IMU

BULLETIN OF THE

INTERNATIONAL MATHEMATICAL UNION

No.75

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Secretariat:

International Mathematical Union Secretariat Hausvogteiplatz 11a D-10117 Berlin, Germany

https://www.mathunion.org/

List of Abbreviations

AO	Adhering Organization
CDC	Commission for Developing Countries
CEIC	Committee on Electronic Information and Communication
CoD	Ad hoc Committee on Diversity
СоР	Ad hoc Committee on Permissions
CWM	Committee for Women in Mathematics
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
ICMI	International Commission on Mathematical Instruction
IDM	International Day of Mathematics
IMU	International Mathematical Union
ISC	International Science Council
PC	Program Committee
SC	Structure Committee

Dear Members of the International Mathematical Union

January 1, 2023, marked the official start of the work of the new IMU Executive Committee (EC), which was elected for the 2023-2026 term at the IMU General Assembly in Helsinki, Finland, in July 2022. In particular, the IMU President Hiraku Nakajima, IMU Vice-Presidents Ulrike Tillmann and Tatiana Toro, Members-at-Large Mouhamed Moustapha Fall, Nalini Joshi, JongHae Keum, Paolo Piccione, Günter M. Ziegler, Tamar Ziegler and myself, as IMU General Secretary, were inaugurated into office. IMU Past President Carlos E. Kenig continues ex-officio as a member of the IMU EC, and Dietmar Hömberg is the IMU Treasurer, appointed by the IMU EC.

The first annual meeting of the new IMU EC took place at the IMU Secretariat in Berlin between March 10-12, 2023. At its first meeting, the IMU EC began planning for the next International Congress of Mathematicians (ICM) in 2026, to be held in Philadelphia, USA. The chair of the 2026 ICM Program Committee, Claire Voisin, responsible for the selection of speakers at the Congress, was appointed and the members of the Fields Medal Committee, traditionally chaired by the IMU President, were voted on. The membership of this committee, as well as that of the Program Committee, will remain confidential until the opening of the ICM in 2026.

As decided at the 2018 IMU General Assembly, the responsibility for determining the scientific structure of the ICM has been separated from the very challenging task of inviting speakers to the Congress. The structure of future ICMs (including the sessions and their relative size) is the responsibility of the ICM Structure Committee, while the invitation of speakers is the responsibility of the Program Committee. Previously, both tasks were the responsibility of the omnipotent Program Committee. The ICM Structure Committee, chaired by Terence Tao, submitted its <u>report</u> in August 2023.

The <u>Proceedings of ICM 2022</u> were published by EMS Press, the publishing house of the European Mathematical Society, in December 2023. All articles were published under the open access license CC-BY 4.0 and made available on the IMU website in addition to EMS Press's website.

A significant part of the IMU's work is conducted through its Commissions and Committees. Many of our colleagues generously volunteer their time to serve our community. Comprehensive reports of their efforts are featured in this Bulletin, and I would like to take this opportunity, on behalf of all of us, to express our gratitude for their dedication and commitment.

The newly elected Commission for Developing Countries (CDC) met for the first time in Berlin in 2023, immediately after the IMU EC meeting, between March 12-14. A joint meeting of the IMU EC and the CDC took place on March 12.

The annual meeting of the ICMI EC was held in Bangkok, Thailand, in February 2023. The main items on the agenda were preparations for the ICMI Plenary Session 2024 and the ICMI Congress, ICME-15, which is planned for July 2024 in Sydney, Australia. Registration for ICME-15 opened in August 2023. The ICMI EC also considered applications from potential host countries for the subsequent congress, ICME-16, in 2028. Two applications were received and, after site visits in the countries, Prague (Czech Republic) was selected as the location for ICME-16.

Following the meeting of the ICMI EC in Bangkok, a meeting of the Capacity and Network Project (CANP) also took place in Thailand. Since 2011, special mathematics didactics workshops in developing countries have been supported under the joint title CANP through a collaboration between CDC and ICMI. The CANP activities in 2023 were partially funded directly by the IMU.

As part of the ICMI Studies, the first meeting of the Organizing Committee for ICMI Study 26 "Advances in Geometry Education" took place in Valencia (Spain) in February 2023. This was followed by a call for papers for the study in June 2023. The conference proceedings for ICMI Study 24 "Mathematics Curriculum Reforms Around the World" were published in July 2023.

A great deal of organizational, financial and professional support was provided in the various ongoing CDC projects. As part of the "Conference Support Program", 28 conferences in developing countries received financial support. Through the "Volunteer Lecturer Program", 15 seminars in developing countries (including Madagascar, Mongolia, Nigeria, Pakistan, the Philippines and Uganda) were approved for funding. Three, four and 11 scholarships were awarded under the Abel Visiting Scholar, IMU-Simons African Fellowship and Individual Travel Support programs, respectively. The organizational management of the IMU Breakout Graduate Fellowship and Graduate Research Assistantships in Developing Countries programs continued to be administered by the CDC in 2023.

To expedite the application and selection processes for IMU's grants for developing countries, the IMU Secretariat implemented a new application and <u>grant management portal</u> during the year. The portal went live in November 2023, and two webinars for interested parties were held by CDC to introduce the new portal and promote CDC's programs. The portal has been extended further to administer grants from the Committee for Women in Mathematics (CWM).

The annual call for proposals from CWM, which offers financial support for projects worldwide, resulted in 48 applications. Of these, 11 projects were selected (including a first meeting of the "Asian and Oceanian Women in Mathematics" in India, the 3rd meeting of the "Latin American Women in Mathematics" in Colombia and the "Southeast Asian Women Mathematicians Meeting" in Indonesia, network meetings in Cuba, India, Nepal and Nigeria, the global initiative 'May 12', and two workshops, one in Uganda and one in Uruguay), for partial or full funding from CWM.

In the summer of 2023, Curator of the IMU Archive, June Barrow-Green, visited the Secretariat to survey the IMU Archive and initiate joint projects with the IMU Archivist. This resulted in the plan to make materials from the IMU Archive freely available on the IMU website. The scope and requirements of the technical infrastructure were already clarified in 2023. The project will be tackled in 2024.

From September 24-29, 2023, the 10th anniversary of the annual Heidelberg Laureate Forum took place, in which the IMU participated as usual.

Membership of the Union is always important for the IMU. Various initiatives are taken to secure payment of membership dues from the Adhering Organizations. While the financial situation of the IMU is stable, we do depend on our members to pay their dues to be able to function for the benefit of mathematics and mathematicians worldwide.

The number of full members increased again in 2023 due to the admission of Mongolia as a full IMU member of Group I.

IMU members are regularly contacted by scammers who use a variety of tactics to convince members to transfer money to their accounts. The perpetrators show some knowledge of the IMU structure, but nothing beyond what is publicly available. We would like to emphasize once again that the IMU *never* contacts individuals asking for money to be transferred.

The call for bids for ICM 2030 was made to the Adhering Organizations in September 2023, with the deadline for submitting bids being November 30, 2025.

With best wishes

Christoph Sorger Secretary General of the International Mathematical Union

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1. IMU Leadership and Membership Information 1.1. Executive Committee 2023-2026

INTERNATIONAL MATHEMATICAL UNION

Executive CommitteeJanuary 1, 2023 – December 31, 2026President:Hiraku Nakajima(Japan)				
Vice-Presidents:	Ulrike Tillmann Tatiana Toro	(UK) (USA/Colombia)		
Secretary General:	Christoph Sorger	(France)		
Members-at-Large:	Mouhamed Moustapha Fall Nalini Joshi JongHae Keum Paolo Piccione Günter M. Ziegler Tamar Ziegler	(Senegal) (Australia) (Republic of Korea) (Brazil) (Germany) (Israel)		
Ex-officio Member (Past President)	Carlos E. Kenig	(USA)		



Meetings of the Executive Committee in 2023: 96th EC Meeting, Berlin, Germany, March 10-12, 2023

1.2. IMU Leadership 2023-2026

IMU Executive Committee (EC) 2023 – 2026

Hiraku Nakajima	IMU President	Japan
Christoph Sorger	IMU Secretary General	France
Ulrike Tillmann	IMU Vice-President	UK
Tatiana Toro	IMU Vice-President	USA/Colombia
M. Moustapha Fall	IMU EC Member-at-Large	Senegal
Nalini Joshi	IMU EC Member-at-Large	Australia
JongHae Keum	IMU EC Member-at-Large	Republic of Korea
Paolo Piccione	IMU EC Member-at-Large	Brazil
Günter M. Ziegler	IMU EC Member-at-Large	Germany
Tamar Ziegler	IMU EC Member-at-Large	Israel
Carlos E. Kenig	IMU EC Ex-officio Member (Past President)	USA

Commission for Developing Countries (CDC) 2023 – 2026

Andrea Solotar	CDC President	Argentina
Ludovic Rifford	CDC Secretary Policy	France
Jose Maria Balmaceda	CDC Secretary Grants	Philippines
Norbert Hounkonnou	CDC, African Member	Benin
Le Tuan Hoa	CDC, Asian Member	Vietnam
Mariel Saez	CDC, Latin American Member	Chile
Dayue Chen	CDC Member appointed by IMU EC	China
K. N. Raghavan	CDC Member appointed by IMU EC	India
Anjum Halai	CDC Member appointed by ICMI EC	Pakistan
Hiraku Nakajima	CDC Ex-officio Member (IMU President)	Japan

International Commission on the History of Mathematics (ICHM) 2023 – 2026

Guillermo P. Curbera	ICHM	Spain
Isobel Falconer	ICHM	UK

International Commission on Mathematical Instruction (ICMI) 2021 – 2024

Frederick K. S. Leung	ICMI President	SAR, China
Jean-Luc Dorier	ICMI Secretary-General	Switzerland
Merrilyn Goos	ICMI Vice President	Australia
Anjum Halai	ICMI Vice President	Pakistan
Marta Civil	ICMI EC Member-at-Large	USA
Patricio Felmer	ICMI EC Member-at-Large	Chile
Mercy Kazima	ICMI EC Member-at-Large	Malawi
Núria Planas	ICMI EC Member-at-Large	Spain
Susanne Prediger	ICMI EC Member-at-Large	Germany
Jill Adler	ICMI EC Ex-officio Member (ICMI President 2017-2020)	South Africa
Hiraku Nakajima	ICMI EC Ex-officio Member (IMU President)	Japan
Christoph Sorger	ICMI EC Ex-officio Member (IMU Secretary General)	France

Committee on Electronic Information and Communication (CEIC) 2019 – 2026

(CEIC terms of membership are staggered.)

Ilka Agricola	CEIC Chair	2023 - 2026	Germany
Jean-Pierre Bourguignon	CEIC Member	2021 - 2024	France
Kevin Buzzard	CEIC Member	2021 - 2024	UK
Marie Farge	CEIC Member	2019 - 2026	France
Rajeeva Karandikar	CEIC Member	2019 - 2026	India
Takashi Kumagai	CEIC Member	2023 - 2026	Japan
Ingrid Rewitzky	CEIC Member	2021 - 2024	South Africa
Peter Taylor	CEIC Member	2023 - 2026	Australia

Committee for Women in Mathematics (CWM) 2023 – 2026

Carolina Araujo	CWM Chair	Brazil
Hélène Barcelo	CWM Vice-Chair	USA
U.K. Anandavardhanan	CWM Member-at-Large	India
Tony Ezome	CWM Member-at-Large	Gabon
Catherine Greenhill	CWM Member-at-Large	Australia
Motoko Kotani	CWM Member-at-Large	Japan
Matilde Lalín	CWM Member-at-Large	Canada
Selma Negzaoui	CWM Member-at-Large	Tunisia
Ekin Ozman	CWM Member-at-Large	Turkey
Carola-Bibiane Schönlieb	CWM Member-at-Large	UK

Persons representing IMU in various organizations

Body	Representative /	Term
	liaison	
Committee on Data of the ISC (CODATA)	Ilka Agricola	2023 - 2026
Consultative Committee for Units (CCU)	Helge Holden	2023 - 2026
COSPAR, International Scientific Union Representative	Nalini Joshi	2023 - 2026
Gruber Foundation, Cosmology Prize, Selection Advisory Board	Hans Ringström	2021 - 2023
ISC	Nalini Joshi	2023 - 2026
UNESCO	M. Moustapha Fall	2023 - 2026
Ramanujan Prize	Tatiana Toro	2023 - 2026
ICMI (IMU EC liaison)	Paolo Piccione	2023 - 2026
CDC (IMU EC liaison)	Tamar Ziegler	2023 - 2026
ICHM (IMU EC liaison)	Tatiana Toro	2023 - 2026
CEIC (IMU EC liaison)	Ulrike Tillmann	2023 - 2026
CWM (IMU EC liaison)	Hiraku Nakajima	2023 - 2026
IMU News Editor	Yoshiharu Kohayakawa	2021 - 2024
IMU News EC correspondent	JongHae Keum	2023 - 2026
IDM (IMU EC liaison)	Günter M. Ziegler	2023 - 2026
Committee on Diversity (IMU EC liaison)	Tatiana Toro	2023 - 2026
Curator of the IMU Archive	June Barrow-Green	2021 - 2024

1.3. Members of the Union

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

The following countries were Members of IMU through December 2023:

*Associate Member

The following organizations are Affiliate Members of IMU:

African Mathematical Union (AMU)

European Mathematical Society (EMS)

Mathematical Council of the Americas (MCofA)

South East Asian Mathematical Society (SEAMS)

Unión Matemática de América Latina y el Caribe (UMALCA)

2. Financial Information

2.1. Approved IMU Membership Dues

For the Period 2023-2026

At the IMU General Assembly meeting 2022 in Helsinki, Finland, the delegates decided on the dues structure for the years 2023-2026, see schedule below. Associate and Affiliate IMU members do not pay dues.

Approved membership dues 2023 – 2026 All amounts in EUR				
Year	<u>2023</u>	<u>2024</u>	2025	<u>2026</u>
Group I	1,460	1,460	1,460	1,460
Group II	2,920	2,920	2,920	2,920
Group III	5,840	5,840	5,840	5,840
Group IV	11,680	11,680	11,680	11,680
Group V	17,520	17,520	17,520	17,520

2.2. Approved IMU Budget

For the Period 2023–2026

	International Mathematical Union												
Proposed new Budget for 2023-2026, in Euro (EUR)													
		-	2023			2024	•		2025			2026	
	% of General Income	General	Special	Curran.	Conoral	Consid	Cum	Conoral	Coosial	C.um	General	Consid	Cum
INCOME	income	General	Special	Sum	General	Special	Sum	General	Special	Sum	General	Special	Sum
I. General													
I. a Membership Dues		449,680			449,680			449,680			449,680		
Sum General Income		449,680			449,680			449,680			449,680		
II. Special					.								
II.a Special Development Fund			5,000			5,000			5,000			5,000	
II.b Donations			60,000			60,000			60,000			60,000	
II.c Grants			70,000 135,000			70,000			70,000			70,000	
Sum Special Income from Third Parties Income from IMU bank accounts	;		135,000			135,000 100			135,000 100			135,000 100	
Other Income			25,000			25,000			25,000			25,000	
Sum Special Income from Other Sources			25,100			25,000			25,100			25,100	
TOTAL INCOME		449,680	160,100	<u>609,780</u>	449,680	160,100	609,780	449,680	160,100	609,780	449,680	160,100	<u>609,78</u>
EXPENDITURE													
1. Commissions & Committees (C&C)	<u>45.0%</u>												
1.1 CDC	20.0%	89,936			89,936			89,936			89,936		
1.2 ICMI	15.0%	67,452			67,452			67,452			67,452		
1.3 CWM	5.0%	22,484			22,484			22,484			22,484		
1.4 CEIC	4.0%	17,987			17,987			17,987			17,987		
1.5 ICHM	0.0%	0 4,497			0 4,497			0			0 4,497		
1.6 Ad hoc committees 1.7 Special support	0.0%	4,497			4,497			4,497			4,497		
C&C Expenditure		202,356	0	202,356		0	202,356		0	202,356	202,356	0	202,35
		202,000		202,000	202,000	Ŭ	202/000	202,000	, v	202,000	202,000		202/00
2. ICM	22.0%												
2.1 Site Committee	1.0%	4,497			4,497			4,497			4,497		
2.2 Program Committee	2.0%	8,994			8,994			8,994			8,994		
2.3 Prize Committees	2.0%	8,994			8,994			8,994			8,994		
2.4 Congress Subvention	5.0%	22,484			22,484			22,484			22,484		
2.5 Travel Grants (Young & Senior)	7.0%	31,478			31,478			31,478			31,478		
2.6 ICM related admin., outreach	5.0%	22,484			22,484			22,484			22,484		
ICM Expenditure		98,930	0	<u>98,930</u>	98,930	0	<u>98,930</u>	98,930	0	<u>98,930</u>	98,930	0	<u>98,93</u>
3. Union Administration	20.0%												
3.1 General Assembly	1.0%	4,497			4,497			4,497			4,497		
3.2 President & Secretary	9.0%	40,471			40,471			40,471			40,471		
3.3 Executive Committee	6.0%	26,981			26,981			26,981			26,981		
3.4 Office	3.0%	13,490			13,490			13,490			13,490		
3.5 Other	1.0%	4,497			4,497			4,497			4,497		
Union Administration Expenditure	1	89,936	0	89,936	89,936	0	<u>89,936</u>	89,936	0	<u>89,936</u>	89,936	0	89,93
4. Outreach	<u>6.0%</u>	0.001			8.001			8.001			8.001		
4.1 ICSU Union Member Contribution 4.2 Awards	2.0%	8,994 4,497			8,994 4,497			8,994 4,497			8,994 4,497		
4.2 Awards 4.3 Website Support, Media Relations	2.0%	4,497 8,994			8,994			4,497 8,994			8,994		
4.5 Website Support, Media Relations 4.4 Bulletin	0.0%	0,554			0,554			0,554			0,554		
4.5 Other	1.0%	4,497			4,497			4,497			4,497		
4.6 Scientific activity support	0.0%	0			0			0			0		
Outreach Expenditure		26,981	0	26,981	26,981	0	26,981	26,981	0	26,981	26,981	0	26,98
5. Overhead	<u>7.0%</u>												
5.1 Office Expenses	1.0%	4,497			4,497			4,497			4,497		
5.2 Bank Charges	1.0%	4,497			4,497			4,497			4,497		
5.3 Legal Advice, Audit Fees 5.4 Other	2.0%	8,994 13,490			8,994 13,490			8,994 13,490			8,994 13,490		
0verhead Expenditure		31,490	0	<u>31,478</u>		0	<u>31,478</u>			<u>31,478</u>		0	31,47
TOTAL EXPENDITURE				449,680			449,680			449,680			449,68
INCOME LESS EXPENSES				160,100			160,100			160,100			160,10

2.3. Independent Auditor's Report

Audit Report

Annual Financial Statements as at 31 December 2023

International Mathematical Union Berlin

Forvis Mazars GmbH & Co. KG Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft

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

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General Engagement Terms

A. AUDIT ENGAGEMENT

We were engaged by the Secretary General of the

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

to audit and report on the annual financial statements for the reporting year ending 31 December 2023.

