

Latin America
Brazil
Bringing ICM to **Rio de Janeiro**



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Professor Ingrid Daubechies

President of the International Mathematical Union

Rio de Janeiro, September 24, 2012

Dear Professor Daubechies,

On behalf of the Brazilian Mathematical Society (SBM), the Institute for Pure and Applied Mathematics (IMPA) and the Brazilian Academy of Sciences (ABC), we invite the International Congress of Mathematicians ICM 2018 to the city of Rio de Janeiro.

Our invitation is backed by the Brazilian government, through the Ministries of Education and of Science, Technology and Innovation, and by the whole Brazilian mathematical community, represented in the ICM 2018 National Committee. Moreover, it is supported by several organizations, including major mathematical societies in the region.

We commit the full support of our own institutions and assure you that ICM 2018 in Brazil will be a great success.

Hilário Alencar

President
Brazilian Mathematical
Society

César Camacho

Director
Institute for Pure and
Applied Mathematics

Jacob Palis

President
Brazilian Academy
of Sciences

Marcelo Viana

Vice-President
Brazilian Mathematical
Society

ICM in Rio



10 Reasons for ICM to come to Brazil

- 1** We offer a complete detailed solution for the realization of the ICM 2018 in Rio de Janeiro and the IMU General Assembly in São Paulo.
- 2** Our proposal is strongly supported by the Brazilian government, local authorities, and the whole Brazilian mathematical community.
- 3** Brazil has developed a network of experienced mathematical institutions that have more than proved their capacity for organizing major international events.
- 4** Brazilian Mathematics is increasingly present in various international stages of Mathematics. Two Plenary Lectures and twelve Invited Addresses have been given at ICMs by Brazilian mathematicians.
- 5** Rio de Janeiro hosts IMPA, the most prominent mathematical research center in the southern hemisphere. The University of São Paulo is consistently ranked as the best university in Latin America.
- 6** The Rio de Janeiro region is a focal point for the Brazilian mathematical community and a hub for international Mathematics. It is home to five research universities and two institutes in the mathematical sciences.
- 7** Rio de Janeiro is a major world destination for tourism and international events in science, business, and sports. It will host the FIFA World Cup 2014 finals, as well as the 2016 Summer Olympics.
- 8** Fueled by a Mathematical Olympiad that reaches nearly 20 million children every year, there is great respect and curiosity for Mathematics in the Brazilian society - excellent potential for enhancing the popularization of Mathematics.
- 9** Brazil plays a crucial role in the activities of the Mathematical Union for Latin America and the Caribbean and has greatly contributed to the development of Mathematics in the region, by training young mathematicians and promoting collaborations among Latin American researchers.
- 10** Latin America now counts 10 IMU member countries and has never hosted an International Congress of Mathematicians. It will be more than 3 decades since the ICM was last held in the Americas.

Past and present, with a view to the future

Brazilian Mathematics

The first graduate programs in Mathematics were launched in the 1930s, with the creation of the Faculty of Philosophy, Sciences and Letters of the University of São Paulo, and the National Faculty of Philosophy of the University of Brazil, in Rio de Janeiro. Among the generation trained in the latter, were Leopoldo Nachbin and Mauricio Matos Peixoto, who helped create the Institute for Pure and Applied Mathematics (IMPA) in 1952 and were also the first Brazilian mathematicians to give Invited Addresses at the ICM 1962 and ICM 1974, respectively.

Brazilian Mathematics is a young endeavor. Pioneer works can be traced back to the mid 19th century, but regular activities took off only in the 1950s, when Brazil joined the International Mathematical Union, the Brazilian Mathematical Colloquium was first held, and a number of important institutions were founded.

A landmark is the organization of the first Brazilian Mathematical Colloquium in 1957. The Colloquium was conceived as a broad meeting congregating the whole national mathematical community, and has been held biennially ever since. Several important books in the national mathematical literature, both elementary and advanced, started out as lecture notes for the Colloquium.

In the 1950s and 1960s, aiming at promoting scientific and technological development in Brazil, federal agencies supported talented students to pursue

high level scientific training abroad. As a result, a new generation of mathematicians emerged and new regular graduate programs in Mathematics were initiated, irradiating from IMPA and the University of São Paulo.

The Brazilian Mathematical Society (SBM) was founded in 1969 and became the country's adhering organization to the IMU. The Society has about 2,000 associates, young and senior, is a nonprofit publishing house for mathematical books and journals, and runs several initiatives of broad interest, such as Klein Project Brazil and the nationwide Master's program for secondary school teachers (PROFMAT).

