union (IMU)
        (Adhering Organizations of Associate Members receive this letter for information)

From: Helge Holden, IMU Secretary

-Postal Ballot 04/18: Application for full Membership of Oman

-Postal Ballot 05/18: Application for Associate Membership of Uzbekistan

Dear colleagues,

- Oman that has been an Associate Member since 2010, has applied for full membership of the IMU. The Executive Committee of the IMU unanimously recommends the application. The enclosed document which was submitted by the Oman Mathematics Committee reports on the status of Mathematics in Oman.

- Uzbekistan has applied for Associate Membership of the IMU. The Executive Committee of the IMU unanimously recommends the application. The enclosed document which was submitted by the Uzbek Mathematical Society reports on the mathematical activities in Uzbekistan.

Postal ballot sheets will be sent to the Adhering Organizations by regular mail.

Please vote on the application from Oman and Uzbekistan using the postal ballots, and return the ballots by mail, email or fax

<div align="center">by June 20, 2018</div>

to the address indicated on the ballot form.

[Ballots are sent by regular mail only, as ballots sent out by email (with possibly multiple recipients) could lead to conflicting votes of one member country.]

Sincerely

Helge Holden
Secretary of the International Mathematical Union

Encl.

International Mathematical Union

May 7, 2018
IMU AO Circular Letter 12/2018

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Survey on the gender gap in mathematics and science

Dear colleagues,

The IMU Committee for Women in Mathematics (CWM) is coordinating the project
  *"A Global Approach to the Gender Gap in Mathematical and Natural Sciences:
  How to Measure It, How to Reduce It?"*
which is funded by the International Council for Science (ICSU) and co-funded by its 11 participating organizations. You find more detailed information on the webpage
  https://icsugendergapinscience.org/
set up for this project.

Task 1 of the project is a Global Survey of Mathematical, Computing, and Natural Scientists. For this Task, CWM is seeking as much input as possible. You are cordially invited to contribute to the Task and provide relevant information by completing the survey.

The URL for the survey is
https://icsugendergapinscience.org/2018-global-survey-of-mathematical-computing-and-natural-scientists/.
You can also get access by clicking on "SURVEY" in the upper right-hand box of the main page of the project. The survey is open from
  May 1, 2018 until October 31, 2018.
It is available in English, French, Arabic, Chinese, Japanese, Russian and Spanish.

Please circulate this letter within your communities and invite your colleagues to make a contribution.

Regards

Helge Holden
Secretary of the International Mathematical Union

IMU AO Circular Letter 13/2018

International Mathematical Union

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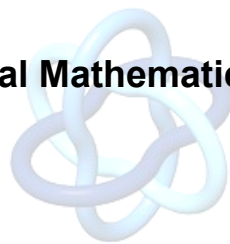
May 28, 2018
IMU AO Circular Letter 13/2018

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To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

2018 IMU General Assembly Slates

Dear colleagues,

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

According to the "Procedures for the Election...", see https://www.mathunion.org/fileadmin/IMU/EC/Procedures_for_Election_2016-04-22.pdf, the IMU Nominating Committee has the task to select, from all persons nominated, see Circular Letters 11/2016, 09/2017, and 10/2017 which can be found at https://www.mathunion.org/membership/circular-letters-adhering-organizations, the slates to be considered at the GA meeting.

The IMU Nominating Committee consists of
– Martin Grötschel (Germany, Chair)
– Martin Kalina (Slovakia)
– Niky Kamran (Canada)
– Ursula Molter (Argentina)
– Shigefumi Mori (Japan, IMU President)
– Cheryl Praeger (Australia)
– Daya Reddy (South Africa)

The 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 São Paulo.

You find the lists of the persons nominated on the IMU GA 2018 web site the URL of which is distributed together with the password to all IMU Adhering Organizations and GA participants. This web site will be used for all papers for the IMU GA 2018.

At the end of each slate, persons who have been nominated but have not been chosen by the Nominating Committee are listed. The non-selected persons can, if the General Assembly wishes so, 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 Committee for which they have been nominated, and they have provided a curriculum vitae (CV). The CVs are made available on the IMU GA 2018 web site.