Mazars GmbH & Co. KG Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft was rebranded as Forvis Mazars GmbH & Co. KG Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft on 1 June 2024. The legal identity was not affected by the change of name.

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 2023 together with the accounting system 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 E. 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 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 46 of the IMU Statutes, the Executive Committee must have the annual accounts audited at least once every four years and present this audit report to the General Assembly, which takes place every four years. 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 expenditures. According to the size definitions of § 267a German Commercial Code (HGB), the IMU would be classified as a micro entity. However, the audit was performed in conformity with the accounting regulations applicable to small entities.

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This report was prepared by us in accordance with the auditing standards of the *Institut der Wirtschaftsprüfer in Deutschland e.V.* IDW PS 450 n.v. "Generally Accepted Standards for the Presentation of Long-form Audit Reports for the Audit of Financial Statements" (10.2021).

The performance of our engagement and our responsibility, also towards any third parties, are governed by the general engagement terms for German public auditors and public audit firms as amended on 1 January 2024, attached as an appendix. Accordingly, our liability is limited in accordance with No. 9 of the general engagement terms. Towards third parties, No. 1 (2) and No. 9 of the general engagement terms apply.

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

B. CERTIFICATION OF THE ANNUAL FINANCIAL STATEMENTS

We issue the following unqualified opinion on the financial statements as of 31 December 2023 of International Mathematical Uni-on, Berlin, in the version attached to this report as Appendices 1 and 2:

Independent Auditor's Report

International Mathematical Union, Berlin

We have audited the annual financial statements, comprising the statements of assets and liabilities and the statement of income and expenditures, together with the bookkeeping system, of the International Mathematical Union, Berlin, for the business year from 1 January 2023 to 31 December 2023. The accounting records and the preparation of the annual financial statements in accordance with German legal requirements are the responsibility of the Association's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the IDW Auditing Standard: Audits of Public Limited Companies (IDW PS 750). Those standards require that we plan and perform the audit such that misstatements resulting from fraud or error which have a material effect on the presentation of the annual financial statements are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Association and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the books and records and the annual financial statements are examined primarily on a test basis within the framework of the audit. The audit includes assessing the accounting principles used and significant estimates made by the Board of Directors, as well as evaluating the overall annual financial statements presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the accounting records, the statements of assets and liabilities and the statement of income and expenditures of the Association comply with generally accepted accounting principles and the legal requirements of an association.

C. 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 the statement of income and expenditures) together with the bookkeeping system, prepared in accordance with German accounting principles.

We point out, that the bookkeeping and the preparation of the annual financial statements are the responsibilities of the IMU's Treasurer.

In preparing the annual financial statements, the legal representatives are responsible for assessing the IMU's ability to continue functioning as an association. Furthermore, they are responsible for disclosing, matters related to the association's ability to continue as a going concern. In addition, they are responsible for preparing the financial statements on the basis of the going concern principle, unless factual or legal circumstances prevent this.

Our responsibility is to provide an opinion on the annual financial statements including 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 for Applied Analysis and Stochastics (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 expenditures.

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.

In accordance with § 317 (4a) HGB the audit does not extend to whether the ability of the International Mathematical Union to continue as a going concern or the effectiveness and efficiency of its management board can be assured.

II. Nature and scope of the audit

Our audit was conducted in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer in Deutschland e.V. (IDW), in particular IDW PS 750 "Audit of Associations".

Those standards require that we plan and perform the audit such that misstatements resulting from fraud or error which have a material effect on 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 includes assessing the accounting principles used and significant estimates made by the Board of Directors, as well as evaluating the overall presentation of the annual financial statements.

The starting point was the previous year's financial statements as at 31 December 2022, which were audited by us and issued with an unqualified certificate. The adoption of the annual financial statements is not provided for in the Articles of Association. Instead, a budget for the following four-year period is prepared on the basis of every fourth annual financial statement. The budget for the period 1 January 2023 to 31 December 2026 was adopted at the 19th General Assembly in Helsinki, Finland, on 3 July and 4 July 2022.

Based on the risks of error identified and assessed by us, we have prepared a risk profile for the disclosures in the annual financial statements. For this purpose, we performed risk assessment procedures to obtain an understanding of the Association and its economic and legal environment and, based on this, assessed the Association's objectives and strategies and their implementation in order to determine the business risks that could lead to material misstatements in the financial reporting.

We used our professional judgment to obtain an understanding of the design of the internal control system and assessed the measures taken by the Association, in particular to ensure the propriety and reliability of the financial reporting, to manage these business risks without, however, performing a detailed systems analysis.

We examined the complete and timely recording of business transactions on a sample basis and satisfied ourselves that the dual control principle was implemented as the main instrument of the internal control system.

For this audit engagement, we did not obtain balance confirmations for debtors, as they are exclusively members of the Association.

We performed the audit with interruptions in the period from April to June 2024.

The Executive Board provided us with all the information and evidence requested. As the legal representative, it has assured us in writing in its declaration of completeness that the disclosures and evidence provided are complete. It has also declared that all business transactions have been recorded and reflected in the annual financial statements.

D. FINDINGS ON AND EXPLANATIONS OF THE ACCOUNTING

I. Compliance of the financial reporting

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 2023 to 31 December 2023 have been properly derived from the accounting records and the underlying documents of the Union in all material respects. These annual financial statements have been prepared correctly in all material respects in analogous application of the provisions of the third book of the German Commercial Code (§§ 238 et seq.), taking into account the supplementary provisions for corporations in the second section (§§ 264 et seq.).

The opening balance sheet values were duly adopted from the previous year's financial statements. The statutory provisions on recognition, disclosure and measurement were observed in all material respects.

The association is not legally obliged to prepare notes to the annual financial statements. The IMU has permissibly waived the preparation of such notes.

3. Management report

The association is not legally obliged to prepare a management report. The IMU has permissibly waived this requirement.

The IMU reports annually to its members in the form of an annual report (Bulletin of the International Mathematical Union). The current Bulletin is No. 74 from December 2022. Printed copies are made available to the member countries. The electronic document is available for download on the IMU website (http://www.mathunion.org/membership/imu-bulletins).

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The content of this bulletin is in particular the presentation of IMU activities to promote mathematics in the world and the proper use of membership fees and donations.

According to information provided by the legal representatives and the results of our audit, there were no events of particular significance that occurred after the end of the financial year.

II. Overall presentation of the annual financial statements

1. Findings on the overall statements

On the basis of the audit we performed by executing our professional duties, the annual financial statements correspond in all material respects to the statutory regulations. Because the Association is not required to prepare notes, the annual financial statements do not satisfy the general standard in accordance with § 264 (2) HGB.

2. Assessment basis

The exercise of accounting and valuation options and the assumptions and exercise of discretionary powers correspond to the previous year and do not reveal any trends with a significant impact on the net assets, financial position and results of operations of the annual financial statements.

Foreign currency receivables and liabilities are recognized in the accounts in euros at the exchange rate at the time they arise. If necessary, they are valued at the lower (for receivables) or higher (for liabilities) exchange rate on the balance sheet date.

E. OTHER CLASSIFICATIONS AND EXPLANATIONS OF THE ANNUAL FINANCIAL STATEMENTS

I. Results of operations

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

	202	3	202	22	impact
	k€	%	k€	%	k€
Revenues	589	100.0	576	100.0	13
Expenses for scientific promotion and scientific activities	-265	-45.0	-247	-42.9	-18
Expenses for administrative tasks	-100	-17.0	-63	-10.9	-37
Expenses	-365	-62.0	-310	-53.8	-55
Operating result	224	38.0	266	46.2	-42
Interest result	7	1.2	0	0.0	7
Total result before income taxes	231	39.2	266	46.2	-35
Income taxes	0	0.0	0	0.0	0
Annual surplus (previous year: annual deficit)	231	39.2	266	46.2	-35
Withdrawal/Allocation from/to reserves (net)	-231	-39.2	-266	-46.2	35
Fund transfer	0	0.0	0	0.0	0

In the financial year, the IMU generated revenues of $k \in 589$, which mainly consists of membership fees. In addition, the IMU receives further donations, which generally come from scientific organizations.

Revenues are composed of the following:

	k€
Member contributions	451
Donations - international	130
Other income	8
	<u>589</u>

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

Donations - international are composed of the following:

	k€
FIMU – IMU breakout Fellowship	83
Niels Henrik Abel Board, Norwegen	30
Others	17
	<u>130</u>

Other income ($k \in 8$) largely involves profits from currency rate fluctuations ($k \in 6$).

Expenses of $k \in 365$ (prior year: $k \in 985$) are shown in detail in the statement of income and expenditures (Appendix 2) as well as in the Budget Comparison (Appendix 4).

While **general administrative expenses** increased by $k \in 33$ in the reporting year, **expenses** for scientific promotion and scientific activities decreased significantly by $k \in 653$. This was due in particular to the high expenses incurred in the previous year for holding the IMU General Assembly, including travel expenses, and for the International Congress of Mathematicians (ICM). The increase in administrative expenses is due to exchange rate losses on currency accounts and the value adjustments on receivables from outstanding membership fees.

In order to assess the financial situation and changes in it, the statements of assets and liabilities for the last two financial years are compared in summarized form:

ASSETS	per 31 De	c 2023	per 31.1	2.2022	change
	k€	%	k€	%	k€
Current Assets					
Receivables and other assets					
Receivables from member contributions	94	3.7	92	3.9	2
Other assets (incl. prepaid expenses and deferred charges)	1	0.0	1	0.0	0
liquid funds	2,421	96.2	2,274	96.1	147
	2,516	100.0	2,367	100.0	149
LIABILITIES					
equity capital	2,199	87.4	1,968	83.1	231
debt capital					
provisions	72	2.9	72	3.0	0
Liabilities from earmarked grants	165	6.6	257	10.9	-92
Other liabilities (incl. deferred income)	80	3.2	70	3.0	10
	317	12.7	399	16.9	-82
	2,516	100.0	2,367	100.0	149

country	year	VA	amount in €
Algeria	2023	*	1,460.00
Argentinia	2023		5,840.00
Armenia	2023		1,460.00
Belgium	2023		5,840.00
Cuba	2023		1,460.00
India	2023		11,680.00
Ivory Coast	2023		1,460.00
Kazakhstan	2023		30.00
Kenya	2023	*	1,460.00
Kyrgyzstan	2023	*	1,460.00
Latvia	2023		1,460.00
Malaysia	2023		1,460.00
Montenegro	2023	*	1,460.00
Могоссо	2023		1,460.00
Peru	2023	*	1,460.00
Russia	2023		17,520.00
Saudi Arabia	2023		1,460.00
Senegal	2023	*	1,460.00
Venezuela	2023		1,460.00
			61,350.00
Quite.	0000		4 400 00
Cuba	2022		1,430.00
Egypt	2022	.	2,860.00
Kenya	2022	*	1,430.00
Kyrgyzstan	2022	^	1,430.00
Montenegro	2022		1,430.00
Nigeria	2022	*	1,430.00
Peru	2022	^	1,430.00
Russia	2022		17,160.00
Saudi Arabia	2022		1,430.00
Senegal	2022	*	1,430.00
Tunisia	2022		1,430.00
			32,890.00
Algeria	2021	*	1,430.00
Indonesia	2021	*	1,430.00
Iran	2021	*	11,440.00
Kenya	2021	*	1,430.00
Kyrgyzstan	2021	*	1,430.00
Montenegro	2021	*	1,430.00
Peru	2021	*	1,430.00
Senegal	2021	*	1,430.00
Tunisia	2021	*	35.00
Venezuela	2021	*	409.99
	-		21,894.99
transfer:			116,134.99

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

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country	year	IVA	amount
			€
transfer:			116,134.99
Algeria	2020	*	1,430.00
Iran	2020		7,848.23
Kenya	2020	*	1,402.62
Kyrgyzstan	2020	*	1,430.00
Montenegro	2020		126.44
Peru	2020	*	1,430.00
Senegal	2020	*	1,430.00
			15,097.29
Kyrgyzstan	2019	*	1,430.00
Peru	2019	*	388.87
			1,818.87
Kyrgyzstan	2018	*	581.25
			581.25
total reveivables			133,632.40
IVA 50 % (marked with *)			-39,626.39
			94,006.01

At the end of 2023 the outstanding member contributions were $k \in 134$. Contributions of the reporting year in the amount of $k \in 81$ were still 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%.

Liquid funds, 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)		935,204.51
Account in CHF (5113915 01)	CHF 74,183.44	79,856.20
Account in USD (5113915 00)	USD 272,997.88	247,323.00
Account in USD (5113915 06)	USD 327,915.54	297,191.30
Account in € (5113915 00)		421,673.06
Account in € (5113915 05)		250,836.81
Account in € (5113915 04)		141,080.48
Account in € (5113915 11)		47,778.56
Cash in €		563.35
		2,421,507.27

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

Equity capital at the period-end date is composed of the following:

	k€	k€
Association net assets		307
Reserves		
- Annual surplus 2007 - 2022	1,256	
- Annual surplus 2023	232	
- ICMI and CDC (Commission Fund)	404	<u>1,892</u>
		<u>2,199</u>

The Statutes do not make reference to association net assets.

Of the equity capital of the Association, € 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 General 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€
Fields-Medal 2026	
General Assembly 2026	60
ICM subsidy	44
Support Program/Structure Committee	15
ICM travel grants	112
ICM-Outreach	50
ICMI and CDC 2022	410
ICM default reserve	450
Support CEIC	36
Support CWM	33
Support CDC DC	20
Outreach (IDM 2024 / 100 years IMU)	8
Digitalisation	78
Co-financing and support of international projects	50
Digital Infrastructure	22
Unrestricted reserves	474
	<u>1,892</u>

Disclosed under <u>ICMI und CDC</u> (Commission Fund) are funds which 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 \in 193,144.92 and for CDC to \in 216,760.21.

Provisions involve expenses for the proceedings of the International Congress of Mathematicians (ICM Proceedings 2022) ($k \in 55$), the audit of the annual accounts and the preparation of the 2023 tax declarations ($k \in 10$) as well as the IDM contributions for 2023 ($k \in 7$).

The main Liabilities from restricted donations developed as follows:

	€	€
Special Development Fund		
Per 1 Jan 2023		0,00
London Mathematical Society (USD 5.000)		4,688.23
Per 31 Dec 2023		4,688.23
Simons Foundation Africa Fund		
Per 1 Jan 2023		48,266.49
Travel Fellowship for 16 mathematicians		-46,637.77
Per 31 Dec 2023		1,628.72
Commemorative publication 100 Years IMU		
Per 1 Jan 2023		44,017.01
Expenditure		-231.80
Per 31 Dec 2023		43,785.21
Simons Foundation IDM 2022-2026		
Per 1 Jan 2023		1,424.72
Inflow for IDM 2022		14,158.95
Expenditures for IDM measures		-28,406.68
Per 31 Dec 2023		0.00
Graduate Assistantships in Developing Countries Program		
Per 1 Jan 2023		51,679.02
Expenditures GRAID		-51,679.02
Per 31 Dec 2023		0.00
IMU Reserve Fund		
Per 1 Jan 2023		56,922.67
Inflow Czech MS for IMU Reserve Fund		1,945.00
Inflow Simons Foundation (30.000)		28,317.91
Expenditures for pending IMU-Member contributions		-14,300.00
Per 31 Dec 2023		72,885.58

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 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 funds received from the **Klaus Tschira Stiftung** (KTS) are designated for financing a commemorative publication on occasion of the 100th anniversary of the founding of the International Mathematical Union. The commemorative publication was published as the book 'Framing Global Mathematics' in 2022.