Development accelerated in the 1970s, when definite policies for expansion and consolidation of the national scientific system, including strategic planning of graduate studies, were put in place by the federal government. The importance of Mathematics for the overall development of science and technology in the country earned it a special treatment at that stage.

Other mathematical societies were then established, including the Brazilian Society for Applied and Computational Mathematics (SBMAC), the Brazilian Statistics Association (ABE), the Brazilian Society for Mathematical Education (SBEM), and the Brazilian Society for the History of Mathematics (SBHMAT).

Starting from 2002, the Brazilian Mathematical Society has been organizing the *Bienal da Matemática*, a biennial meeting with over 2,000 participants, devoted to the teaching and popularization of Mathematics at all levels.

Brazil has two major mathematical olympiads. The Brazilian Mathematical Olympiad (OBM) has been promoting regional and national mathematical olympiads, as well as Brazil's successful participation in International Mathematical Olympiads, since 1979. The Brazilian Mathematical Olympiad for Public Schools (OBMEP) was started by IMPA and the federal government in 2005, and now reaches almost 20 million children every year. The President of Brazil usually chairs over the award ceremony.

There are now over 50 graduate programs in Mathematics and Statistics in Brazil, from the Amazon region to the southern border, that train a growing number of Brazilian students and a substantial number of foreign students, especially from Latin America and, increasingly, from Asia, Europe and North America.

Education, with a special role for mathematical education, has been a consistent top priority of the Brazilian government for many years. Among other initiatives, PROFMAT, a nationwide Master's program for secondary school teachers was launched in 2010 by the Brazilian Mathematical Society with the support of the federal government.

Science without Borders, another large scale initiative of the Brazilian government to foster international scientific exchange, kicked off in 2010. It will award over 100,000 scholarships every year, to Brazilian students - graduate and undergraduate - and researchers going abroad and to distinguished foreign scientists - young and senior - visiting Brazil.

**Mathematical Olympiads award ceremony:
President Dilma Roussef speaking**



In half a century or so, the number of Brazilian mathematicians has increased to about 2,000 active researchers and faculty members. Research activity covers most areas of Mathematics and many applications, with regular publications in the best journals, and it has been spreading to the whole national territory. Two Plenary Lectures and 12 Invited Addresses were given at ICMs by Brazilian mathematicians.

Organization & Finance

R\$1.00 = US\$0.50 = €0.40

Major Revenues

Federal Government	R\$ 6,000,000
Local governments and companies	R\$ 1,000,000
Registration fees	R\$ 2,100,000

We will keep the basic registration fee at the same level as in recent ICMs (USD 300 - 400), with substantial reductions for early registration, students, and mathematicians coming from the developing world.

Major Expenditures

Venue	R\$ 2,000,000
Support to participants	R\$ 2,500,000
Organization	R\$ 1,500,000

The organizers will provide local and travel support to 500 mathematicians from the developing world, including 200 mathematicians from other Latin American countries.

Organizing Committee

Hilário Alencar - *Universidade Federal de Alagoas*
Carolina Araujo - *IMPA*
Henrique Bursztyn - *IMPA*
Emanuel Carneiro - *IMPA*
Eduardo Colli - *Universidade de São Paulo*
Paulo Cordaro - *Universidade de São Paulo*
José Espinar - *IMPA*
Vanderlei Horita - *Universidade Estadual Paulista*
Roberto Imbuzeiro Oliveira - *IMPA*
Yoshiharu Kohayakawa - *Universidade de São Paulo*
Paolo Piccione - *Universidade de São Paulo*
Márcio Soares - *Universidade Federal de Minas Gerais*
Eduardo Teixeira - *Universidade Federal do Ceará*
Marcelo Viana - *IMPA - chair*

Administrative Support

Juliana Bressan - *IMPA*

Organization

Interevent - http://www.interevent.com.br/_en/

National Committee

Hilário Alencar - cochair
President, Sociedade Brasileira de Matemática

César Camacho - cochair
Director, IMPA

Jacob Palis - cochair
President, Academia Brasileira de Ciências

Marcelo Viana - cochair
Vice-president, Sociedade Brasileira de Matemática

José Carlos de Almeida
Director, Instituto de Matemática, Universidade Federal de Alagoas

Fagner Dias Araruna
Chair, Departamento de Matemática, Universidade Federal da Paraíba

Manuel Jesús Cruz Barreda
Chair, Departamento de Matemática, Universidade Federal do Paraná