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.
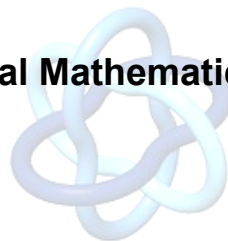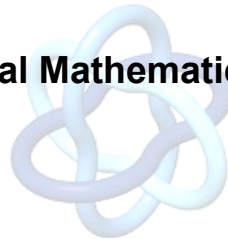
Best regards

Helge Holden
Secretary of the International Mathematical Union

IMU AO Circular Letter 14/2018

International Mathematical Union
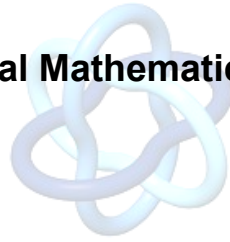
To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Bids for the ICM 2022

Dear colleagues,

As you know, the IMU received two bids to host the ICM 2022, from France (site Paris) and Russia (site St Petersburg). See IMU AO CL 14/2016.
The final decision will be made by a vote at the General Assembly meeting 29–30 July in São Paulo, Brazil. See IMU AO CL 8/2018.

In order to give the AOs more time to make up their mind about this important decision, we have made the bids available on the IMU GA 2018 web site together with the recommendation of the Site Selection Committee, see the Committee's report, which unanimously recommends St Petersburg as the venue. The URL and password are the same as sent out with IMU AO CL 13/2018 and 13a/2018.

The Circular Letters (IMU AO CL) can be found at
https://www.mathunion.org/membership/circular-letters-adhering-organizations.

Sincerely

Helge Holden
Secretary of the International Mathematical Union

International Mathematical Union

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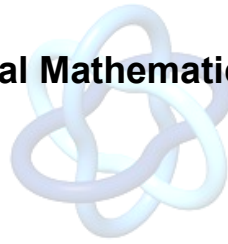
June 1, 2018
IMU AO Circular Letter 15/2018

</div>

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Results on applications from Senegal and Thailand

Dear colleagues,

I am happy to report about the outcome of the postal ballot on the applications for full membership from Senegal and Thailand, see IMU AO Circular Letter 7/2018.

The vote on both applications for IMU Membership yielded a positive result. As of June 2018, Senegal and Thailand are Members in group I of the IMU.

Thank you for your contribution.

Regards

Helge Holden
Secretary of the International Mathematical Union

International Mathematical Union

<div align="right">

July 4, 2018
IMU AO Circular Letter 16/2018

</div>

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Results on applications from Oman and Uzbekistan

Dear colleagues,

I am happy to report about the outcome of the postal ballots on the applications for full membership from Oman and for Associate Membership from Uzbekistan, see IMU AO Circular Letter 11/2018.

The vote on both applications for IMU Membership yielded a positive result.

As of July 2018, Oman is a Member in group I and Uzbekistan is an Associate Member of the IMU.

Thank you for your contribution.

Regards

Helge Holden
Secretary of the International Mathematical Union

IMU AO Circular Letter 17/2018

International Mathematical Union

July 10, 2018
IMU AO Circular Letter 17/2018

To: The Adhering Organizations of the International Mathematical Union (IMU)
          and Participants at the 2018 IMU General Assembly meeting

From: Helge Holden, IMU Secretary

Papers for the 2018 IMU General Assembly

Dear colleagues,

Finally the papers for the General Assembly meeting are available at the GA website. The URL and password can be obtained from the IMU Secretary who can also provide details regarding the structure of the GA webpage.

No printed material will be distributed to the participants at the meeting in São Paulo. We expect all participants to print those documents that they find necessary to have at the GA meeting and to bring them to São Paulo. If you think that papers are missing, please contact me at your earliest convenience.