The **Simons Foundation** will provide TUSD 15 annually for the International Day of Mathematicians (IDM) for the period from 2022 to 2026.

The **Graduate Assistantships in Developing Countries Program** (GRAID) supports newly developing research groups in developing countries. With the support of GRAID, research groups can finance the studies (Masters or PhD) of their most gifted students. GRAID is financed by donations of mathematicians and mathematical associations from all over the world.

The **IMU Reserve Fund** was established in 2022, to support member organisations that fall behind with their member contributions due to temporary extreme and adverse circumstances. In the reporting year, at the request of three member countries, funds from the reserve fund were used to settle the outstanding membership fees of the applicants. The funding will be provided through dedicated contributions. Applications for assistance will be reviewed by the IMU Executive Committee and decided on a case-by-case basis. The Executive Committee will report on this principle at IMU's next General Assembly.

The **Special Support CDC** includes k€ 41, unchanged from the previous year, for IMU's commission CDC from the agreement with the Det Norske Videnskaps-Akademi (initially until 2025) to support programs in developing countries, primarily conferences (Conference Support Program) and guest lectures by international lecturers (Volunteer Lecturer Program).

Other liabilities largely involve the bank balance held for the International Commission for History in Mathematics (ICHM) in the amount of $k \in 48$ as well as the managed bank balances for the Standing Committee for Gender Equality in Science (SCGES) in the amount of $k \in 12$ and funds to be further transferred in conjunction with the Project Gender Gap in Mathematical and Natural Sciences in the amount of $k \in 4$.

II. 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 $k \in 147$ and corresponds to the change in cash between 1 January 2023 ($k \in 2,274$) and 31 December 2023 ($k \in 2,421$).

Forvis Mazars GmbH & Co. KG International Mathematical Union | Audit Report Annual Financial Statements as at 31 December 2023

F. FINAL REMARKS

Publication or reproduction of the annual financial statements of the International Mathematical Union, Berlin, for the financial year from 1 January 2023 to 31 December 2023 in a form different from the certified form, which is attached as an Appendix to this report, again requires our consent if our attestation is quoted or if reference is made to our audit. We herein refer to § 328 HGB.

Berlin, 8 July 2024

Forvis Mazars GmbH & Co. KG Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft

In the original German version signed by:

Ralf Bierent Wirtschaftsprüfer Jacqueline Kotynski Wirtschaftsprüfer

ASSETS	per 31 Dec 2023	2022	LIABILITIE S	per 31 Dec 2023	: 2023	Prior year
	Э Э	ę		ŧ	e	e
A. Current Assets			A. Net Assets			
I. Receivables and other			 Association net assets 	307,465.98		307,465.98
assets			II. Reserves	1,891,697.72		1,660,300.66
Receivables from member contributions	94,006.01	91,466.91		7	,199,163.70	2,199,163.70 1,967,766.64
	94,006.01	.01 01,400.31	B. Provisions		72,411.07	72,256.07
ll. Cash-in-hand, bank balances*	2,421,507	2,421,507.27 2,274,429.42 C. Liabilities	C. Liabilities			010 010 70
B. Prepaid Expenses	1,014.00		1. Liabilities from resultied donauons 1.014.00 2. Other liabilities	72,977.90		64,227.84
					237,652.51	321,047.62
			D. Deferred Income		7,300.00	5,840.00
Total Assets	2,516,527.	2,516,527.28 2,366,910.33	Total Liabilities	2	2,516,527.28	2,366,910.33

STATEMENT OF A SSETS AND LIABILITIE S as at 31 December 2023

* contained therein ICMI € 250,836.81 and CDC € 141,080.48

STATEMENT OF INCOME AND EXPENDITURES for 2023

Prior year

	€	€	€	€
Revenues			589,328.12	820,317.05
Member contributions	450,896.60			439,367.46
Donations - international	130,047.27			331,345.60
Other income	8,384.25			49,603.99
Expenses for Scientific Promotion and Scientific Activities		-265,212.82		-918,453.43
Promotion of scientific activities	-243,570.17			-430,543.96
Expenditures ICM and GA	-13,150.14			-368,439.88
Travel expenses	-500.00			-74,371.71
Award ceremonies	-7,992.51			-25,740.64
Other				-19,357.24
Administrative expenses		-99,517.78		-67,058.96
Reimbursement personnel expenses	-4,168.98			-25,255.09
Travel expenses	-48,082.73			-16,924.40
Audit fees	-10,270.00			-10,115.00
Member contributions	-4,411.00			-4,305.00
Postage	-416.10			-438.20
Bank fees	-695.85			-4,385.66
Other	-31,473.12			-5,635.61
Other Expenditures			-364,730.60	-985,512.39
Interest and Similar Income			6,799.54	92.92
Interim Result			231,397.06	-165,102.42
Other Taxes			0.00	0.00
Annual Surplus			231,397.06	-165,102.42
Withdrawals from Reserves			20,022.30	186,375.40
Allocation to Reserves			251,419.36	-21,272.98
Unallocated Cash Balance			0.00	0.00

Country	amount EUR
Algeria	1,460.00
Argentina	5,840.00
Armenia	1,460.00
Australia	11,680.00
Austria	2,920.00
Belgium	5,840.00
Belarus	1,460.00
Bosnia & Herzegovina	1,460.00
Brazil	17,520.00
Bulgaria	1,460.00
Cameroon	1,460.00
Canada	17,520.00
Chile	5,840.00
China	10,512.00
Colombia	1,460.00
Croatia	1,460.00
Cuba	1,460.00
Cyprus	1,460.00
Czech Republic	5,840.00
Denmark	5,840.00
Ecuador	1,460.00
Egypt	2,920.00
Estonia	1,460.00
Finland	5,840.00
France	17,520.00
Georgia	1,460.00
Germany	17,520.00
Greece	1,460.00
Hong Kong	1,460.00
Hungary	5,840.00
Iceland	1,460.00
India	11,680.00
Indonesia	2,920.00
Iran	11,680.00
Ireland	2,920.00
Israel	17,520.00
Italy	17,520.00
Ivory Coast	1,460.00
Japan	17,520.00
Kazakhstan	1,460.00
Kenya	1,460.00
Korea, Republic of	17,520.00

Schedule of Member Contributions 2023

Kyrgyzstan Latvia Lithuania Luxembourg Malaysia Mexico Mongolia	1,460.00 1,460.00 1,460.00 5,840.00
Latvia Lithuania Luxembourg Malaysia Mexico Mongolia	1,460.00 1,460.00 5,840.00
Luxembourg Malaysia Mexico Mongolia	1,460.00 5,840.00
Luxembourg Malaysia Mexico Mongolia	1,460.00 1,460.00 5,840.00
Mexico Mongolia	5,840.00
Mexico Mongolia	
	1,216.60
Montenegro	1,460.00
Morocco	1,460.00
Netherlands	11,680.00
New Zealand	1,460.00
Nigeria	1,460.00
Norway	5,840.00
Öman	1,460.00
Pakistan	1,460.00
Peru	1,460.00
Philippines	1,460.00
Poland	11,680.00
Portugal	5,840.00
Romania	1,460.00
Russia	17,520.00
Saudi Arabia	1,460.00
Senegal	1,460.00
Serbia	1,460.00
Singapore	1,460.00
Slovakia	2,920.00
Slovenia	1,460.00
South Africa	2,920.00
Spain	11,680.00
Sweden	11,680.00
Switzerland	11,680.00
Taiwan	7,008.00
Thailand	1,460.00
Tunisia	1,460.00
Turkey	2,920.00
Ukraine	2,920.00
United Kingdom	17,520.00
Uruguay	1,460.00
USA	17,520.00
Venezuela	1,460.00
Vietnam	1,460.00
Uzbekistan	1,460.00
Ozbenialali	1,400.00

Schedule of Member Contributions 2023

Appendix 4

INTERNATIONAL MATHEMATICAL UNION

Budget Comparison 2023

	% of	B	udget 2023			Actual 2023	
	General		EUR			EUR	
	Income	General	Special	Sum	General	Special	Sum
INCOME							
I. General							
I.a Membership Dues		450,897			450,897		
Sum General Income		450,897			450,897		
II. Special							
II.a Special Development Fund			4,500			6,633	
II.b Donations			46,500			31,768	
II.c Grants			33,200			140,756	
Sum Special Income from Third Parties			84,200			179,157	
II.d Income from IMU bank accounts			1,000			6,800	
II.e Other Income			25,000			8,384	
Sum Special Income from Other Sources TOTAL INCOME		450,897	26,000 110,200	561,097	450,897	15,184 194,341	645,2
TOTAL INCOME		450,051	110,200	301/031	450,057	194,941	040,2
EXPENDITURE	45.000						
1. Commissions & Committees (C&C)	45.00%	0.0 1.00	33 39.7		00.170		
1.1 CDC	20.00%	90,179	37,700	<u>127,879</u>	90,179	66,815	
1.2 ICMI	15.00%	67,635			41,569		
1.3 CWM	5.00%	22,545			16,836		
1.4 CEIC	4.00%	18,036	4.500		527		
1.5 Ad Hoc Committees	1.00%	4,509	4,500	<u>9,009</u>		27.645	
1.6 Special Support	0.00%	0	42,000	42,000		27,645	
1.7 KHM	0.00%	0	04.200	207.104	140 111	04 450	242.6
C&C Expenditure		202,904	84,200	287,104	149,111	94,459	243,5
2. ICM	2.204						
2.1 Site Committee	22%	4 500					
	1%	4,509			12.150		
2.2 Program Committee 2.3 Prize Committees	2%	9,018 9,018			13,150		
2.4 Congress Subvention	2%	22,545					
2.5 Travel Grants (Young & Senior)	7%	31,563	4,500	36.063	500		
2.6 KM related admin., outreach	5%	22,545	4,500	36,063	500		
CM Expenditure		99,197	4,500	103,697	13,650	0	13,6
icin experiorare		33,231	4,500	203/031	13,050	0	10,0
3. Union Administration	20%						
3.1 General Assembly	1%	4,509	4,500	9,009			
3.2 President & Secretary	9%	40,581	1,000	2002	18,948		
3.3 Executive Committee	6%	27,054			24,332		
3.4 Office	3%	13,527			21,502		
3.5 Other	1%	4,509			4,803		
Union Administration Expenditure		90,179	4,500	94,679	48,083	0	48,0
		10,213	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1,012			
4. Outreach	6%						
4.1 ISC	2%	9,018			4,411		
4.2 Awards	1%	4,509					
4.3 Website Support, Media Relations	2%	9,018	4,500	13,518	7,993		
4.4 Other	1%	4,509	4,500	9,009			
4.5 Scientific Activity Support	0%	0					
Outreach Expenditure		27,054	9,000	36,054	12,404	0	12,4
5. Overhead	7%						
5.1 Office Expenses	1%	4,509	4,500	9,009	4,509	2,036	
5.2 Bank Charges	1%	4,509	1,000	5,509	696		
5.3 Legal Advice, Audit Fees	2%	9,018	1,500	<u>10,518</u>	9,018	1,252	
	3%	13,527	1,000	14,527	13,527	15,986	
5.4 Other Overhead Expenditure	376					19,274	47,0

Appendix 4/cont'd

TOTAL EXPENDITURE	561,097		364,731
Transfer to liabilities from donations not yet spent			
Interim Result	<u>0</u>		231,397
Draw from Reserves	0		0
Return to Reserves	0		0
Result	<u>0</u>	EUR	231,397

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 last amended in July 2022 by a resolution of the 19th General assembly in Helsinki/Finland. The changes included, among other things, the introduction of a new Article 3 (General Principle of the International Science Council) and the consequent shifting of all other articles in the numeration by one digit . 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 net assets, Members

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

According to Article 4 (according to the new numeration), 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 2023, the IMU had 83 regular members (voting), two associate members (non-voting) and five affiliate members (non-contributory and non-voting).

Executive Committee, Representatives

As of 1 January 2023, the members of the Executive Committee are the following persons:

- Hiraku Nakajima, Japan (President)
- Christoph Sorger, France (Secretary General)
- Ulrike Tillmann, UK (Vice-President)
- Tatiana Toro, USA/Colombia (Vice-President)
- Mouhamed Moustapha Fall, Senegal (Member-at-Large)
- Nalini Joshi, Australia (Member-at-Large)
- JongHae Keum, Korea/Republic of (Member-at-Large)
- Paolo Piccione, Brazil (Member-at-Large)

- Günter M. Ziegler, Germany (Member-at-Large)
- Tamar Ziegler, Israel (Member-at-Large)
- Carlos E. Kenig, USA (Member of the Executive Committee ex-officio because he was the President of the IMU in the preceding term of office)

Reporting Year

The reporting year corresponds to the calendar year.

The Bulletins are made available to members via the homepage www.mathunion.org. All members are informed about each new publication via e-mail. A printed version of the Bulletin will be produced and sent upon individual request.

General Assembly

The following was resolved during the last General Assembly in Helsinki/Finland in July 2022:

- Adoption of the annual financial statements of 2018 to 2021 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 2018 to 2021.

Budget for the time between 2023 and 2026.

Increase in member contributions between 2023 and 2026 to € 1.460,00 per unit (unit contribution).

Appointments of the various committees and commissions.

Establishment of a reserve fund to support member organisations that fall behind with the member contributions due to temporary extreme and adverse circumstances. The funding will be provided through dedicated contributions. Applications for assistance will be reviewed by the IMU Executive Committee and decided on a case-by-case basis.

The next General Assembly will take place in 2026 in New York City/USA.

2. Tax Information

The Association is registered with the Finanzamt für Körperschaften (tax office for corporations) 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 to the IMU 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 its last notice of exemption for 2018 to 2020, 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 2025. The IMU is entitled to issue donation confirmations.

[Translator's notes are in square brackets]

General Engagement Terms

for

Wirtschaftsprüferinnen, Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms]

as of January 1, 2024

1. Scope of application

(1) These engagement terms apply to contracts between German Public Auditors (Wirtschaftsprüferinnen/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 a greed in writing (Textform) or prescribed by a mandatoryrule.

(2) Third parties may derive claims from contracts between German Public Auditors and engaging parties only when this is agreed or results from mandatory rules prescribed by law. In relation to such claims, these engagement terms also apply to the se third parties. A German Public Auditor is also entitled to invoke objections (Einwendungen) and defences (Einreden) arising from the contractual relationship with the engaging party to 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 ordnung smäßiger 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 Pr
üfungen), the consideration of foreign law requires an express agreement in writing (Textform).

(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.

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 dircumstances 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 submitted as well as the explanations and statements provided in a statement as drafted by the German Public Auditor in a legally accepted written form (gesetziche Schriftform) or any other form determined by the German Public Auditor.

. 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 a legally accepted written form (gesetalishe Schriftform) or in writing (Textform) as part of the work in executing the engagement, only that presentation is authoritative. Drafts of such presentations are non-binding. Except as otherwise provided for by law or contractually agreed, oral statements and explanations by the German Public Auditor are binding only when they are confirmed in writing (Textform). 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 consent be issued in writing (Textform), 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 a bout 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 feles 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 un conscionability or impossibility of subsequent performance. No. 9 applies to the extent that further claims for damages exist.

(2) The engaging platty must assert a claim for subsequent performance (Nacherfüllung) in writing (Textform) without delay. Claims for subsequent performance 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 profession al 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: Handebgesetzbuch], § 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 draumstances confident to him or of which he becomes a ware 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, daims for damages due to negligence arising out of the contractual relationship between the

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engaging party and the German Public Auditor, 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), are limited to € 4 million pursuant to § 54 a Abs. 1 Number 2 WPO. This applies equally to claims against the German Public Auditor made by third parties arising from, or in connection with, the contractual relationshp.

(3) 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.

(4) The maximum amount under paragraph 2 relates to an individual case of damages. An individual case of damages 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 regard less 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.

(5) A claim for damages expires if a suit is not filed within six months subsequent to the written statement (Textform) of refusal of acceptance of the indemnity and the engaging party has been informed of this consequence. This does not apply to daims 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.

(6) § 323 HGB remains unaffected by the rules in paragraphs 2 to 5.

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 (Bestätigungsvermerk), 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 consent, issued in a legally accepted written form (gesetzliche Schriftform), 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 material errorshe 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 (Textform), ongoing tax advice encompasses the following work during the contract period:

- a) preparation and electronic transmission of annual tax returns, including financial statements for tax purposes in electronic format, for income tax, corporate tax and business tax, 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)
- 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 (Textform).

(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 acreed in writing (Textform).