Jéfferson Luiz Rocha Bastos
Chair, Departamento de Matemática, Universidade Estadual Paulista em S. José do Rio Preto

Rodney Josué Biezuner
Chair, Departamento de Matemática, Universidade Federal de Minas Gerais

Valtemir Martins Cabral
Chair, Departamento de Matemática, Universidade Federal do Amazonas

Flávio Ulhoa Coelho
Director, IME, Universidade de São Paulo

Gauss Cordeiro
Director, Centro de Ciências Exatas e Naturais, Universidade Federal de Pernambuco

Celso Costa
Director, Instituto de Matemática, Universidade Federal Fluminense

Alexandra Oliveira Abdala Cousin
Chair, Departamento de Matemática, Universidade Estadual de Maringá

Rudnei Dias da Cunha
Director, Instituto de Matemática, Universidade Federal do Rio Grande do Sul

Lorenzo J. Díaz
Director, Departamento de Matemática, Pontifícia Universidade Católica do Rio de Janeiro

José de Arimatéia Fernandes
Chair, Departamento de Matemática, Universidade Federal de Campina Grande

Fábio Gomes Figueira
Chair, Departamento de Matemática, Universidade Federal de São Carlos

Cátia Regina Gonçalves
Chair, Departamento de Matemática, Universidade de Brasília

Isaac Costa Lázaro
Director, Instituto de Matemática, Universidade Federal da Bahia

José Carlos Maldonado
Director, ICMC, Universidade de São Paulo em São Carlos

Caio Negreiros
Director, IMECC, Universidade Estadual de Campinas

Mauro Lima Santos
Director, Instituto de Ciências Exatas e Naturais, Universidade Federal do Pará

Walcy Santos
Director, Instituto de Matemática, Universidade Federal do Rio de Janeiro

Geci José Pereira da Silva
Director, Instituto de Matemática e Estatística, Universidade Federal de Goiás

Romildo José da Silva
Chair, Departamento de Matemática, Universidade Federal do Ceará

Letter from the Ministers of Science and Education

Aloizio Mercadante
Minister of Education



"We can assure you that our mathematical community is more than ready to organize an event of this magnitude."

Marco Antonio Raupp
Minister of Science,
Technology and Innovation



OFÍCIO INTERMINISTERIAL Nº 294/MEC/MCTI

Brasília, May 10, 2012.

Professor Ingrid Daubechies
President of
International Mathematical Union

Dear Professor Daubechies,

The Brazilian Mathematical Society is bidding to host the International Congress of Mathematicians, ICM 2018, in Brazil. This initiative has the full support of the Brazilian federal government.

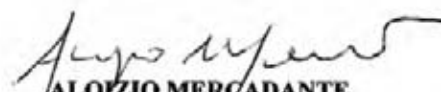
As you probably know, Science and Education are among the very highest priorities of our government. The Brazilian economy has been flourishing in a sustainable way, for several years, and funding for scientific research and education, at all levels, has been growing vigorously.

Large scale programs, such as Science without Borders, that offers 100,000 scholarships for international exchange, and *Mathematical Olympiads for Public Schools*, that gathers over 20 million children every year, are clear proof of the government's resolve to bring to a whole new level the presence of Brazil in the world's scientific scenario.

We view the realization in our country of prestigious events such as the International Congress Of Mathematicians as a natural development towards this goal. Thus, our Ministries will contribute BRL 6,000,000 (six million Brazilian Reais) towards the expenses of ICM 2018.

We are well informed of the role Brazilian mathematicians have been playing in the International Mathematical Union over the years. We can also assure you that our mathematical community is more than ready to organize an event of this magnitude. So, we very much hope that our bid will be successful.

Very best regards,


ALOIZIO MERCADANTE
Minister of Education


MARCO ANTONIO RAUPP
Minister of Science, Technology and Innovation

Latin America Brazil

Bringing ICM to **Rio de Janeiro**

*Prefeitura da Cidade do Rio de Janeiro
Gabinete do Prefeito*

Rio de Janeiro, August 3rd, 2012.

To the
International Mathematical Union

Re: International Congress of Mathematicians – ICM 2018

Dear Sirs,

It is with great pleasure that the City of Rio de Janeiro extends its official invitation to the International Congress of Mathematicians – ICM in 2018.

We look forward to being able to give you and your members a warm welcome in 2018 and to making sure you receive the genuine "cariooca" hospitality.

Rio is definitely a professional choice to host important international events such as yours, since it provides diverse venues and entertainment options plus a very efficient and comfortable hotel accommodations of varied chains & categories. The city is also going through a redevelopment of the urban infrastructure of the entire harbor area.