I refer to Article 20 in the IMU Statutes, which states

"... Any Adhering Organization of an IMU Member not represented at a meeting of the General Assembly may forward its votes by registered mail to the Secretary of the Union; and such votes shall be valid, if received two weeks prior to the beginning of the General Assembly, and if the original question has not been modified by substantial amendments. Voting by correspondence shall be in such a way that each Member of the Union casts its votes as a unit, counted as many times as the group indicates …"

You should have received an email from the Chair of the GA Organizers, Paolo Piccione, regarding practical arrangements in São Paulo.

We look forward to seeing you in São Paulo for an exciting General Assembly meeting!

Regards

Helge Holden
Secretary of the International Mathematical Union

IMU AO Circular Letter 18/2018

International Mathematical Union
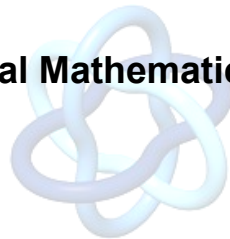
<div align="right">
July 20, 2018
IMU AO Circular Letter 18/2018
</div>

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Fraud Alert

Dear colleagues,

Many colleagues around the world have received emails like the one below, allegedly sent in the name of IMU President Shigefumi Mori, but sent from an email address that is not associated with the IMU.

These emails are false emails, and should be deleted immediately.
We are working to put an end to these emails.

We apologize for any inconvenience in this matter.

Regards

Helge Holden
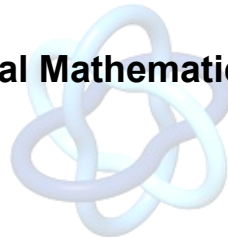Secretary of the International Mathematical Union

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Hello Prof.[name].How are you?Our friend Prof.[name] and IMU
member from Chile are on the way now to Christchurch to attend His sister
funeral.As far as I know,they are on the way to New Zealand and they
have some problem in the Philippine airport.Kindly call them at
00639954309481 or +639954309481 and please help them in any possible
way and I will call you as soon as possible.At this time,its midnight here
in Germany and I have a flight to catch later this morning back to
Japan... I will call you as soon I will arrive in my office.Thank
you very much.

In Prayers,
Prof. Shigefumi Mori
IMU President
International Mathematical Union
Secretariat
Hausvogteiplatz 11A
10117 Berlin
Germany
Phone : +49 30 2037 2430
++++++++++++++++++++++++++++++++++

IMU AO Circular Letter 19/2018

International Mathematical Union

<div align="right">

October 5, 2018
IMU AO Circular Letter 19/2018

</div>

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

International Day of Mathematics logo competition

Dear colleagues,

The IMU is leading the project to declare an International Day of Mathematics (IDM).
From your responses to the AO CL 5/2017
https://www.mathunion.org/fileadmin/IMU/Publications/CircularLetters/2015-
2016/IMU_AO_CL_5_2017.pdf
the IMU decided to move forward to create an annual International Day of Mathematics
and to select March 14 ("Pi Day") as the date for the IDM.

UNESCO is the authority to proclaim the International Day of Mathematics. If UNESCO
decides to proclaim the IDM, the first celebration of IDM is expected to be on March 14 in
2020.

For more information see also the IMU webpage
https://www.mathunion.org/outreach/IDM.

Now the IMU is inviting bids for the logo of the IDM.

Ideally, the logo must be available in different formats for use on the web and for printing on posters. An editable version of the logo will be needed for use in high quality work. If this is not feasible, the IMU is entitled to engage a professional graphic designer for this purpose.

Logos together with artist information (full name, date of birth, career or profession, personal webpage if any, and email) must be sent by email at idm@mathunion.org. Only electronic bids are eligible. An email confirming receipt of submissions will be sent. In case of not receiving a confirmation within 48 hours, please resend the work.

Submissions may include more than one logo. Submissions must include the artist's statement that, if the logo is chosen by the IMU, the creator of the logo will assign all rights to the logo to the IMU. This includes the permission to make slight modifications. The IMU assures that the name of the winning artist will appear on the IDM website. The competition does not give a monetary award and is open to all individuals worldwide. For submissions not chosen, the rights are retained by the artist.

The deadline for submission of logos to the competition is 31 December 2018.
IMU's decision is expected by April 2019.

The jury for selection of the IDM logo will be nominated by the Executive Committee of the IMU and its decision will be final.