(6) Work relating to special individual issues for income tax, corporate tax, business tax and valuation assessments for property units as well as all issues in relation to sales tax, payroli 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 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, Equidations and the Eke, and
- d) support in complying with disclosure and documentation obligations.
- (7) To the extent that the preparation of the annual sales tax return is under-

taken 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 completion of documents to daim 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 daims 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 daims. 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.

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2.4. IMU Special Development Fund

Contributions to the IMU Special Development Fund.

2023

London Mathematical Society, UK

4,688.23 EUR

2.5. Third-Party Donations (monetary contributions)

2023

American Mathematical Society, US – Breakout	17,980.76 EUR
FIMU, US – Breakout	65,146.28 EUR
FIMU, US – Volunteer Lecturer Program	9,152.48 EUR
Individual Donation, Germany – CDC	6,000.00 EUR
Mathematical Society of Japan, Japan – CDC	1,025.87 EUR
Niels Henrik Abel Board, Norway – CDC	30,230.79 EUR
Simons Foundation, US – IDM Support	14,158.96 EUR
Simons Foundation, US – Reserve Fund	28,317.91 EUR
Swiss Mathematical Society, Switzerland – CDC	511.09 EUR
Union of Czech Mathematicians & Physicists, Czech Republic – Reserve Fund	1,945.00 EUR

2.6. IMU Bank Accounts

International Mathematical Union, Hausvogteiplatz 11A, D-10117 Berlin, Germany

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

BIC (SWIFT) code: DEUTDEDB110

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

3. Commissions and Committees

3.1. International Commission on Mathematical Instruction (ICMI) https://www.mathunion.org/icmi



ACTIVITY AND FINANCIAL REPORT 2023

A brief description of the 2023 ICMI activities

Administration and Governance

The ICMI **Executive Committee** (term in office 2021-2024) held 3 online 2H meetings on April 28, May 15 and October 16, and one face-to-face meeting in Bangkok (Thailand) February 12-14, 2023.

ICMI EC Nominating Committee

The ICMI EC Nominating Committee for the ICMI EC 2025-2028 was finalized by December 31, 2022 and started working in early 2023.

ICMI General Assembly (ICMI GA) 2024

During 2023 the ICMI EC discussed the agenda of the ICMI GA in 2024. Furthermore, the ICMI Country Representatives and officers of the ICMI Affiliate Organizations were invited to preregister for the ICMI GA.

ICMI Awards

The two award committees selected in 2023 the three 2024 ICMI Awardees. During the ICMI EC meeting in 2023 it was decided that until the presentation of the awards during the ICME-15 opening ceremony in Sydney in 2024, the names of the awardees would remain confidential to the public. Of course, the ICMI President was informed of the names of the 3 awardees.

ICME-14 (2021)

ICME-14 was held in a hybrid mode (combining online with face-to-face activities) from July

11-18, 2021. In 2023 the LOC worked on the publication of the proceedings.

ICME-15 (2024)

The second meeting of the ICME-15 IPC was held in Sydney, February 6-8, 2023.

The ICMI President, Secretary-General and Administrative Manager met several times online with the Congress Convener Kim Beswick and the head of the Local Organizing Committee Will Morony to discuss various issues related to the preparation of the congress.

ICME-16 (2028)

The Site Visit Committee visited the two bidders (Praha and Bangkok) in 2023. After the site visit the ICMI EC decided in May 2023 to accept the bid for ICME-16 from the bidding committee from Praha, CZ.

ICMI Studies

The Chinese version of the ICMI Study 23 volume on Whole Numbers in the Primary Grades was published in 2023.

The ICMI Study 24 volume "School Mathematics Curriculum Reforms" was published as open access in 2023.

The final manuscript of the ICMI Study 25 volume "Teachers of Mathematics Working and Learning in Collaborative Groups" was sent to Springer for processing in January 2024.

ICMI Study 26 on Geometry was launched in 2022 by the ICMI EC. In February 2023 the first IPC meeting was held in Valencia, Spain.

A new ICMI Study 27 on Mathematics Education and the Socio-Ecological was launched in 2023 by ICMI EC.

Outreach to Developing Countries

Representatives from all five CANPs met with the ICMI EC in February 2023 in Bangkok, Thailand to discuss implications of COVID and the continuation of their activities.

Klein Project

It was decided to move the Klein Blog from the US to the IMU Server in Germany, implementation is ongoing.

AMOR (Awardees Multimedia Online Resources Project)

Development of the AMOR Project is ongoing. New sections have been added in 2023.

Detailed description of the 2023 ICMI activities

Administration and Governance

ICMI Executive Committee

The EC 2021- 2024 composition is as follows:

Position	Name	Country
President	Frederick K. S. Leung	Hong Kong SAR, China
Secretary-General	Jean-Luc Dorier	Switzerland
Vice Presidents	Merrilyn Goos	Australia
	Anjum Halai	Pakistan
Members-at-large	Marta Civil	USA
	Patricio Felmer	Chile
	Mercy Kazima	Malawi
	Núria Planas	Spain
	Susanne Prediger	Germany
Ex-officio members	Jill Adler, immediate past ICMI President	South Africa
President of IMU	Hiraku Nakajima Japan (2023- 2024)	Japan
	Carlos Kenig, 2021- 2022	USA
Secretary of IMU	Christoph Sorger, France (2023- 2024)	France
	Helge Holden, 2021- 2022	Norway
IMU Liaison Person	Paolo Piccione	Brazil

Between February 12-14, 2023, the ICMI EC met in Bangkok (Thailand). Most EC members were able to participate. The committee heard reports, discussed issues, made decisions on and established item actions (where needed) on the following: the ICMI-16 site visits and the choice of the site (Site Visit Committee members for ICME-16 (2028) were: Frederick Leung, Jean-Luc Dorier, Merrilyn Goos, Lena Koch), ICME-14 (2021), ICME-15 (2024), ICMI Studies 23, 24, 25, 26, and a possible new ICMI Study 27, the ICMI newsletter, outreach to developing countries and in particular CANP, the IMU report, the AMOR Project, ICMI Awards, ICMI Nominating Committee, the Database Project, ICMI Country Representatives and Affiliate Organizations, International Day of Mathematics, CDC and the ICMI General Assembly. The three-day EC meeting in Bangkok was followed by a two-day CANP workshop organized by Anjum Halai and Lena Koch. From each of the 5 CANP networks two representatives were invited and participated.

Additionally, three ICMI EC meetings were held online during 2023 on April 28, May 15 and October 16. They were arranged as 2-hour meetings, accommodating the different time zones in the home countries of the members.

ICMI EC Nominating Committee

The ICMI EC Nominating Committee for the ICMI EC 2025-2028 was finalized by December 31, 2022 and started working in 2023. The committee is chaired by Abraham Arcavi. By May 2024 (two months prior to the ICMI GA), the Secretary-General will send to the IMU Adhering Organizations and ICMI member representatives the ICMI Nominating Committee slate. The EC will be elected during the ICMI General Assembly on July 7, 2024 in Sydney, Australia.

ICMI General Assembly (ICMI GA) 2024

During 2023 the ICMI EC discussed the agenda of the ICMI GA in 2024 and it was decided to hold in parallel four workshops in person and two hybrid on the following topics: A) Exchange of experiences on the International Day of Mathematics B) How to establish mature mathematics education research communities? C) Exchange ideas about strategies in emerging communities D) How to support early career researchers in mathematics education?

Furthermore, the ICMI Country Representatives and officers of the ICMI Affiliate Organizations were invited to pre-register for the ICMI GA. The General Assembly will be held on July 7, 2024 in Sydney, Australia.

ICMI Thematic Affiliate Organizations and Regional Affiliate Organizations

ICMI's organizational outreach includes 8 multinational Regional Organizations and 8 International Thematic Organizations that have obtained affiliation with ICMI (<u>https://www.mathunion.org/icmi/organization/affiliate-organizations</u>). These organizations are independent and self-financed. They collaborate with ICMI on specific activities, such as the <u>ICMI Studies</u> or CANP. The Affiliate Organizations present activity reports to the <u>General Assembly of ICMI</u>.

Awards

In 2023 the ICMI Awardees were selected by the ICMI Award Committees which are led by the following chairs: Helen Forgasz, Australia (**ICMI Emma Castelnuovo Award Committee 2021-2024**) and Alan H. Schoenfeld, USA (**ICMI Felix Klein and Hans Freudenthal Awards Committee, 2021- 2024**). The awards will be presented during the ICME-15 Opening Ceremony on July 8 in Sydney, Australia. Each awardee is invited to present a lecture. During the ICMI EC meeting in February 2023 it was decided that the names of the awardees will be kept in secret and not announced until the Opening Ceremony of ICME-15). Before that, only the Committees, the ICMI President and those who will be involved in the logistics (ICME-15 LOC chair and convenor, ICMI Administrative Manager) will know the final decisions.

In 2023 the ICMI EC decided to create and produce the ICMI award medals (looking similar to the previous medals) in Germany. The process is ongoing and the medals will be finalized in May 2023 and be presented to the Awardees on July 8, 2024 in Sydney, Australia.

ICME-14 (2021)

Due to COVID-19, ICME-14, the 14th International Congress on Mathematical Education (ICME-14) originally scheduled for July 2020, was held in a hybrid mode at East China Normal University in Shanghai, China, from July 11–18, 2021. In 2023 ICMI EC kept in contact with ICME-14 Local Organizing Committee (LOC) regarding the publication of the proceedings. The proceedings will be published in early 2024.

ICME-15 (2024)

The second IPC meeting of ICME-15 was held on February 6-8, 2023, in Sydney, Australia. Main issues discussed include finalization of the program, updates on the organization of Topic Study Groups and various organizational issues. The Solidarity Fund Selection Committee started working in November 2023.

ICME-16 (2028)

Two full bids were submitted for ICME-16 (2028) by the end of 2022. The Site Visit Committee visited both locations (Praha in January 2023 and Bangkok in February 2023). After the site visit the ICMI EC decided in May 2023 to accept the bid for ICME-16 from the bidding committee from Praha, CZ chaired by Prof. Nada Vondrová (Charles University, Praha). The selection process of the IPC members for ICME-16 has started in 2023 and will be finalized in 2024.

During the ICMI EC meeting in February 2023, the ICMI EC decided to change the paragraph about the IPC meetings from "two meetings" to "at least one meeting should take place in the host country" in the agreement with the ICME host country. Holding one of the IPC meetings online is acceptable, but at least one meeting should be held in person in the host country.

ICMI Studies

The Study Volume of **ICMI Study 24 on "School Mathematics Curriculum Reforms: Challenges and Changes"** was published as open access in 2023 and can be downloaded here: <u>https://link.springer.com/book/10.1007/978-3-031-13548-4</u>

During 2023, **ICMI Study 25 on "Mathematics Teachers Working and Learning in Collaborative Groups"** was finalized and the publication of the volume as open access is expected in July 2024, before ICME-15.

ICMI Study 26 on Geometry was launched in November 2021. The aim of the study is to review the current landscape of Geometry education and how it has changed in the past decades, especially since the last ICMI Study (Study 9) on "Perspectives on the Teaching of Geometry for the 21st Century". The co-chairs are Thomas Lowrie (Australia) and Angel Gutiérrez (Spain). The first IPC meeting was held February 23-25, 2023 in Valencia (Spain) The conference is planned to be in Reims (France) – April 22-26, 2024.

ICMI hosted an online **ICMI Symposium on Mathematics Education and the Socio-Ecological** on March 20, 2023, to act as a gathering point for scholars working in what might be diverse areas, but whose concerns could be broadly grouped under "socio-ecological".

As a result of the Symposium and previous discussions, ICMI Study 27 on Socio-ecological perspectives in mathematics education was launched in September 2023. The Study will highlight three aims: 1) to gather state-of-the-art scholarship in socio-ecological mathematics education around the world and to engage in across-perspective dialogues; 2) to explore the different ways in which a theorization of the socio-ecological influences the focus and methodological approaches of mathematics education research; and 3) to provide insight into the practical implications of socio-ecological research associated with the mathematics curriculum, pedagogy, teacher preparation and education-related policies, beyond traditional approaches.

The co-chairs (Professor Kate le Roux from the University of Cape Town in South Africa and Professor Alf Coles from the University of Bristol in the United Kingdom) and IPC were selected in 2023. The IPC held their first (online) meeting on September 29, 2023. The discussion Document should be published in early 2024.

The **Chinese translation of ICMI Study 23** on "Building the foundation: Whole numbers in Primary Grades" was published in 2023. Due to the lockdown in China, the publication process had been delayed. The document can be found here: https://www.mathunion.org/fileadmin/ICMI/ICMI%20studies/ICMI%20Study%2023/ICMI%20S tudy%2023%20Chinese%20Version.pdf

Outreach to Developing Countries

Capacity and Networking Project (CANP)

The pandemic had strong implications for the five CANP regions and many CANP CEP (Continuation and Expansion Projects) activities could not be held. In order to react to those challenges, the ICMI EC invited 10 CANP leaders to a workshop in Bangkok in February 2023. During the two-day meeting, past obstacles and future plans were discussed. Based on the discussions, all 5 CANP submitted proposals to the ICMI EC for activities to be carried out between 2024 and 2026. The proposals were evaluated and approved in September 2023 and all 5 CANP networks will receive up to 4600 Euro (per CANP network) to carry out those activities.

The Klein Project

The Klein blog which was hosted for many years in the USA (by William McCallum) is currently being transferred to a blog server hosted by the IMU Secretariat. Due to some technical issues, further maintenance will be necessary in 2024.

Outreach, Dissemination of Information, Archiving and Reporting

ICMI Newsletter

The Editors are Jean-Luc Dorier, Merrilyn Goos and Lena Koch. Since 2022, four newsletters a year (March 1, June 15, September 15 and December 15) are published.

ICMI Website

The ICMI website <u>https://www.mathunion.org/icmi</u> is hosted by the IMU Secretariat and edited by Lena Koch, supported by Vanessa Chung as well as the ICMI Secretary General Jean-Luc Dorier. Occasional "bugs" are being fixed as they emerge during the use of the site. The website receives technical support from the IMU technician Frank Klöppel. In 2022 several pages of the website were updated and ICME is now more prominent on the ICMI website.

ICMI Facebook

The ICMI Facebook page was established in 2011 and has more than 7000 followers. 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

Regular articles on ICMI were published in the journal *L'Enseignement Mathématique* (historically connected to ICMI). This is under the responsibility of Jean-Luc Dorier, ICMI SG.

ICMI Column in the Newsletter of the EMS (European Mathematical Society) (now EMS Magazine)

An ICMI Column is regularly published in the education sections of the ex-Newsletter, now Magazine of the European Mathematical Society (EMS). In 2023, the editor of the education section was Jason Cooper (Israel and the ICMI Column is under the responsibility of Nùria Planas, ICMI EC member).

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. Bernard Hodgson has a regular column in the ICMI Newsletter in which he publishes interesting vignettes related to the history of ICMI. These vignettes are reproduced in *L'Enseignement Mathématique*

Reports

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

ICMI Digitization Program

ICMI 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 <u>centennial</u> of <u>L'Enseignement Mathématique</u>¹, <u>the first five ICMI Studies</u>² (and the corresponding Discussion Documents), ICMI Bulletins, proceedings of various meetings and conferences, and other relevant documents, are available for perusal and free download on the ICMI Website. Since 2022 <u>all ICME proceedings are now published on the ICMI website.³</u>

¹ https://www.unige.ch/math/EnsMath/EM-ICMI/welcome.html

² https://www.mathunion.org/icmi/digital-library/icmi-studies/icmi-study-volumes

³ https://www.mathunion.org/icmi/conferences/icme/past-icmes

ICMI is now publishing all new ICMI Studies as **open access (ICMI Studies 19, 21 and 22, 23, 24 are already available as open access)**. It was decided by the ICMI EC in 2021 to publish as many as possible past ICMI Studies as open access as well. In 2023 ICMI Administrative Manager Lena Koch and IMU Secretariat Project Assistant Vanessa Chung started to contact all authors of ICMI Study 20 and Study 18 (they all need to sign a consent form). The authors of ICMI Study 17 and 16 will be contacted in 2024. The process is very time consuming.

AMOR (Awardees Multimedia Online Resources Project)

This project, led by Jean-Luc Dorier, aims to compile a series of specially developed lectures of the ICMI awardees of the Felix Klein and Hans Freudenthal Medals. Since 2021 the project is supported by EC members at large **Núria Planas and Marta Civil**, and new units and videos were added (e.g., a unit about Terezinha Nunes). The website is accessible at: <u>https://www.mathunion.org/icmi/awards/amor</u>

Financial Summary

ICMI receives an 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 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.

ICME years are the most expensive ones since it includes funding for all the extra costs involved with the congress: travel and accommodation for invited guests, hosting a VIP dinner, etc. In addition, an ICME year includes other travel expenses (e.g., the handover meeting). The unused funds from ICME-14 due to the hybrid format of ICME (only Chinese participants could participate in Shanghai) resulted in an accumulation of the savings in 2021, but on the other hand it allowed a reallocation of some of these funds to cover other underfunded ICMI activities or new ones for the future (e.g., external reviewer for ICMI Studies, Open Access of past ICMI Studies and the CANP meeting in Bangkok).