We are implementing a new intermodal system linking in the express ways (BRTS), trains, ferry and subway, which will increase the transportation capacity from 16% to 50% within the city.

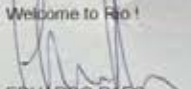
Rio is suited to all tastes, offering something to everyone, allowing them to become acquainted with the many sides and charms of the city.

In addition, the population of Rio is naturally friendly and warmhearted, and our cultural traditions, cuisine and nightlife are not only good but special.

Speaking from experience, I feel sure that you could not choose a better venue for your event.

I look forward to meeting you in 2018.

Welcome to Rio!


EDUARDO PAES
Mayor
City of Rio de Janeiro

Prefeitura da Cidade do Rio de Janeiro – Gabinete do Prefeito
Rua Afonso Cavalcanti, 455 / 13^o andar / 20211-110 – Cidade Nova – Rio de Janeiro – RJ
Tel.: 2273-3897 / 2273-3972 / 2503-2812 / 2503-2815 FAX: 2273-3972



*“Rio is suited to all tastes,
offering something to everyone”*

Eduardo Paes
Mayor, Rio de Janeiro

Proposed Host City

Rio de Janeiro

Rio de Janeiro, the most visited city in the southern hemisphere, is widely known for its unparalleled mix of natural beauty, historical landmarks and cosmopolitan life. With its seductive exquisite beaches, breathtaking sights as the Christ the Redeemer monument, the Sugar Loaf mountain and the Maracanã stadium, the rhythms of samba and bossa nova, and a youthful and friendly population, Rio received the nickname of "Marvelous City" and was recently granted the title of World Heritage Site by UNESCO.

About Rio

Rio de Janeiro is located at 22°53'S and 43°17'W, on the Atlantic coast of the southeast part of Brazil. It is the second largest city in the country, with a total population of 6.3 million people. It receives 4.5 million tourists each year.

Weather

The average temperature in Rio is 25°C. During the month of August, the temperature range is from 18°C to 24°C.

History

Officially founded in 1565, Rio de Janeiro was the capital of Brazil from 1763 to 1960, witnessing different periods of Brazilian history: Portuguese colony from 1500 to 1822, Brazilian Empire from 1822 to 1889 and Brazilian Republic from 1889 to the present.



ICM should be held in Rio because...

1

Rio is a well-established tourist city

The city has around 23,000 hotel rooms, with varied price ranges.

Effective transportation system consisting of subway, buses and reasonably priced taxis connects the hotels with the convention centers, touristic landmarks and international airport.

Around 300 weekly direct flights from foreign cities.

Extensive presence of restaurants with international cuisine.

2

Major sports events are enhancing the infrastructure

Rio hosted the Pan-American Games in 2007 and will host the FIFA World Cup finals in 2014 and the Summer Olympics in 2016.

Additional 9,000 hotel rooms to be created until 2016.

Total renovation of the harbour area (close to downtown) and expansion of the international airport.

Expansion of the subway system and implementation of the new Bus Rapid Transit (BRT) system.

3

The city has successfully received important political and scientific conventions

United Nations Conference Rio+20 recently took place in Rio (June 2012), bringing together representatives of 193 nations, with daily attendance of 5,000 people.

Major scientific events recently held in Rio include, for instance, the International Congress of Mathematical Physics (2006), the International Astronomical Union General Assembly (2009) and the International Conference on Hyperbolic Problems (to occur in 2014).

4

Rio has amazing attractions

Some of the most famous beaches in the world such as Copacabana and Ipanema.

Several mountains and hills in the Tijuca Forest encrusted in the urban environment allowing for amazing views and hiking trails.

A sports-oriented city, Rio has a great number of bike trails, running trails, parks, soccer fields, beach volleyball courts and much more.

Vibrant nightlife in the bohemian neighborhood of Lapa with performances of samba and choro groups.

Other cultural attractions: the Botanical Garden, over 100 museums, the Municipal Theater, concert halls and nightclubs.