In a separate call, see AO CL 20/2018, organizations are invited to make bids to host the IDM website.
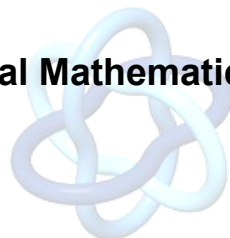
Please feel free to circulate this call among potential bidders.

Regards

Helge Holden
Secretary General of the International Mathematical Union

IMU AO Circular Letter 20/2018

International Mathematical Union

October 5, 2018
IMU AO Circular Letter 20/2018

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Call for bids to host the International Day of Mathematics website

Dear colleagues,

The IMU is leading the project to declare an International Day of Mathematics (IDM).
From your responses to the AO CL 5/2017
https://www.mathunion.org/fileadmin/IMU/Publications/CircularLetters/2015-2016/IMU_AO_CL_5_2017.pdf
the IMU decided to move forward to create an annual International Day of Mathematics and to select March 14 ("Pi Day") as the date for the IDM.

UNESCO is the authority to proclaim the International Day of Mathematics. If UNESCO decides to proclaim the IDM, the first celebration of IDM is expected to be on March 14 in 2020.

For more information see also the IMU webpage
https://www.mathunion.org/outreach/IDM.

The IDM will be overseen by an IDM Advisory Board, composed of representatives worldwide and appointed by the IMU. The Board will be responsible for choosing a theme for each year and for overseeing the IDM website.

Now the IMU is inviting bids to host the website of the International Day of Mathematics.

The bid should be drafted according to the guidelines given below.

– Hosting the IDM website will be subject to UNESCO's proclaiming the International Day of Mathematics.
– The URL of the IDM website will be www.idm314.org.
– The IDM website cannot include any commercial advertisements or sales in any form, and its use should be free and open to all.
– The IDM website host can nominate one representative to the IDM Advisory Board.
– The deadline for the submission of bids is 15 January 2019. IMU's decision on the successful bidder is expected by April 2019.
– In a separate call, see AO CL 19/2018, bids for the logo of the International Day of Mathematics will be invited. The winning logo is to be displayed on the IDM website.
– The IMU in consultation with the IDM Advisory Board will be responsible for the content of the IDM website.

Please feel free to distribute this call among potential bidders. Only electronic bids are eligible.
Please submit your bid to idm@mathunion.org.

Guidelines for preparing a bid to host the IDM website:

Description of the project:
The IDM website should contain statements about "what is the IDM", about the date March 14, as well as background/history, founders, Advisory Board.

Each year, all countries will be invited to celebrate the IDM with mathematics activities in schools and with the general public, under a (non-mandatory) theme, which may vary from year to year. Announcements of activities worldwide will be posted on the IDM

website. To help the local communities organize activities, Open Source material for curriculum enrichment and activities for the public will be made freely available.

Design of IDM website:
Modern, user-friendly, intuitive design. Robust and clear structure and arrangements, allowing easy handling also by non-experts. Optimized for use on mobile devices and tablets. The design should allow for versions or mirror sites in different languages. Compliance with data protection rules is mandatory. Archiving of content should be done.

Apply a content management system (CMS) that allows various roles of administration, which means different sections of the website can be administered by different persons. This way there is a high level of self-administration that requires, on the other hand, qualified overseeing of the website as a whole.

Topics to be covered:
– Major goals of the IDM, Theme of the year, activities organized around the year (posted with title, date, location, organization, a short description and a URL to the website of the activity), event map, invitation to contribute to the Open Source material.
– A resource section containing Open Source curriculum enrichment material and/or proposals of activities for the public related to the Theme of the year, offered in several languages.
– A section for the media including: (i) a presentation of the centralized international events, for instance the celebrations at UNESCO and videos of activities there, (ii) press releases.
– A blog.
– A news section.
– The website may also offer a presence on social media.

In your bid, please include:

1. Description of host institution:
Describe the institution, source of funding, annual budget, number of employees, geographic location, electronic infrastructure, including back-up facilities and safety.