The detailed financial report can be found in the Appendix to this report.

Conclusion

The ICMI EC would like to thank IMU and the IMU EC, the IMU Secretariat staff members and its host institution WIAS in Berlin, Germany, and all institutions who financially and administratively supported ICMI activities in 2023.

The ICMI EC would also like to highlight the work of all individuals who have been actively involved in ICMI activities. Without their support and involvement, ICMI activities and outreach events would not have been possible.

Frederick Leung, ICMI President Jean-Luc Dorier, ICMI Secretary-General Lena Koch, ICMI Administrative Manager

1 March 2024

INCOME	Actual income in 2023	2024 Budget forecast
IMU Grant (annual)	67.452,00€	67.452,00 €
return of loan ICME-15		5.000,00€
Return of funds from IMU for CANP (4)		2.000,00€
Royalties ICMI Studies	85,38 €	
ZE - Springer Nature/Editing of ICMI Study 24	1.000,00 €	
Total:	68.537,38 €	74.452,00 €
EXPENDITURE	Actual spending 2023	planned spending 2024
1. ICMI Administrative Costs		
1.1. ICMI EC meeting 2023	10.595,66 €	- €
1.2. ICMI EC Meeting 2024	6.051,54 €	8.000,00€
1.3. President and Secretary Admin Cost		- €
1.4. Travel and other costs ICMI EC Members/ICMI Officers to ICMI related activities (excluding EC meetings) e.g. regional conferences	3.364,76€	3.000,00 €
1.5. Other Administrative Cost	648,89 €	500,00 €
Total Expenditure ICMI Administrative cost including EC meetings:	20.660,85 €	11.500,00 €
2.Research and Publication		
2.1. ICMI Studies Editing language	- €	1.000,00€
2.3. Open Access ICMI Study 26	- €	18.000,00€
2.4. ICMI Study 26 IPC Meeting Support	1.000,00 €	2.000,00€
2.5. Open Access ICMI Studies (past studies)		60.000,00 €
2.6. ICMI Symposium Socioecological	1.200,00€	- €

2.7. Klein Project	- €	1.000,00€
2.8. ICMI Study 27 Support		5.000,00€
Total Expenditure Research and Publication	2.200,00 €	87.000,00 €
3. ICME and GA 2024		
3.1. ICMI GA	965,60 €	12.000,00€
3.2. Travel cost EC members (IPC meetings and other ICME activities Meeting etc.)		1.000,00€
3.3. Awardees and Chairs of ICMI Committees (awards) (travel/accommodation)	- €	2.000,00€
3.4. ICME Congress Subvention		10.000,00€
3.5. loan ICME-15		
3.6. Travel Grants for ICMI representatives and other ICMI officer e.g. CANP representatives		20.000,00€
3.7. ICME related admin and additional cost (IT, Voting System etc.)		5.000,00€
3.8. ICMI Dinner		20.000,00€
3.9. Awards and Prizes (Medal/Certificate)	3.500,00€	12.000,00€
3.10. ICMI Studies launch		1.500,00€
3.11. ICMI Booth during ICME		5.000,00€
Total Expenditure ICME and GA:	4.465,60 €	88.500,00€
4. Developing Countries		
4.1. CANP grants transfered	2.000,00€	
4.1.1. CANP 1-5 Grants not yet transferred but approved		11.000,00€
4.2. CANP 1-5 Workshop 2023	8.544,63 €	- €
4.3. new activities		
4.4. Translation CANP MALI for publication		- €

4.5. CANP Publications (Springer) and Open Access		- €	
4.6. Reimbursement of the online registration fee for ICME-14 developing countries participants	- €	35.000,00 €	
Total Expenditure Developing Countries:	10.544,63 €	46.000,00 €	
5.Outreach			
5.1. Public Relations including flyer and poster also digitally possible	- €	5.000,00€	
5.2. Website, Media, Newsletter	- €	1.000,00€	
5.3. ICMI publications			
5.4. Archive	- €	400,00€	
5.6. Amor		1000,00€	
Total Expenditure Outreach:	- €	7.400,00€	
6. Regional Conferences			
EMF ICMI Conference Support Grant	1.000,00€		
EARCOME ICMI Conference Support Grant		5.000,00€	
CIAEM ICMI Conference Support Grant	5.068,75€	- €	
others		10.000,00€	
Total Regional Conference	6.068,75€	15.000,00 €	
7. Further Costs			
7.1. Bank Charges	549,16 €	2.000,00€	
7.2. Other unforeseen cost		500,00 €	
Further Costs:	549,16 €	2.500,00 €	
Total Transfers/spending ICMI	44.488,99 €	257.900,00 €	
Opening balance sheet 1.1.2023	226.788,42 €		
Closing Balance Sheet/ Status of the ICMI bank account as of 31.12.2023	250.836,81 €		
Accruals for 2024	257.900,00 €		

Expected savings in 2024 67.388,81 €	
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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, 2023 – December 31, 2023

The CDC members in the term 2023-2026 are:

- CDC President: Andrea Solotar (Argentina)
- CDC Secretary for Policy: Ludovic Rifford (France)
- CDC Secretary for Grants: Jose Maria P. Balmaceda (Philippines)
- CDC African member: Mahouton Norbert Hounkonnou (Benin)
- CDC Asian member: Le Tuan Hoa (Vietnam)
- CDC Latin American member: Mariel Saez (Chile)
- CDC member appointed by the IMU Executive Committee: Dayue Chen (China)
- CDC member appointed by the IMU Executive Committee: K. N. Raghavan (India)
- CDC member appointed by the ICMI Executive Committee: Anjum Halai (Pakistan)
- IMU President (2023-2026) and Ex-officio CDC Member: Hiraku Nakajima (Japan)

The CDC liaison of IMU EC is: Tamar Ziegler (Israel).

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 some support by staff members of the IMU Secretariat.

CDC Programs

During 2023 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 2023 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 4,000 EUR.

The funds are for academic use (travel or living expenses) only of invited speakers or participants coming from developing countries. The CDC Grant Selection Committee (GSC) selects the grant recipients; it is an eight- member committee, chosen and supervised by the CDC and chaired by the CDC Secretary for Grants Selection. Five of its eight 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 purpose of the program is to provide funding for intensive courses (duration 10 working days- 4 weeks) given in universities in the developing world by external lecturers.

The following courses can be supported:

(A) Courses that are part of a regular mathematics undergraduate or master degree program at the hosting university on topics where the applicant university has a lack of expertise.

(B) Courses at doctoral level which can be beneficial to PhD students and researchers of one or several research institutions.

The maximum amount that is awarded for each visit is EUR 4,400 (USD 5,000). This program is supported by the American Mathematical Society (USA) and the Niels Henrik Abel Board (Norway). A six-member CDC sub-committee, chaired by the CDC Secretary for Policy, evaluates the program.

Individual Research Visits

D) 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; candidates must be under 35 years of age. 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: the chair

and one of the members are appointed by the IMU Executive Committee and one member is chosen by CDC.

E) IMU-Simons African Fellowship Program

The program supports research sabbaticals for mathematicians from African developing countries employed in Africa to travel to an internationally known mathematical center of excellence (worldwide) for collaborative research. The program financed by the Simons Foundation, NY (USA) with a total of 250,000 USD was initially expected to last five years (2017-2021) but the completion date has been extended until 2023. 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. This program closed in 2023.

F) Individual Travel Support Program (ITSP)

This program supports travel costs for research visits (minimum stay is four weeks) by mathematicians based in a developing country. The CDC Grant Selection Committee (GSC) selects the grant recipients.

Graduate Support

G) IMU Breakout Graduate Fellowship Program

In 2016 IMU has launched a new Program funded by the generous donations of most 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 was developed with the assistance of the Friends of IMU (FIMU). The Breakout Selection Committee, that consists of five members and that is chaired by the CDC Secretary for Policy, evaluates the applications. The program is administered by the London Mathematical Society (LMS), supported by the IMU Secretariat.

H) 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 six members, three of them are not CDC members. The Committee is chaired by a CDC member and its Secretary is proposed by the American Mathematical Society (AMS). The program is administrated by the GRAID Selection Committee, supported by the AMS.

Other activities

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 organized by the donors of the mathematical materials.

CDC Website

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

Definition of Developing Countries

The definition of developing or less affluent countries to be used by IMU has been revised by the IMU Executive Committee in November 2023, based on a proposal by the CDC.

For the period 2024-2026 CDC refers to data of the World Bank which classifies:

- low-income economies as those who have a GNI per capita, calculated using the World Bank Atlas method, of USD 1,135 or less in 2022;
- lower middle–income economies are those with a GNI per capita between USD 1,136 and USD 4,465
- upper middle–income economies are those with a GNI per capita between USD 4,466 and USD 13,845;
- high-income economies are those with a GNI per capita of USD 13,846 or more.

The data about research and development spending is extracted from https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS

Additionally a complementary group of countries has been added which are considered by the World Bank as developed economies, but whose GNI per capita is currently below USD 20,000, and whose research and development spending is below 1 per cent of their PIB, and which do not belong to a group of countries or a political and economic alliance such as the European Union.

As in previous terms, the following subdivision into priority groups has been established for the CDC, for various purposes:

- Priority 1 (Low income): GNI per capita below 1,136 USD.
- Priority 2 (Lower-middle income): GNI per capita in the interval from USD 1,136 to USD 4,465.
- Priority 3 (Upper-middle income-low): GNI per capita in the interval from USD 4,466 to USD 7,585.
- Priority 4 (Upper-middle income-medium): GNI per capita in the interval from USD 7,586 to USD 10,706.
- Priority 5 (Upper-middle income-high): GNI per capita in the interval from USD 10,707 to USD 13,845.
- Priority 6 (GNI per capita is between USD 13,845 and USD 20,000, but research and development spending is below 1 per cent of the country's PIB, and the country does

not belong to a group of countries or a political and economic alliance such as the European Union).

At any moment, IMU member countries can ask the IMU to consider inclusion/exclusion as a developing or less affluent country. The application should be motivated and well-documented. On the basis of the evidence presented by the country, the CDC would then make a recommendation to the IMU EC for a case-by-case decision. If a country's World Bank status as a developing or less affluent country has changed between the data used to decide on the status and the time of the request, this information should be included as part of the evidence.

All countries classified as "developing or less affluent countries" can be found here:

https://www.mathunion.org/cdc/about-cdc/definition-developingcountries

CDC Activities 2023 in Detail

Conferences and Projects

A) Conference Support Program

During 2023 a total of 28 conferences and research schools taking place in the following countries were selected by the Grant Selection Committee to receive a conference grant award. Below find the list of conferences who were selected in 2023.

Country	Conference	Amount awarded
	Total	65,000 €
Argentina	Topics in K-theory and Non-Commutative Geometry	3,000€
Brazil	XVI Latin American Congress of Probability and Mathematical Statistics (CLAPEM)	3,000€
Brazil	CIMPA School "Non-Associative Algebras and Related Topics"	1,500 €
Brazil	Special holonomy and geometric structures on complex manifolds	1,500 €
Colombia	CIMPA Research School on Isogenies of Elliptic Curves and Applications to Cryptography	3,000€
Costa Rica	Escuela de Matemática de América Latina y del Caribe (EMALCA) 2024	2,000€
El Salvador	EMALCA El Salvador 2023	5,000€
Gabon	Mathematics and Sustainable Development	3,000€
Georgia	XIII Annual International Conference of the Georgian Mathematical Union	2,000€
India	CIMPA School Post-Quantum Cryptography	3,000€
India	International Colloquium on Randomness, Geometry and Dynamics	1,500 €
Italy	Commutative Algebra and Algebraic Geometry in Prime Characteristics	3,000€
Kenya	Mathematical Modeling of Chemical Reaction Networks: Basic Tools, Applications, and Open Challenges	3,000€
Lebanon	L-Functions and Modular Forms in Number Theory	2,000€
Malawi	Mathematical Modelling for the Life, Health and Social Sciences	2,000€
Nepal	Third International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2023)	3,000€
Niger	African Conference of Mathematics and Applications	1,500 €
Pakistan	CIMPA School on Algebra and Algebraic Geometry for Applications	1,500€
Paraguay	EMALCA Paraguay 2023	2,000€
Philippines	2024 CIMPA Research School "Current Trends in Algebra"	1,500 €
Philippines	SEAMS School on Scientific Computing for Differential Equations and Applications	1,500€
South Africa	Blockchain in Theory and Real Applications	4,000€

South Africa	3MC school on Quantitative Biology: Applications in Epidemiology, Ecology and Cancer; 3MC International Conference on Mathematical Modelling in Biology and Life Sciences	2,000 €
Thailand	CIMPA School Mathematics for Medicine and Health Sciences	2,000€
Tunisia	Ordered structures and their applications in Finance and Machine Learning	2,000 €
Uganda	Women in Sage (Uganda)	2,000 €
Ukraine	Numbers in the Universe: Recent Advances in Number Theory and its Applications	2,000 €
Uzbekistan	Dynamics Days Central Asia and Caucasus	1,500 €

In the 2023 the total of 89,000 Euro were transferred for 2022 and 2023 selected conferences. 26,000 Euro were transferred for conferences selected in 2022, 63,000 Euro for conferences selected in 2023. One conference selected in 2023 who has not received the funding will receive the funding in 2024 (2,000 Euro), before the start of the conference/research school. The amount of 4,606.10 Euro was returned as unspent funds and will be used for conferences in 2024.

B) Project Support Program (PSP)

In 2022 the CDC (2019-2022) awarded 17 projects with a grant and paid 80% of the grant. In 2023 the most projects were finalized and received 9.380,52 Euro. The remaining amount of 6.899,48 € will be paid in 2024.

In 2023 this program did not open a call for applications.

Lecturing and Mentoring

C) Volunteer Lecturer Program

In 2023 15 courses were awarded a grant for courses held in 2023 and 2024.

Volunteer Lecturer Courses awarded in 2023:

Madagascar

Université d'Antananarivo, Département de Mathématiques et d'Informatique (Madagascar)

The course is part of a double Master Degree in Mathematics and Computer Science. The program started in February 2023 with 20 students. In order to ensure that students in the Double Master degree program receive the best possible education, the department has reached out to former faculty members who now reside abroad to provide their expertise as volunteer lecturers. The lecturers are:

- Tovohery Hajatiana RANDRIANARISOA (Sweden) taught a course from 19 July 02 August (30 hours) in Algebraic Coding Theory
- Louis ANDRIANAIVO (Italy) will teach a course in 2024 in Machine Learning with TensorFlow

Mongolia

German-Mongolian Institute for Resources and Technology, Department Faculty of Mechanical and Electrical Engineering (Ulaanbaatar, Mongolia)

Prof. Fernando Costa (Portugal) will give a course in Differential Equations in September 2024 at the Department Faculty of Mechanical and Electrical Engineering of the German-Mongolian Institute for Resources and Technology. About 15 students and participants from GMIT and the Institute of Mathematics and Digital Technology will participate in the course.

Nigeria

Department of Mathematics, Joseph Sarwuan Tarkaa University (Nigeria)

Prof. Faraimunashe Chirove (South Africa) will teach in 2024 a course in Applied Mathematics at the Department of Mathematics, College of Physical Science, Joseph Sarwuan Tarkaa University, Makurdi, P.M.B 2373 Makurdi, Benue State, Nigeria. The Lecturer will give two courses: one in Applied Mathematics, Ordinary Differential Equation III (MTH 451) to final year undergraduates and another in Advance Mathematical Modelling (MTH 812) to Graduate students. MTH 451 is a core course that final-year undergraduate students must pass to be awarded a Bachelor of Science (B.Sc.) Mathematics, while MTH 812 is one of the courses necessary for awarding Masters of Science (M. Sc.)

Philippines

Caraga State University (Butuan City, Philippines)

Prof. Mark Asch (France) gave a course in Data Assimilation and Machine Learning for Environmental Problems at the Caraga State University, Butuan City, Philippines from 09-19 October, 2023. During this period the course was given every day for 6h per day to 25 Master and PhD students and some junior faculty.

College of Science and Mathematics MSU-Iligan Institute of Technology Tibanga (Iligan City, Philippines)

Prof. Ramla Abdellatif (France) gave a course in Abstract Algebra from July 24 until August 20, 2023 at the College of Science and Mathematics MSU-Iligan Institute of Technology Tibanga. The Seminar Course in Abstract Algebra is an elective seminar course for both PhD Mathematics and MS Mathematics program of MSU-IIT. The PhD Math program requires 24 units core courses, 24 units elective courses and dissertation while the MS Math Program requires 18 units core courses, 12 units elective courses and masteral thesis. About 12 Master students and 13 doctoral students enrolled in the seminar course.

Pakistan

Lahore University of Management Science (Lahore Pakistan)

- Prof. Alberto Abbondandolo (Italy) will teach a course in Complex Analysis in 2024.
- Prof. Christian Blanchet (France) will teach a course in Topology in 2024.
- Prof. Daniele Angella (Italy) will teach a course in Topology in 2024.
- Prof. Frank Neumann (Italy) will teach a course in Complex Analysis in 2024.
- Prof. Charlene Kalle (Netherlands) gave a course in Qualitative Differential Equations in November 2023.