Getting to Rio

Weekly Flights to Rio

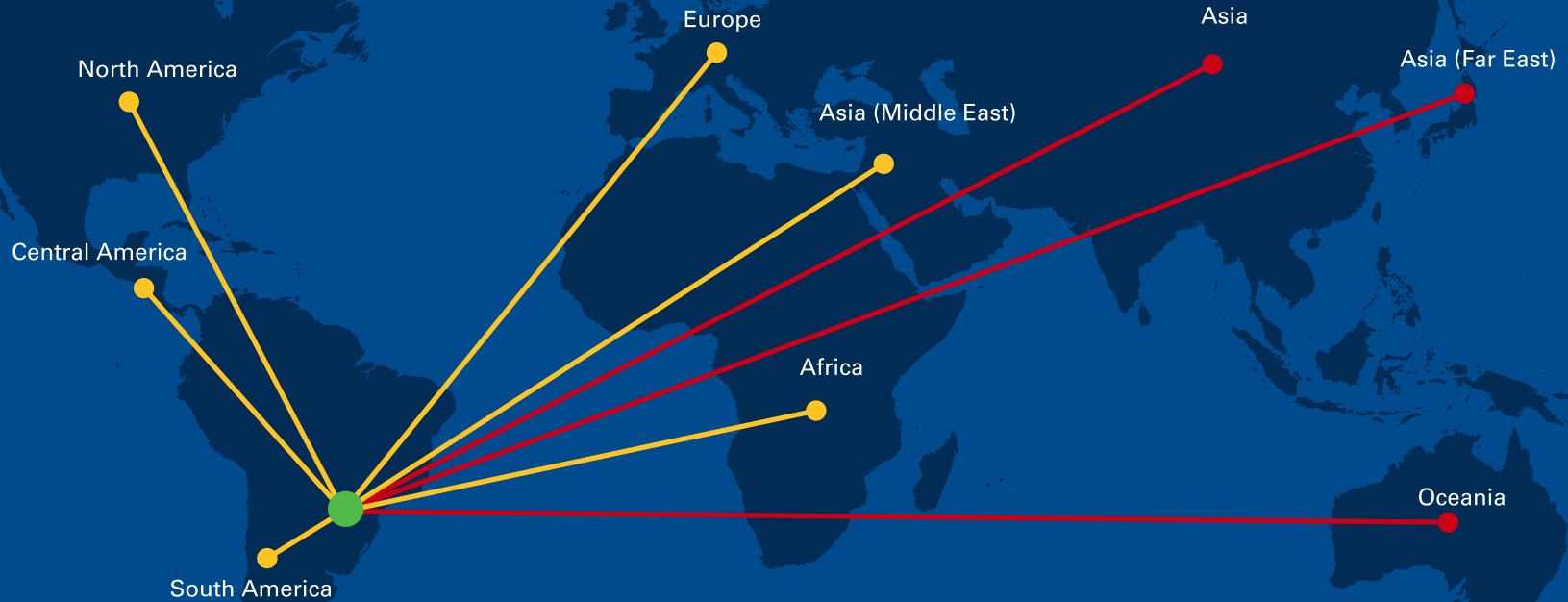
Europe - 66
Asia - 07
North America - 64
South America - 147
Central America - 12
Africa - 03

Weekly Flights to Brazil

Europe - 207
Asia - 12
North America - 213
South America - 438
Central America - 35
Africa - 15

Average air travel time:

Europe - 11-12 hours
Asia - 11-25 hours
North America - 9-14 hours
South America - 3-8 hours
Central America - 7 hours
Africa - 10 hours
Oceania - 18 hours



The Brazilian government is fully committed to the principle of free circulation of scientists - we have no knowledge of a mathematician ever being denied a Brazilian visa. Citizens of over 65 countries and territories are not required to hold a visa to enter Brazil, including most countries in Europe and South America. For other nationalities, the application for a Brazilian visa is usually simple and fast.

Direct Flights — Yellow line
International Connection — Red line

Accommodation Where to stay in Rio

Rio has a wide variety of accommodation options in all price ranges. The city currently has over 23,000 hotel rooms. This is expected to increase to 32,000 rooms by 2016 according to a report from the Ministry of Tourism - Embratur (www.turismo.gov.br/turismo/o_ministerio/embratur/). The beach neighborhoods of Zona Sul and all of Centro (downtown) are well connected to the convention center by a network of buses and subway lines.

Category	Rooms	Range(R\$)	District	Rooms
5 stars	4,286	700+	Leblon/ Ipanema/Copacabana	9,986
4 stars	6,719	250~650	Santa Teresa/Centro/Glória	4,153
3 stars	5,287	150~450	Flamengo/Botafogo	2,638
2 stars	1,953	80~300	Barra da Tijuca/São Conrado	2,802
1 star	1,965	50~150	Other	~4,000
Serviced Flats	1,179	200+		
Bed& Breakfast	1,076	50~200		
Hostels	584 dorms	25~65		
				Total >23,000 rooms

R\$1.00 = US\$0.50 = €0.40



Transportation & Security

Getting around Rio

Bus

This is the most popular means of public transportation in Rio. A single-trip fare of R\$ 2.75 is enough to move around most of the city, including the downtown and Zona Sul areas. Most bus lines operate 24 hours a day, 7 days a week. More information is available from <http://www.rioonibus.com/>.