2. Description of administrative support offered:
Describe the kind of administrative resources provided for the project of hosting the IDM website, and the kind of web competence offered. Support will be needed year around with an expected peak around March 14 every year to answer questions from users.

3. Description of ideas for the IDM:
The kind of activities you propose to include on the IDM website, and how you propose to develop a successful IDM website and successful activities worldwide.

Time frame:
– By 15 January 2019: Submit bids.
– By 20 March 2019: If necessary, IMU may give feedback to bidders so that the bidders have the chance to improve their bids.
– By 10 April 2019: Decision on the successful bid.
– By 15 November: Go-live of the IDM website (subject to UNESCO's decision to proclaim the IDM).

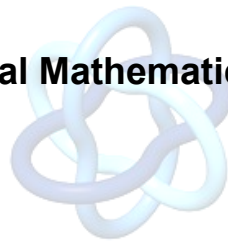A renewable contract for a five-year period will be made with the successful bidder.

Deadline for submission of bids: 15 January 2019.
Please submit your bid to idm@mathunion.org.

Regards

Helge Holden
Secretary General of the International Mathematical Union

IMU AO Circular Letter 21/2018

International Mathematical Union

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

**Elections for the ICMI Executive Committee**

Dear colleagues

Please see the attached letter from Abraham Arcavi, Secretary General of the International Commission on Mathematical Instruction (ICMI), regarding the election for the ICMI Executive Committee for the term 2021–2024. This is a very important issue for ICMI and the IMU, and we look forward to your active involvement in the process.

For further questions, please contact Abraham Arcavi <abraham.arcavi@weizmann.ac.il>.

Regards

Helge Holden
Secretary General of the International Mathematical Union
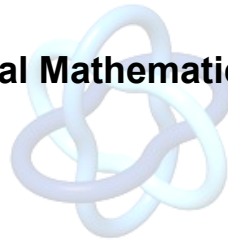
International Mathematical Union

To: The Adhering Organizations of the International Mathematical Union (IMU)

From: Helge Holden, IMU Secretary

Heidelberg Laureate Forum 2019

Dear colleagues

The 7th Heidelberg Laureate Forum (HLF), see http://www.heidelberg-laureate-forum.org, will take place in Heidelberg, Germany during September 22–27, 2019.

At HLF all winners of the Fields Medal, the Abel Prize, the ACM A.M. Turing Award, the Nevanlinna Prize, and the ACM Prize in Computing are invited to attend. In addition, young and talented computer scientists and mathematicians are invited to apply for participation. The previous HLFs have been an exceptional success. The HLF serves as a great platform for interaction between the masters in the fields of mathematics and computer science and young talents.

Applications for participation at the 7th HLF are open in three categories: Undergraduates, PhD Candidates, and PostDocs. See the webpage https://application.heidelberg-laureate-forum.org/intern/reg_nom_registration_for.php for the online nomination form. Please note that in compliance with German data protection law all previous login information and nominator accounts were deleted.

The IMU Adhering Organizations and national mathematical societies can nominate young researchers. Nominated persons get "priority treatment", but, since there may be too many nominations, they have no acceptance guarantee. During the nomination process you will be asked for an Org-ID, which is IMU39514 for the IMU. **The deadline for application is February 15, 2019**.

IMU asks its Adhering Organizations to distribute this information among their national mathematical communities, if possible, through the newsletters of the national mathematical societies.

The HLF was initiated by the late German entrepreneur Klaus Tschira, and is supported by the Klaus Tschira Foundation, The Norwegian Academy of Science and Letters, The Association for Computing Machinery, as well as The International Mathematical Union.

Regards

Helge Holden
Secretary General of the International Mathematical Union

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. (https://www.wias-berlin.de/index.jsp?lang=1).

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) and the Committee for Women in Mathematics (CWM).

The IMU Secretariat also hosts the IMU archive.

After a positive evaluation of the work of the IMU Secretariat since 2011, the IMU General Assembly 2018 decided to enter into a new and unlimited Cooperation Agreement with WIAS.

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6. Impressum

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