Uganda Kampala International University (Kampala, Uganda)

Prof. Olabode Bamigbola (Nigeria) gave a course in Applied Mathematics in November/December 2023. 30 PhD students participated in the course which is a core course for the PhD program. The department has started a PhD program and there is urgent need for a senior professor in mathematics to enhance available manpower in the department. During the VLP visit a seminar to the staff and PhD student on how to write research articles and Publications was given by the VLP lecturer.

For courses selected in 2023 the amount of 7,941,24 Euro were transferred in 2023. The amount of 11,150 Euro will be transferred in 2024 for courses which were selected in 2023.

Additionally 6 Volunteer Lecturer Courses which were awarded in 2021/22 were held in 2023 and also received the payment in 2023. The total transferred in 2023 for those courses were 19,126.55 Euro.

Travel Programs to support Individual Research Visits

D) Abel Visiting Scholar Program

Since 2023 funds for the Abel Visiting Scholar Program are included in the general CDC budget. In 2023 the Abel Visiting Scholar Grant was awarded to three recipients.

- Nguyen Thi Van Anh (b.1989) is a lecturer at Hanoi National University of Education, Vietnam. She will be hosted by Professor Akhtar Khan of the Rochester Institute of Technology, USA
- Len Meas (b.1987) is a lecturer at Royal University of Phnom Penh, Cambodia. He will be hosted by Professor David Rule of the Linkoping University, Sweden.
- Nabil Bennenni (b. 1985) is an associate professor at University of science and technology USTHB of Algeria. He will be hosted by Professor Ayoub Otmani, University Artois Lens, Rouen, France.

E) IMU-Simons African Fellowship Program (duration 2017-2021, extended to 2023)

IMU-Simons African Fellowship Program (duration 2017-2021, extended to 2023)

The funds for the IMU-Simons African Grants are not included in the general CDC budget, but kept as a separate budget. Four fellowships were granted in 2023:

Country	Awardee	Home Institution	Host	Host Institution	Host Country
South Africa	Olutayo Oyeyemi Oyerinde	University of the Witwatersrand, South Africa	Tomasz Marciniak	Bydgoszcz University of	Poland

				Science and Technology	
Morocco	Ezzinbi Khalil	Cadi Ayyad University, Egypt	Mamadou Abdoul Diop	Gaston-Berger University	Senegal
Kenya	Josephine Kagunda	University of Nairobi, Kenya	Greg Rempala	Ohio State University	USA
Egypt	Susan El- Deken	Helwan University, Cairo, Egypt	Alfred Geroldinger	University of Graz	Austria

Individual Travel Support Program

Eleven grants were awarded in 2023:

Country	Awardee	Home Institution	Host	Host Institution	Host Country
Iran	Maliheh Hosseini	K.N. Toosi University of Technology, Tehran, Iran	Juan Jose Font Ferrandis	Universitat Jaume I	Spain
Argentina	Cynthia Will	CONICET (Consejo Nacional de investigaciones científicas y Técnicas), Argentina	Anna Fino	Florida International University	USA
Morocco	Hassane Bouzahir	Ibn Zohr University, Agadir, Morocco	Alessandro N. Vargas	Federal University of Technology - Parana	Brazil
South Africa	Rosephine Georgina Rakotonir ainy	University of Cape Town, South Africa	Ramalhinho Dias Lourenço Helena	Universitat Pompeu Fabra	Spain
Uzbekistan	Utkir Rozikov	V.I. Romanovskiy Institute of Mathematics of Uzbekistan Academy of Sciences	Benedikt Jahnel	Weierstrass Institute for Applied Analysis and Stochastics	Germany
Cameroon	Joel Fotso	University of Bamenda, Higher Teacher Training College, Cameroon	Elvira Zappale	Sapienza University of Rome, Italy	Italy
Egypt	Mohamed Tantawy	October 6 University, Giza, Egypt	Stefanie Sonner	Radboud University Nijmegen, Netherlands	Netherlan ds
Cameroon	Alexis Nangue	Higher Teachers' Training College of the University of Maroua	Alan D. Rendall	Johannes Gutenburg University of Mainz	Germany

Uzbekistan	Aygul Babadjano va	V.I. Romanovskiy Institute of Mathematics of Uzbekistan Academy of Sciences	Natalia Dilna	Institute of Mathematics, Slovak Academy of Science	Slovakia
India	Chaitanya Gopalakris hna	Indian Statistical Institute	Weinian Zhang	Sichuan University, China	China
Ethiopia	Surafel Luleseged Tilahun	Addis Ababa Science and Technology University	Abebe Geletu	African Institute of Mathematical Sciences - Rwanda	Rwanda

The amount of 7,256.30 Euro were transferred for Individual Travel grants in 2023. The amount of 32,019 Euro will be transferred in 2024 for the remaining grants selected in 2023. The amount of 495 were transferred in 2023 for a grant which was awarded in 2022. The amount of 10,000 Euro will be transferred in 2024 for grants awarded prior to 2023.

Graduate Support Programs

G. IMU Breakout Graduate Fellowship Program

The funds for the IMU Breakout Fellowship Program are not included in the general CDC budget but in a separate account.

The three students awarded in 2023 are:

- Marzieh **SOURI** is an Iranian PhD student at the Institute for Research in Fundamental Sciences, Iran.
- Heritiana Daniel **ANDRIASOLOFO** is a Madagascar PhD student at University of Antananariv, Madagascar.
- Priyendhu **KETHAPPAN SASIKUMAR** is an Indian PhD student from at Amrita Vishwa Vidyapeetam, Coimbatore Campus, Amritanagar Coimbatore, Tamil Nadu, India.

Updates from Awardees selected in previous years:

The awardees selected in previous calls have provided satisfactory reports during the year and their fellowship has been renewed. Morever several awardees have complete their PhD as expected.

H. Graduate Research Assistantships in Developing Countries (GRAID)

The GRAID funds are not included in the general CDC budget but kept in the FIMU account and are transferred by the American Mathematical Society to the grantees.

The GRAID Committee has evaluated in 2023 the Round 7 of GRAID and selected for funding the following projects:

- Group from Burkina Faso with PI Idrissa Kaboré (University of Bobo-Dioulasso) and IP Christian Maire (Université de Franche-Comté, France) supporting one student.
- Group from Nepal with PI Jivandhar Jnawali (Tribhuvan University) and IP Naveen Vaidya (San Diego State University, USA) supporting one student.

- Group from Benin with PI Jonas Doumate (University of Abomey-Calavi) and IP Rachidi Salako (University of Nevada, USA) supporting one student student.
- Group from Cameroon with PI Gabriel Deugoue (University of Dschang) and IP Theodore Techim Medjo (Florida International University, USA) supporting one student.

Other activities

Library Assistance Scheme

No books were shipped in 2023.

CDC Panel at ICM2026

Since 2014 the Commission for Developing Countries (CDC) has organized special activities during the ICM's (Seoul 2024, Rio 2018, Virtual ICM 2022).

CDC decided in 2023 to hold also in 2026 a special activity during the ICM2026 in the USA. Details will be discussed in 2024 and 2025.

CDC Conflict of Interest Policy Document

CDC has created in 2023 a Conflict of Interest Policy Document (an addendum to the existing IMU document) which has been approved by the IMU EC in early 2024 and which will be signed by all CDC Selection Committee members (internal and external).

Administrative

Costs

Administrative costs are kept to less than 10% of the CDC operating budget. The administrative costs for CDC consisted primarily of bank transfer costs.

Most of the administrative work is managed by staff members from the IMU Secretariat. The salaries of the IMU Secretariat staff are covered from the grant the Secretariat receives annually 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 technical costs are mainly covered by the IMU Secretariat funds.

The GRAID program is administrated by the GRAID Selection Committee, supported by AMS and FIMU. The Breakout Fellowship Program is administered by LMS (London Mathematical Society), supported by IMU Secretariat.

CDC Income 2023

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 of the Financial Statement includes the IMU annual grant to CDC, the support received during 2023 from Niels Henrik Abel Board (including the Abel Travel Fund) and donations from Paola Francesca Chilla Heidelberg, Germany), the Japanese Mathematical Society as well as FIMU. Additionally some funds were returned as unspent grants.

The financial overview below <u>excludes</u> the income and payments of the following CDC Programs: IMU Simons African Fellowship Program, GRAID and Breakout Graduate Fellowships Program.

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 gratitude 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: http://www.mathunion.org/CDC

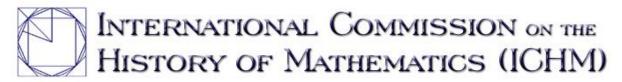
Andrea Solotar CDC President 2023-2026

Ludovic Rifford CDC Secretary for Policy 2023-2026 Lena Koch,

CDC and ICMI Admin. Manager, IMU Secretariat

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

https://www.mathunion.org/ichm



2023 Report of the ICHM to the IMU

June Barrow-Green (Chair)

1. Commission organisation

a. List of 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) <u>June.Barrow-Green@open.ac.uk</u> *Vice-chair*

Clemency Montelle (University of Canterbury, New Zealand) <u>clemency.montelle@canterbury.ac.nz</u>

Secretary

Sloan Despeaux (Western Carolina University, USA) <u>despeaux@email.wcu.edu</u> *Treasurer*

Eisso Atzema (University of Maine, USA) <u>eisso.atzema@maine.edu</u> (from 1 August 2023)

Martina Schneider (University of Mainz) <u>mschneider@mathematik.uni-mainz.de</u> (up to 31 July 2023)

Members-at-Large

- Michela Malpangotto (France) <u>michela.malpangotto@obspm.fr</u>
 S. Mohammad Mozaffari (Iran/China) <u>mozaffari@ustc.edu.cn</u>
- Volker Remmert (Germany) remmert@uni-wuppertal.de
- Adrian Rice (USA) <u>arice4@rmc.edu</u> Clara H. Sánchez (Colombia) chsanchezb@unal.edu.co
- GUO Shirong (China) guoshirong1959@163.com, gsr@imnu.edu.cn
- Galina Sinkevich (Russia) galina.sinkevich@gmail.com

IMU Representatives:

Isobel Falconer (School of Mathematics and Statistics, University of St Andrews, Scotland) <u>ijf3@st-andrews.ac.uk</u> Guillermo P. Curbera (Instituto de Matemáticas, Universidad de Sevilla, Spain) <u>curbera@us.es</u>

Ex-Officio

Craig Fraser (University of Toronto, Canada) <u>craig.fraser@utoronto.ca</u> (immediate past chair)

Antoni Malet (Universitat Pompeu Fabra, Spain) <u>antoni.malet@upf.edu</u> (editor *Historia Mathematica*)

Jeffrey Oaks (University of Indianapolis, USA) <u>oaks@uindy.edu</u> (editor *Historia Mathematica*)

In 2023, the Executive Committee of the ICHM had two 'listening' members: Snezana Lawrence (International Study Group on the Relations between the History and Pedagogy of Mathematics (HPM), an affiliate of the ICMI) and Tatiano Toro (IMU liaison).

In 2023, the Executive Committee of the ICHM had four business e-meetings together with related email discussions.

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

None constituted at present. During 2024 we will be constituting Prize Committees for the May Medal and the Montucla Prize.

c. Details of membership of the Commission

There are 44 National Members of the ICHM: Algeria, Austria, Belgium, Belorussia, Brazil, Canada, China, Costa Rica, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Guatemala, Iceland, Iran, Israel, Italy, Japan, Kazakhstan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Russia, Saudi Arabia, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Syria, Taiwan, Tunisia, Turkey, United Kingdom, USA. Individuals are listed at <u>https://www.mathunion.org/ichm/about-us/members</u>

d. URL of Commission website

<u>https://www.mathunion.org/ichm</u>. It is updated whenever necessary, e.g. to include changes in membership, reports of meetings, etc.

2. Activities

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

Workshops and Symposia:

Co-sponsorship of the Special Sessions on the History of Mathematics at the Joint Mathematics Meeting, Boston, USA, 4-7 January 2023.

DHST Global History of Science Festival 29 September 2023

The ICHM was represented by Clemency Montelle.

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 Antoni Malet (Universitat Pompeu Fabra, Spain) and Jeffrey Oaks (University of Indianapolis, USA). It is published by Elsevier Science and is available electronically to subscribers of <u>ScienceDirect</u>.

c. Activities supported in the last year

Early Career Scholar Support.

Due to Covid-19, many early career scholars have been denied the opportunity to participate in face-to-face conferences, and helping with funding their attendance at such conferences is usually the main way in which the ICHM offers them support. In October 2020, the ICHM instituted a grant scheme for early career scholars to fund individual research-related activities with an international dimension. Such activities could include registration fees for online conferences, childcare grants for attendance at online conferences, cost of scans from overseas archives, etc. In 2022 it was agreed to continue this source of funding for early career scholars for the foreseeable future.

https://www.mathunion.org/ichm/grants-sponsorships/ichm-grants

• Travel grant for Alte Hohne to participate in BHSM Research in Progress, Oxford, UK, February 2023.

We awarded funding for the Consonances Conference which was held at Maynooth University, Ireland. See the <u>report</u> on our website.

We awarded funding for the 33rd Novembertagung which was held at the University of Rijeka, Croatia. See the <u>report</u> on our website.

[The Novembertagung, which is organised by early career scholars for early career scholars, is held every year in a different country. We consider this to be one of the most important meetings supported by the ICHM as it enables early career scholars to make contact with one another at an international level as well as having the opportunity to present their work in a supportive environment.]

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

None

3. Future plans

Activities planned for 2024

Grants for Early Career Scholars

- We have awarded travel grants to three early career scholars from Europe to enable them to speak at the <u>BSHM Research in Progress</u> meeting to be held in Oxford, UK, on 2 March 2024. Each grant is up to a maximum of 300€.
- We have awarded a travel grant of 300€ to Saša Popović towards research visits in France, Germany, and Italy. The grant is up to a maximum of 300€.

We co-sponsored AMS-MAA Special Sessions on History of Mathematics (San Francisco, January 3-6, 2024). No financial aid was requested.

We have organised an ICHM panel on 'Translating European Mathematics' for the 2024 European Congress of Mathematics (Seville, 15-19 July 2024). The panel, which will be chaired by Norbert Schappacher, will have three speakers, and is fully funded by the Congress.

We are in the process of organising ICHM symposia for the <u>27th International</u> <u>Congress of History of Science and Technology</u> which will take place in Dunedin, New Zealand, 29 June – 5 July 2025 as a hybrid in-person and online event. The ICHST, which takes place every four years, is where the ICHM May Medal and Montucla Prize are awarded. Funds will be available to assist ECRs who wish to attend the Congress and are speaking in ICHM symposia.

We are supporting an online history of mathematics lecture series organised jointly by the International Academy for the History of Science and the Institute for Advanced Study, Princeton.

Funds will be available to support the 34th Novembertagung which is due to be held in Serbia in the autumn of 2024. We will also make funds available to support Novembertagung satellite meetings for scholars for whom travel is not viable.

<u>INI Programme on Modern History of Mathematics</u>, Cambridge (UK), 8 January – 2 May 2025. We expect early career scholars to apply to the ICHM for travel funding to attend this Programme (funding for accommodation, etc., is provided by the INI).

4. Financial report

Expenditure for 2023

Earl-Career Scholar Grant

• Travel grant for Alte Hohne to participate in BHSM Research in Progress, February 2023. 261€ awarded.

International Conferences

- Consonances I: Mathematics, Language, and the Moral Sense of Nature. Maynooth University, Ireland, 30 August – 1 September 2023. £2,000 awarded.
- 33rd Novembertagung XVth Austrian Symposium on the History of Mathematics, 15-16 September 2023, Rijeka, Croatia. 4500€ awarded.

Conference organizers submit reports on their conferences and these reports are published on the ICHM website <u>here</u>. The financial assistance is offered to the conference organizer in the form of a grant.

Income for 2023

Elsevier Honoraria US\$5000.

DHST Grant 2000€.

The financial position of the ICHM is currently good.

3.4. Committee on Electronic Information and Communication (CEIC) https://www.mathunion.org/ceic

CEIC Annual Report 2023

The work of the CEIC is basically organized on the basis of 4-year terms between two ICMs, under the leadership of a chairperson appointed for that period. Thus, the year 2023 was the first of the 4-year term 2023-2026. In late February/early March 2023, some CEIC members with ongoing/terminated terms were asked if they would be willing to continue their work, and some new members were nominated; all were confirmed by the IMU EC in March 2024. It is therefore now composed of the following persons:

- · Ilka Agricola (Germany), Chair, 2023-2026
- · Jean-Pierre Bourguignon (France), 2021-2024 (first term)
- · Kevin Buzzard (UK), 2021-2024 (first term)
- · Marie Farge (France), 2019-2026 (second term)
- · Rajeev Karandikar (India), 2019-2026 (second term)
- · Takashi Kumagai (Japan), 2023-2026 (first term)
- · Ingrid Rewitzky (South Africa), 2021-2024 (first term)
- · Peter Taylor (Australia), 2023-2026 (first term)

The IMU EC liaison officer for the term 2023-2026 is Ulrike Tillmann (UK). The committee started its work therefore effectively in April 2023.