Subway

Rio's subway system operates from 5:00 to 24:00 on weekdays and from 7:00 to 23:00 on weekends and holidays. It currently consists of two lines that serve an average of 600,000 passengers per weekday. New stations and a full new line to Barra da Tijuca are expected to be completed by 2016. The single-trip fare of R\$ 3.20 allows for a free transfer to an integrated bus system. All stations are wheelchair accessible and have features for the visually impaired. For more information, visit <http://www.metrorio.com.br/>



Biking

There are dedicated bike lanes along the beaches and around the Rodrigo de Freitas Lagoon. A new bike rental system, with kiosks spread around Zona Sul, offers day-long rentals for R\$ 5.00 and monthly passes for R\$ 10.00. See <http://www.movesamba.com.br> for more information.



Taxi

Regular yellow taxis can be a cost-effective way to navigate around Rio, especially for groups of people. More information is available from <http://www.rioguiaoficial.com.br/rio-de-janeiro/informacoes-turisticas/transportes-urbanos>.

Location	To Convention Center	
	Estimated Time	Estimated Fare
Jobim Int'l Airport	25 min	R\$30.00
Ipanema	17 min	R\$25.00
Flamengo	18 min	R\$18.00

R\$1.00 = US\$0.50 = €0.40



Safety

As in any other big city, and in spite of a precipitous decline in violent crime, visitors should exercise caution when moving around Rio. Helpful tips are available from: http://www.policiamilitar.rj.gov.br/dicas_seguranca_categoria.php.

Opening Ceremony Maracanãzinho Arena



Part of the Maracanã sports complex

Completely renovated 2003 - 2007

Area: 11,198m²

Capacity: 11,800 seats

Fully air-conditioned

Served by Maracanã subway station

Close to several bus stops



Carta n.º 04/2012/SETUR

Rio de Janeiro, August 3rd, 2012.

To the
International Mathematical Union

Re: International Congress of Mathematicians – ICM 2018

Dear Sirs,

The unique setting of Rio de Janeiro makes it different from other megacities in the world. Here, the city unveils itself in all contrasts from the ocean beaches to the rain forest. An endless sequence of varied shaped hills and the huge mass of ocean waters design its coastline.

Centred mostly around the downtown area, Rio de Janeiro's historical attractions and cultural tradition reveal unexpected treasures from the past, side by side, with contemporary notable buildings hosting a modern lifestyle. Rio has been the political and cultural center of Brazil since the 18th century.

An ideal city for international congresses, conventions and exhibitions, Rio de Janeiro can host a great number of participants in any type of event. There are two modern and well equipped convention centers in the city and hotels with conference services suited to all budgets, either for leisure or business requirements. The hotels' substructure is being constantly inspected, ensuring that services and technology are continuously improved.

The City Hall supports the feasibility of new constructions of hotel projects (buildings) by offering incentives to achieve the target of 34 000 rooms in the city.

We will be much honored if the City of Rio de Janeiro is selected to host the International Congress of Mathematicians – ICM in 2018.

Welcome to Rio !

[Signature]
PEDRO AUGUSTO GUIMARAES
Secretary of Tourism
City of Rio de Janeiro

SETUR - Secretaria Especial de Turismo do Município do Rio de Janeiro
Praça Pio X, 119 - 10th andar - Centro - CEP: 20.040-20 | (55 21) 2571-7000 / 2976-7010
www.rioguiaoficial.com.br | www.rioofficialguide.com