Organisational aspects & internal work

Since half of the CEIC members were new and the last meeting had been in mid 2022, the first activities were devoted to introducing the members to each other, sharing their experience and expectations (see the enclosed questionnaires); IA spent some substantial time establishing contacts with other organisations and persons pursuing similar goals (see below for details). As a platform for information and exchange, all documents are shared via a cloud drive. There were only two meetings in 2023, namely online on Friday April 28, and on Monday November 13, with an interims report by the Chair in September. The main reason for the long gap was a severe illness of the Chair in May/June and the resulting difficulties in catching up. During these meetings, we had two presentations by CEIC members:

- Kevin Buzzard (April 28, 2023): Recent developments around Theorem Provers and AI
- Marie Farge (November 13): Publishing research articles in Diamond Open Access

Both presentations led to intensive and insightful discussions among the members of the committee, which are recorded in the respective minutes. In many respects, both presentations opened the eyes of the members to how far-reaching the relevant issues are. From the Chair's point of view, the presentations were very helpful in making the specialised knowledge of the individual members better known throughout the Committee. It also sharpened the committee's opinions on what the vision and challenges of a Global Digital Math Library (GDML) might actually be in detail. One outcome of the discussions is that CEIC will prepare a collection of case studies of questions relevant to math publishing in the countries of their members, as it has become clear that the national situations are extremely diverse. The talk by Kevin Buzzard was very much under the influence of the recent release of ChatGPT, resulting in the questions whether the CEIC should make recommendations or any other kind of statement on the use of AI in math; we finally decided against such a statement, mainly because progress is extremely fast, the question is too large for this kind of committee, and many issues (like: consequences for conducting exams), while being crucial for our daily work, rely on too many national or even local conditions / parameters.

Committee on Permissions (CoP)

This is an ad-hoc committee of the IMU "to advise the IMU on a negotiating strategy regarding the window for open access" proposed by the previous CEIC and chaired by Thomas Brennan (Harvard Law School, US). Here is the state of affairs (from an email of Tom, 9/9/23):

"As you likely know from Stephen [Watt], we are beginning the writing of our report after a lengthy process of scheduling and carrying out interviews and conducting surveys over the past many months since I last spoke with you in February [2023]. It has been a lot of work, and I am grateful to everyone on the committee to keeping at it despite substantial challenges and frustrations in getting meetings set up with publishers, etc. Nevertheless, preparing the report turned out to be rather challenging, so it is now expected in May 2024. Certainly, it will constitute a database of information that we have never had in such a quality, and CEIC is prepared for analysing it in full depth and preparing recommendations based on it.

IMKT (International Mathematical Knowledge Trust)

https://imkt.org

After some hard times during the pandemic, a new board was elected recently, including some former CEIC members (Stephen Watt, U Waterloo; Patrick Ion) and CoP members (Samuel Hansen, U Michigan; Evelyne Miot, France / Centre Mersenne). The Chair is now in regular exchange with IMKT and participating in its board meetings as a guest. One goal is to prepare a

structured overview of active math online resources and to possibly create a "meta platform" for them, based on some existing initiatives.

PED - EMS Committee on Publication and Electronic Dissemination

The EMS (European Mathematical Society) maintains a similar committee, the EMS Committee on Publication and Electronic Dissemination. Olaf Teschke from zbMathOpen and Evelyne Miot are members. The Chair made contact for an exchange of ideas, but this had no further consequences. We should probably make another try.

Future of ArXiv

There were multiple discussions in 2023 about the possible future of the ArXiv, linked to the issue of securing longterm funding and the options of legal statute (who will be in control, does it remain a project of Cornell University?). It is common opinion within the CEIC that the ArXiv is a crucial piece of international science infrastructure. At Shin-Tung Yau's initiative (Bejing Centre for Mathematical Science), there was an offer from the Chinese Academy of Science to relocate the ArXiv to China / Hongkong. IA had several meetings with people from Bejing and ArXiv. In the end, the Simons Foundation did decide to continue their funding. Further information may be found in the Press release for ArXiv funding by the Simons Foundation (October 2023):

https://news.cornell.edu/stories/2023/10/research-repository-arxiv-receives-10m-upgrades

There is a severe lack of moderators in mathematics at ArXiv, hence the Chair posted a call for applications in the IMU News 122 from November 2023. Unfortunately, we do not know of any applications resulting from this call.

CoData Meeting in Salzburg, October 2023

https://codata.org

IA attended the Codata General Assembly as a representative of the IMU in October 2023. A separate report on it was delivered to the CEIC members and the EC.

Workshop Perspectives on Electronic Information and Communication in the Mathematical Sciences

This workshop is funded by the Simons Foundation and is to take place at its headquarters in New York September 12-13, 2024. The plan is not only to have a meeting of the CEIC, but also a joint meeting with people from other institutions and committees (IMKT, CoP, ArXive and many more).

Signed: Ilka Agricola (CEIC Chair), March 13, 2024 (after approval by the CEIC by email)

3.5. Committee for Women in Mathematics (CWM)

https://www.mathunion.org/cwm

Report of the activities of the IMU Committee for Women in Mathematics (CWM) in 2023

1) Committee members

The composition of CWM 2023-2026 is as follows.

- Carolina Araujo, IMPA, Rio de Janeiro, Brazil Chair
- Hélène Barcelo, SLMath, Berkeley, USA Vice Chair
- U.K. Anandavardhanan, IIT Bombay, India
- Tony Ezome, Ecole Normale Supérieure, Libreville, Gabon
- Catherine Greenhill, University of New South Wales, Australia
- Motoko Kotani, Tohoku University, Japan
- Matilde Lalín, Université de Montréal, Canada
- Selma Negzaoui, University of Monastir, Tunisia
- Ekin Ozman, Bogazici University, Turkey
- Carola Bibiane-Schönlieb, University of Cambridge, UK

IMU EC liaison: Hiraku Nakajima, University of Tokyo, Japan

2) CWM virtual meetings

Members of CWM 2019-2022 and CWM 2023-2026 had a virtual "transitional meeting" on December 20, 2022. In 2023, the CWM met twice virtually (via Zoom), on January 26 and October 31. Arrangements have been made to organize the first CWM in-person meeting at ICTP, Trieste, Italy, on June 3-4 2024. We include below the agenda of the transitional meeting in 2022 and the two meetings in 2023.

Agenda of CWM Transitional Meeting - December 20 2022 16:00 UTC

- 1) Introduction of CWM 2023-2026 members
- 2) Overview of CWM activities
- 3) Words from CWM 2019-2022 members
- 4) Questions and Discussions
- 5) CWM 2023-2026 next meeting in January 2023 (CWM Call 2023)

Agenda of CWM Meeting - January 26 2023 20:00 UTC

- 1) Selection of activities to be supported (CWM Call 2023)
- 2) Other topics

Agenda of CWM Meeting - October 31 2023 15:00 UTC

1) CWM Call 2024

- 2) May 12 Initiative
- 3) CWM in-person meeting at ICTP June 3,4 2024
- 4) CWM questionnaire Childcare at Conferences
- 5) (WM)² 2026 in Philadelphia, USA
- 6) Other topics

3) Activities supported by the CWM Call 2023

At the end of 2022, CWM called for proposals for initiatives to be held during 2023 to support women in mathematics (see Annex A). The CWM Call 2023 received 48 applications, of which 11 were selected. Some of the selected projects aimed at supporting continental networks for women in mathematics, such as the 1st meeting of the Asian and Oceanian Women in Mathematics (AOWM) in India, the 3rd Meeting for Latin American Women in Mathematics in Colombia, the 3rd Southeast Asian Women Mathematicians Meeting in Indonesia, and a network conference organised by the Commission of African Women in Mathematics of the African Mathematical Union (AMU-CAWM) in Morocco. CWM has also supported networking activities for women in mathematics in Cuba, India, Nepal and Nigeria, the global May 12 initiative, and two research workshops geared towards establishing research networks for women, in Uganda and Uruguay. Depending on the nature of the project, CWM funding went to infrastructure, webpage's creation and update, travel expenses and accommodation support for participants from developing countries. In what follows, we provide more details on each of these projects.

May 12 initiative

"May 12 - Celebrating Women in Mathematics" is a global initiative currently led by several national and continental organisations for women in mathematics. Every year, it launches a campaign and proposes activities to celebrate women in mathematics on May 12, honouring the birthday of Maryam Mirzakhani. Its interactive website (*) gathers and displays information about events organised in the scope of May 12. CWM funding went to the webpage's maintenance and update.

(*) https://may12.womeninmaths.org/

1st Meeting of the Asian and Oceanian Women in Mathematics (AOWM)

The Asian and Oceanian Women in Mathematics (AOWM) platform was launched in 2022. The first hybrid meeting of AOWM took place in April 2023 at ICTS, Bangalore, India. CWM funding went to travel expenses and accommodation support for participants from developing countries.

3rd Meeting for Latin American Women in Mathematics (LAWM)

The Meetings for Latin American Women in Mathematics aim to strengthen the Latin American network of women in mathematics. The 1st edition took place in Mexico in 2016, and the 2nd edition took place in Chile in 2018. The 3rd one took place in Tunja, Colombia, in June 2023. CWM funding went to travel expenses and accommodation support for participants from developing countries.

3rd Southeast Asian Women Mathematicians (SAWM) Meeting

The 3rd edition of the Southeast Asian Women Mathematicians Meeting took place in Yogyakarta, Indonesia, in July 2023. The 1st edition took place in Indonesia in 2019, and the 2nd edition took place virtually in 2021. CWM funding went to travel expenses and accommodation support for participants from developing countries.

Networking conference organised by the Commission of African Women in Mathematics of the African Mathematical Union (AMU-CAWM) in Morocco

This is a 2-day network conference organised by the Commission of African Women in Mathematics of the African Mathematical Union (AMU-CAWM) with the aim of establishing the Northern Africa Women in Mathematics Association. It was originally planned to place in Rabat, Morocco in October/November 2023. CWM funding went to travel expenses and accommodation support for participants from developing countries.

Note: This event was postponed to March 11-23, 2024. Upon request and justification from the organisers, the CWM support has been reallocated for 2024.

Networking event for women within the ZIGZAG School of Physics and Mathematics without Frontiers in Cuba

This is a networking event for the female participants of the ZIGZAG School of Physics and Mathematics without Frontiers, originally planned to place in 2023 in La Habana, Cuba, with the participation of students from different countries in Central America and the Caribbean. CWM funding went to organisation of the panel and food for participants.

Note: This event was postponed to March 11-23, 2024. Upon request and justification from the organisers, the CWM support has been reallocated for 2024.

Indian Women and Mathematics (IWM) Activities in 2023

The collective IWM develops several activities to support women in mathematics, such as workshops, mini-courses, a visitor program, and the IWM Annual Conference. CWM funding went to travel expenses and accommodation support for participants from developing countries.

Women of Nepal in Mathematical Sciences (WoNiMS) Annual Conference 2023

The Women of Nepal in Mathematical Sciences (WoNiMS) Annual Conference 2023 was a 3-day event that took place at Tribhuvan University, Kathmandu, Nepal, on November 3-5, 2023. CWM funding went to travel expenses and accommodation support for participants from developing countries.

Networking project: Breaking Barriers to Women in Mathematics through Networking and Collaboration

This hybrid networking project is dedicated to women researchers working in Sub-Saharan Africa, as well as undergraduate and postgraduate students from three institutions in Nigeria and one in Ghana. CWM funding went to infrastructure and connectivity.

Workshop: Women in SAGE-Uganda

Since 2007, more than 100 Sage Days have been organised around the world. Women in Sage days have been organised in United States, South Korea, France, Canada, Greece, Senegal and Nigeria. The 3rd edition in Africa took place in September 2023 at Makerere University, Uganda, with the support of the African Women in Mathematics Association (AWMA) and Uganda Women Mathematicians (UGAWOM). CWM funding went to travel expenses and accommodation support for participants from developing countries.

Matemáticas en el Cono Sur 2

This is the second edition of a research workshop geared towards establishing research networks for women in South America. The activities were carried out virtually throughout 2023, with a final in-person workshop planned to take place in Montevideo, Uruguay, in February 2024. The first edition of the event took place in Uruguay in 2018. CWM funding went to travel expenses and accommodation support for participants from developing countries.

4) CWM Newsletter

The CWM Newsletter has been issued twice a year since May 2019, in May and November/December. One can subscribe to it through the CWM webpage (*). The Newsletter is sent automatically to those that have subscribed to it. It is also sent by email to CWM ambassadors, who distribute it in their country, and to various mathematical institutes. The Newsletter is also posted on CWM website and advertised in IMU-News. It is currently edited by CWM member Ekin Ozman. Two CWM Newsletters were issued in 2023 with the following content:

(*) https://www.mathunion.org/cwm/about/cwm-newsletter

CWM Newsletter Issue 9 - May 2023

- Interview with the new vice chair of CWM Hélène Barcelo
- News from CWM: First Meeting of CWM 2023-2026 and result of CWM call 2023, etc.
- Other News and Announcements: May 12 Celebration, Wolf Prize, and other Prizes, Honors and Achievements, etc.
- Article by Betul Tanbay on the Themes of the International Day of Mathematics

https://www.mathunion.org/fileadmin/CWM/Initiatives/CWMNewsletter9.pdf

CWM Newsletter Issue 10 - December 2023

- Interview with CWM member Matilde Lalín
- News from CWM: CWM call for 2024 is open and accepting applications, SCGES Third Annual Report is Published, etc.
- Other News and Announcements: 2024 AWM Awards and Prizes to be announced in JMM, etc.
- Interview with the mathematician and illustrator Constanza Rojas-Molina about her work as cartoonist of mathematicians (by Marie-Françoise Roy)

https://www.mathunion.org/fileadmin/CWM/Initiatives/CWMNewsletter10.pdf

5) Remember Maryam Mirzakhani Exhibition

The Remember Maryam Mirzakhani Exhibition consists of 18 original posters. It was first produced by CWM in 2018 for the Maryam Mirzakhani Memorial during the first World Meeting for Women in Mathematics - (WM)², in partnership with curator Thais Jordão and designer Rafael Meireles Barroso. Since then, it has been shown in several places across the globe. Institutions interested in hosting the exhibition can contact CWM to request an agreement. Once the request is approved, they receive access to a folder in IMU's cloud containing the 18 exhibition posters, as well as an introductory poster and flyers presenting the exhibition. In 2023, CWM made agreements with the following institutions to host Remember Maryam Mirzakhani Exhibition:

- Centre International de Recherches Mathématique (CIRM), Marseille, France. The Remember Maryam Mirzakhani Exhibition opened on November 8, 2023, to mark the 10th anniversary of the Jean Morlet Chair.
- Institute of Pure and Applied Mathematics (IMPA), Rio de Janeiro, Brazil. The Remember Maryam Mirzakhani Exhibition opened on March 14th, in the occasion of IDM, and is planned to stay open for one year (until March, 2024).

6) (WM)² - World Meeting for Women in Mathematics

The two World Meetings for Women in Mathematics (WM)² were satellite activities of the ICM organised by CWM. The first (WM)² took place in Rio de Janeiro in 2018 and had very positive outcomes. A permanent website was then designed for future (WM)² editions (*). The second (WM)² was a mostly virtual event taking place on July 1-2 2022, with a special in-person joint session with the Probability and Mathematical Physics ICM satellite event, on July 2 2022 in Helsinki. The Proceedings of the second (WM)² are currently under preparation. We hope to organise the third (WM)² in 2026 in Philadelphia, on the day preceding ICM 2026, preferably in the same venue. Arrangements are being made to organise it in partnership with the Association for Women in Mathematics (AWM).

(*) https://www.worldwomeninmaths.org/

7) The Standing Committee for Gender Equality in Science (SCGES)

The SCGES is an independent committee formed in 2020 by several international scientific organisations, including the IMU, following the "Gender Gap in Science

Project" (2017-2019). The main goal of the "Gender Gap in Science Project" was to produce sound data about gender gap in science to support the choices of interventions that scientific unions could feasibly undertake. The aim of SCGES is to ensure liaison amongst international scientific unions to foster gender equality and the implementation of recommendations of the "Gender Gap in Science Project". The SCGES third Annual Report was published in November 2023, and can be found on SCGES' website (*). The current IMU representative and deputy representative at SCGES are Marie-Françoise Roy (former CWM chair) Carolina Araujo (current CWM chair). At the discretion of the IMU EC, both Marie-Françoise Roy and Carolina Araujo are willing to remain IMU representatives at SCGES. It could also be interesting to have a member of the IMU EC directly involved with SCGES.

(*) https://gender-equality-in-science.org/wpcontent/uploads/2023/11/SCGESreport2022-2023.pdf

8) CWM ambassadors

CWM has established a list of special correspondents worldwide, called CWM Ambassadors, with the job of disseminating information received from CWM, as well as keeping CWM informed about activities and initiatives in their countries. The original list included 85 names from 55 countries in 2016. There are now 175 CWM ambassadors from 101 countries. The list is posted on the CWM website (*).

(*) https://www.mathunion.org/cwm/about/cwm-ambassadors

9) CWM Call 2024

In November 2023, the CWM Call 2024 was launched, inviting proposals of funding for activities or initiatives to support women in mathematics taking place from February 2024 to February 2025, with deadline January 05, 2024 (see Annex B). With the assistance of IMU project assistant Vanessa Chung, a new webform for CWM Call was set up, which has improved the CWM Call process. It would be very good if CWM could use the same platform as CDC for the next annual call.

10) CWM website and publicity

The CWM website (*) gathers information about relevant organisations, news and events for women in mathematics across the globe. It has been updated on a regular basis with the help of IMU archivist Birgit Seeliger. CWM also contributes with a section in most issues of the IMU News.

(*) http://www.mathunion.org/cwm/

11) CWM operation mode and liaison with the IMU EC and office

Most of CWM's work has been done by email. Zoom calls have also been used. The liaison with the IMU Executive Committee through Hiraku Nakajima has been very positive. We would like to thank the members of the IMU office staff who have consistently been very helpful.

12) CWM Expenditure 2023

Balance left from 2022 (*)	3 079,99 €	
Budget from IMU 2023	22 545,00€	
Reimbursement for mailing CWM archives (**)		235,06€
Call 2023 - May 12 initiative (O1)		1 137,46€
Call 2023 - 1st Meeting of the OAWM (N01)		2 036,55 €
Call 2023 - 3rd Meeting for LAWM (N04)		2 036,55 €
Call 2023 - 3rd SAWM Meeting (N06)		1 036,55 €
Call 2023 - Conference AMU-CAWM (N10)		1 036,55 €
Call 2023 - ZIGZAG School (R06)		400,00€
Call 2023 - IWM Activities (O5)		536,55€
Call 2023 - WoNiMS Conference (N11)		1 536,55 €
Call 2023 - Breaking Barriers (N13)		1 036,55 €
Call 2023 - Women in SAGE-Uganda (R18)		3 036,55 €
Call 2023 - Cono Sur 2 (R20)		1 536,55 €
Maintenance and hosting of (WM) ² website		1 104,00€
CWM Newsletter/Sendinblue - Share CWM 2023		130,72€
Total expenses 2023		16 836,19 €
Balance left from 2023 (***)	8 788,80 €	
		2 000 00 0

Call 2022 - AWMA website (transferred January 2024) (*)

3 000,00 €

(*) 3 000 € reallocated from CWM Call 2022 (AWMA website). The work on the webpage started late in 2023 and the payment from IMU took place in January 2024. (**) Reimbursement to former CWM chair Marie-Françoise Roy for mailing all CWM archives from 2015 to 2022 to the IMU Office and to current CWM chair Carolina Araujo. (***) In addition to the 3000 € reallocated from CWM Call 2022, we intentionally underspent in 2023 in order to have funds to cover the in-person CWM meeting scheduled for June 2024.

13) Annexes

A - CWM funding call for 2023

https://www.mathunion.org/fileadmin/CWM/Initiatives/CWMCall2023.pdf

B - CWM funding call for 2024

https://www.mathunion.org/fileadmin/CWM/Initiatives/CWMCall2024.pdf

Carolina Araujo and Hélène Barcelo Chair and Vice-chair of the IMU Committee for Women in Mathematics 4. Circular Letters of the IMU Secretary General to the Adhering Organizations



International Mathematical Union

January 17, 2023 IMU AO Circular Letter 1/2023

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

From: Christoph Sorger, IMU Secretary General

Updated Contact Information

Dear colleagues

This is the first email I am sending out in my capacity as IMU Secretary General since taking office on 1 January 2023. I very much look forward to working and engaging with IMU members over the course of the 2023–2026 term. I would also like to take this opportunity to thank my predecessor Helge Holden for all his work, dedication and commitment to the IMU – as you know, there were some very challenging moments during his term – and moreover for all his help during the transition period.

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

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

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.

Advice regarding email addresses

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

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

— Emails sent from the IMU should be received by at least two different recipients, preferably using different mail servers. If we have only one email address for a country, and that address ceases to work, we will be unable to discover that you did not receive our email, and, thus, we will lose contact with your country. Similarly, having at least two recipients helps ensure communication is maintained in situations such as individual prolonged absences etc.

- Please try and maintain the email addresses you give us and send us updates if necessary. We reserve the right to remove addresses that constantly bounce.

- Please create a stable URL for your Adhering Organization.

Electronic voting

Following the successful introduction of electronic voting at the 19th IMU General Assembly in July 2022, we intend to hold future ballots via the electronic voting system during this term. For this, we will need each voting member to specify a single email address (further details will be included in the individual email you will receive shortly).

Fraud alerts

The IMU is regularly exposed to attempted frauds, usually in the form of emails requesting immediate transfer of money due to some emergency. I would like to take this opportunity to reiterate that the IMU never requests money on an individual basis.

Fraudulent emails often appear to be sent in the name of the IMU President or other IMU office holders, and can seem quite authentic, but closer scrutiny of the email reveals that the IMU is not the sender. Please also note that emails sent from the IMU President or IMU Secretary General are digitally signed (S/MIME certification) and have a signature with the IMU Logo below. Any other email should be considered as suspicious, in which case please do not respond to it and report it to me.

Kind Regards



January 19, 2023 IMU AO Circular Letter 2/2023

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

From: Christoph Sorger, IMU Secretary General

ICM Structure Committee for ICM 2026

Dear colleagues

I write regarding the ICM Structure Committee for ICM 2026.

The ICM Structure Committee is responsible for the structure of the Scientific Program of the ICM. In particular, it decides, among others, on the number of plenary lectures, the sections and their precise definition, the target number of talks in each section as well as other kinds of lectures, and the arrangement of sections.

The first ICM for which the ICM Structure Committee conducted its work was <u>ICM 2022</u>. A new ICM Structure Committee has now been constituted, which will be responsible for the Scientific Program of ICM 2026. The selection of the speakers will remain with the Program Committee.

Membership of the ICM Structure Committee for <u>ICM 2026</u> is as follows:

Terence Tao [Chair] Hiraku Nakajima [IMU President, ex officio] Nalini Anantharaman Annalisa Buffa Weinan E Irene Fonseca Isabelle Gallagher Martin Hairer Mike Hopkins Meena Mahajan Akshay Venkatesh Anna Wienhard Geordie Williamson

The ICM Structure Committee is encouraged to interact with the mathematical community worldwide.

The Chair Terence Tao can be contacted at chair@sc26.mathunion.org.

Regards



January 19, 2023 IMU AO Circular Letter 3/2023

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

From: Christoph Sorger, IMU Secretary General

Program Committee for ICM 2026

Dear colleagues

One of the important tasks of the Executive Committee of the IMU is to establish the Program

Committee for the International Congress of Mathematicians (ICM). The next ICM will take place in Philadelphia in 2026.

The Program Committee is responsible for the selection of all speakers at the ICM in 2026. You are hereby invited to propose members for the Program Committee. Members of the Program Committee cannot speak themselves at the ICM.

Please note that members of recent Program Committees are not eligible (a list of all former

Program Committees can be found <u>here</u>).

Your proposal should include a brief letter of recommendation as well as a CV of the candidates [pdf-format only]. Candidates should not be contacted prior to the nomination, as the composition of the Program Committee (except its chair) will only be made public at ICM 2026.

The deadline is **12 February 2023**, and proposals should be sent to me at <u>secretary@mathunion.org</u>.

Regards



March 6, 2023 IMU AO Circular Letter 4/2023

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

From: Christoph Sorger, IMU Secretary General

Result on application from Mongolia

Dear colleagues

I am happy to report about the outcome of the member ballot on the application from Mongolia to become a member in Group I, see IMU AO Circular Letter <u>28/2022</u>.

The vote on Mongolia's application yielded a positive result. As of March 2023, Mongolia is a Member in Group I of the IMU.

Thank you for your contribution.

Regards



August 31, 2023 IMU AO Circular Letter 05/2023

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

From: Christoph Sorger, IMU Secretary General

Dates for ICM 2026 and the 20th IMU General Assembly

Dear colleagues

Please note the following important information regarding the next International Congress of Mathematicians, ICM 2026:

ICM 2026 will take place over 23–30 July 2026 in Philadelphia, USA.

The 20th IMU General Assembly will be held in New York City, USA, on 20–21 July 2026.

These are the final, confirmed dates of ICM 2026 and the 20th IMU General Assembly.

The official website of the Congress is

https://www.icm2026.org/

Please circulate this information in your community!

I hope to see you all at ICM 2026!

Regards



September 8, 2023 IMU AO Circular Letter 06/2023

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

From: Christoph Sorger, IMU Secretary General

International Decade of Sciences for Sustainable Development 2024–2033

Dear colleagues

I am happy to announce that on 25 August the United Nations, in a meeting of its General Assembly, proclaimed the International Decade of Sciences for Sustainable Development (IDSSD) 2024–2033.

This is a great outcome of the **International Year of Basic Sciences for Sustainable Development** (<u>IYBSSD 2022</u>), of which the IMU is a founding union.

More information regarding the proclamation can be found <u>here</u>. The full text of the resolution can be found <u>here</u>.

The IMU looks forward to being part of the IDSSD 2024–2033. Many activities will take place worldwide throughout the decade to come, and we sincerely hope that mathematicians will take part in these activities and continue to show the fundamental role of mathematics among the sciences.

Regards



September 11, 2023 IMU AO Circular Letter 07/2023

- To: The Adhering Organizations of the International Mathematical Union (IMU)
- From: Christoph Sorger, IMU Secretary General

IMU Bulletin No. 74 (2022)

Dear colleagues

IMU Bulletin No. 74, reporting about IMU activities in 2022, is now available on the IMU <u>website</u>. We do not intend to send out printed versions.

Regards



October 9, 2023 IMU AO Circular Letter 08/2023

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

From: Christoph Sorger, IMU Secretary General

Report from the ICM Structure Committee

Dear colleagues

I refer to <u>CL 2/2023</u> regarding the work of the ICM Structure Committee (SC), chaired by Terence Tao. As a reminder, the SC is charged with the task of proposing the structure for the ICMs, while the decision of the actual speakers is left with the Program Committee (PC).

The SC has now finalized its report outlining the Scientific Program for ICM 2026 (attached). The report references the previous <u>SC report from 2019</u> and the <u>PC/OC</u> <u>Guidelines</u>. The IMU is very grateful to the members of the SC for accomplishing their job in such a thorough and timely manner.

The IMU Executive Committee (EC) has discussed the report and decided to endorse the recommendations made in the report, in particular regarding the Scientific Program for ICM 2026:

- 1. The EC endorses the Sections with its descriptors and with the given base lecture Slots as described in section 4 of the report;
- 2. The EC endorses the proposal to leave 20 sectional talks, and one or two plenary talks, to be assigned to special lectures as described in section 3.3 of the report.

Regards



November 15, 2023 IMU AO Circular Letter 09/2023

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

From: Christoph Sorger, IMU Secretary General

Call for bids for ICM 2030

Dear colleagues

This letter is about the International Congress of Mathematicians to be held in the year 2030

(ICM 2030).

One of the objectives of the International Mathematical Union defined in the IMU Statutes is

"... To support and assist the International Congress of Mathematicians ...",

The IMU Executive Committee (IMU EC) cordially invites all Adhering Organizations and national mathematical societies of IMU members to submit bids to host ICM 2030 and the IMU General Assembly (IMU GA) meeting prior to this Congress.

Only electronic submissions will be accepted. Submissions should be sent to secretary@mathunion.org

For a bid to be considered by the Site Selection Committee (SSC) it must be received no later than

30 November 2025

The SSC will evaluate all bids received, taking into account – but not restricted to – the mathematical ambience, the infrastructure and the economic conditions offered by each bidder, as well as the accessibility of the proposed site, the involvement of the local mathematical community, and the geographical distribution of places where ICMs took place in the past.

The IMU EC will prepare a recommendation based on the SSC's advice and refer this recommendation to the 20th IMU GA, which will take place in New York City, USA, on 20–21 July 2026 prior to the ICM in Philadelphia.

The IMU GA will make the final decision on the location of ICM 2030.

Attached hereto are the ICM Bidding Guidelines endorsed by the IMU General Assembly 2018, and subsequently updated by the IMU EC, providing advice and instructions to potential bidders. Please read the guidelines carefully and take note of the updates and changes.

The IMU has secured the URL icm2030.org to be used for ICM 2030.

Every country interested in making a bid for ICM 2030 is strongly encouraged to do so.

Please do not hesitate to contact me if you have any question or require further information.

Regards



November 21, 2023 IMU AO Circular Letter 10/2023

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

From: Christoph Sorger, IMU Secretary General

Heidelberg Laureate Forum 2024

Dear colleagues

The 11th Heidelberg Laureate Forum (<u>HLF</u>) will take place in Heidelberg, Germany between 22–27 September 2024.

At the HLF, all winners of the Fields Medal, the Abel Prize, the ACM A.M. Turing Award, the Nevanlinna Prize/IMU Abacus Medal, 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.

Over the course of the week-long conference, young researchers will be given the exclusive possibility to profoundly connect with their scientific role models and find out how the laureates made it to the top of their fields. As described by a young researcher, "Meeting the humans behind some of the most formidable inventions and discoveries of our time was phenomenal. What was unexpected, perhaps, was how warm and approachable these individuals turned out to be. I am grateful to have been given this opportunity, and to have shared it with peers who I hope to soon call colleagues, collaborators and friends."

Applications for participation at the 11th HLF are open in three categories: Undergraduate/Pre-Master, Graduate PhD, and PostDocs. The application period for the 11th HLF runs from 9 November 2023 until 9 February 2024.

Young researchers at all phases of their careers (Undergraduate/Pre-Master, Graduate PhD, or PostDocs) are encouraged to complete and submit their applications by 9 February (midnight CET).

The IMU Adhering Organizations and national mathematical societies can also nominate young researchers. Nominated persons get "priority treatment", but, since there may be too many nominations, they have no acceptance guarantee. You may use the code IMU75896 when registering.

See the webpage <u>https://application.heidelberg-laureate-forum.org</u> for the online application and nomination forms.

The deadline for application is 9 February 2024.

For questions regarding requirements and the application process, please contact Young Researchers Relations at: <u>yr@heidelberg-laureate-forum.org</u>.

All applications that are completed and submitted by the deadline are meticulously reviewed by an international committee of experts to ensure that only the most qualified candidates are invited. There are 100 spaces available for each discipline of mathematics and computer science. All applicants will be notified by the end of April 2024 whether or not they are invited.

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

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

Regards



December 13, 2023 IMU AO Circular Letter 11/2023

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

From: Christoph Sorger, IMU Secretary General

IMU Archiving Guidelines

Dear colleagues

I write to you regarding the IMU Archiving Guidelines. The guidelines were initially created and then endorsed by the IMU Executive Committee in 2013, with subsequent amendments endorsed at the General Assembly in 2014.

Following IMU Archive Curator June Barrow-Green's visit to the IMU Secretariat in Berlin this year, the guidelines have now been further updated in line with suggestions made by June.

The primary changes are intended to better reflect current archiving practices, for example where involving electronic communications, and also allow the digitization of past prize committee materials.

Regards



December 18, 2023 IMU AO Circular Letter 12/2023

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

From: Christoph Sorger, IMU Secretary General

ICM 2022 Proceedings

Dear colleagues

I am pleased to inform you that the proceedings of the International Congress of Mathematicians 2022 have now been published.

The proceedings are published by <u>EMS Press</u> and are available open access under the CC-BY-4.0 license at <u>https://doi.org/10.4171/icm2022</u>, as well as on the IMU <u>website</u>

Regards

5. The IMU Secretariat

The Secretariat of the International Mathematical Union has been permanently based in Berlin, Germany, at the <u>Weierstrass Institute</u> since January 2011. Following a positive evaluation of the work of the IMU Secretariat between 2011-2018, an unlimited Cooperation Agreement with WIAS was signed in 2018 (as approved at the 18th IMU General Assembly).

Under the supervision of the IMU Executive Committee, the Secretariat runs the IMU's dayto-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.



IMU Secretariat staff:

Dietmar Hömberg: Head of the Secretariat and IMU Treasurer (Image mathunion.org) Scott Jung: Manager of the Secretariat (Image mathunion.org) Lena Koch: ICMI/CDC Administration (Image mathunion.org) Mariusz Szmerlo: IMU Accountant (Image mathunion.org) Birgit Seeliger: IMU Archivist (Image mathunion.org) Frank Klöppel: IT and Technical Support (Image mathunion.org) Vanessa Chung: Project Assistant (Image mathunion.org) IMU Secretary General: Christoph Sorger (Image mathunion.org)

Address of the IMU Secretariat:

International Mathematical Union Secretariat Hausvogteiplatz 11a 10117 Berlin, Germany Phone: +49 30 20372-430 Fax: +49 30 20372-439 E-mail: office@mathunion.org

6. Impressum

International Mathematical Union Secretariat Hausvogteiplatz 11a D 10117 Berlin, Germany Phone: +49 30 20372-430 Fax: +49 30 20372-439 E-mail: office@mathunion.org URL: https://www.mathunion.org

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