ICM Main Venue Sul America Convention Center

One of Brazil's most modern convention centers

Located in downtown Rio de Janeiro

Opened in 2007

Area: 16,000m²

Capacity: 5,000 seats

Auditorium for 3,000 people

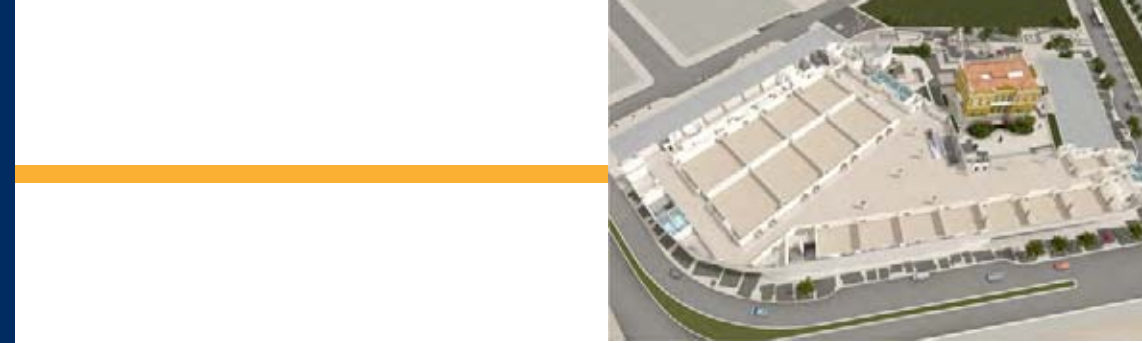
13 conference rooms for
70 to 140 people (73 to 141 m²)

Full catering service

Fully air-conditioned

Served by Estácio subway station

Close to several bus stops



City of Rio de Janeiro Tourist Attractions

1 Corcovado

One of the most beautiful spots in the city, it stands 2,330 feet above sea level and provides a breathtaking panoramic view of Rio. The top of Corcovado, crowned with a 98 feet high statue of Christ, can be reached by electric train.

<http://www.corcovado.com.br>



2 Sugar Loaf mountain

This natural symbol of Rio de Janeiro can be seen at the entrance of Guanabara Bay. It is 1,300 feet high and can be reached by cable-car. There is also a Tourist Heliport located on the top of neighboring Urca Hill.

<http://www.bondinho.com.br>

3 Botanical Garden

A paradise of plants and trees from the four corners of the Earth. Founded in 1808, it spreads over an area of about 340 acres and exhibits over 5000 species of plants, some of the most impressive being the Imperial Palms planted in 1842.

<http://www.jbrj.gov.br>



4 Rodrigo de Freitas Lagoon

A large lagoon in the middle of Zona Sul, with great views to Corcovado and very close to Ipanema and Leblon beaches. Bikes and little peddle-operated boats are available for rental.



5



Tijuca National Park

The park covers 3,300 hectares and hosts the Tijuca Forest, the largest urban forest in the world. Roads and hiking trails run through the entire length of the park allowing visitors to enjoy its many natural wonders.

<http://www.parquedatijuca.com.br>

6



Lapa / SantaTeresa neighborhoods

Built as an aqueduct during the colonial period, the Lapa Arches are located at the heart of Rio's nightlife district of Lapa. There is a scenic tram line going over the arches linking downtown Rio to the picturesque SantaTeresa district, a vibrant artistic community, with a great range of bars, restaurants, artists' studios, cultural centers and museums.



Maracanã Stadium

This stadium, inaugurated in 1950 to host the FIFA World Cup, is Brazil's temple of soccer and the largest stadium in South America. The sports museum inside the stadium has photos, posters, cups and uniforms of the giants of all times.

<http://www.suderj.rj.gov.br/maracana.asp>



8

Museums and Architecture

Rio has a variety of museums and buildings with unique architecture: Municipal Theater, Museum of Modern Art, National Library, Colombo Bakery, Museum of Contemporary Art and many others.



9

Beaches

Rio has over 90 km of white sand beaches, including worldly famous Copacabana, Ipanema, Leblon and Barra daTijuca.



Fort of Copacabana

This military base at the south end of Copacabana beach is open to the general public and provides an amazing view of Copacabana. It hosts a museum, a branch of the historical Colombo Bakery, and choro concerts on Sundays.



10

Around Rio de Janeiro and Brazil

Tourist Attractions

Petrópolis

Located 70 km from Rio, in the mountains of Serra dos Órgãos, this historical city contains magnificent buildings, such as the Imperial Palace, turned into a museum and featuring furniture, paintings and other relics from the Brazilian Imperial period. The city also offers fine dining and adventure sports.



Búzios

Located in a beautiful peninsula 170 km to the northeast of Rio de Janeiro, the resort city of Búzios has 20+ scenic beaches and features great surfing, windsurfing and other water sports.



Ilha Grande

Located 150 km from Rio, this picture-postcard car-free island hosts wild rainforest and peaceful beaches connected by a series of pathways and trails. Its Lopes Mendes Beach has recently been voted one of the world's most beautiful. It is famous for snorkelling, sailing and kayaking.



Itatiaia National Park

Located 170 km from Rio, on the shoulders of the Serra of Mantiqueira, the park is an ecological sanctuary that shelters unique animal and vegetal species, cool crystalline rivers and waterfalls, and two of the highest peaks in Brazil, including the Black Needles Peak (2791m)



Paraty

Founded in the 17th century and located 250 km west of Rio, this picturesque colonial town features old churches and historic buildings, cobblestone streets, fine restaurants and bars. It is surrounded by natural waterfalls, spectacular beaches, and over 300 islands that can be reached by boat.

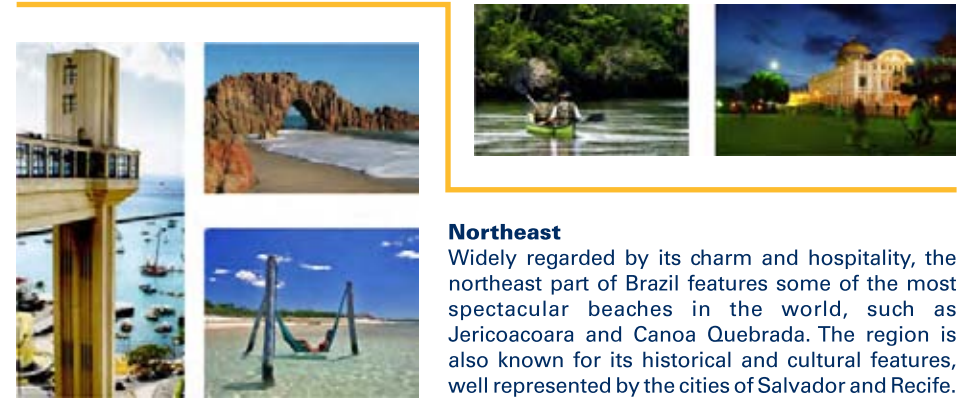


Rio de Janeiro surroundings

Brazil

North

The Amazon jungle is the largest rainforest on Earth and a World Natural Heritage site. At the heart of the jungle, at the encounter of the Amazon and Black rivers, is the city of Manaus. At the end of the Amazon river is the city of Belém, full of historical buildings and cultural attractions, and the great Marajó Island.

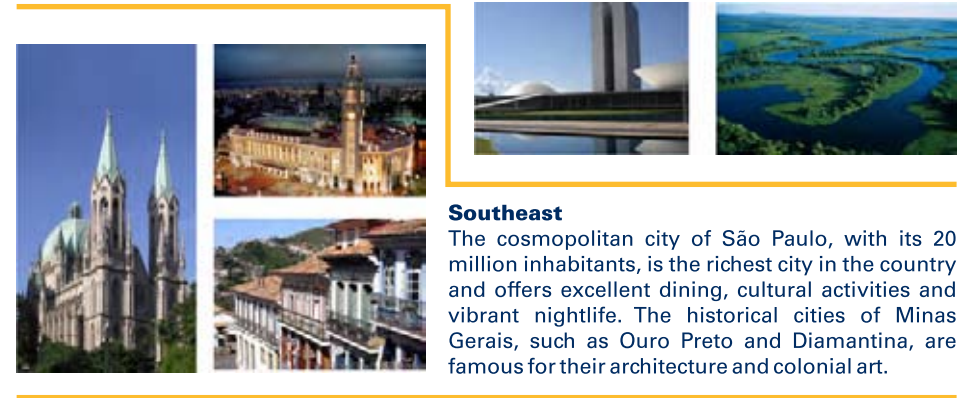


Northeast

Widely regarded by its charm and hospitality, the northeast part of Brazil features some of the most spectacular beaches in the world, such as Jericoacoara and Canoa Quebrada. The region is also known for its historical and cultural features, well represented by the cities of Salvador and Recife.

Midwest

The central region hosts the capital Brasília, founded in 1960 and regarded for its particular architecture, and the Brazilian swamps (Pantanal), a sanctuary of unique biodiversity. The city of Bonito offers a variety of nature and adventure activities in the Pantanal region.



Southeast

The cosmopolitan city of São Paulo, with its 20 million inhabitants, is the richest city in the country and offers excellent dining, cultural activities and vibrant nightlife. The historical cities of Minas Gerais, such as Ouro Preto and Diamantina, are famous for their architecture and colonial art.

South

The city of Foz do Iguaçu, located on the triple border Brazil-Paraguay-Argentina, hosts the impressive Iguazu Falls and the Itaipu Dam. Other interesting tourist destinations are the charming cities of Gramado and Canela, and the beautiful beaches of Florianópolis.



Country History

Cultural Aspects

A cultural history of Brazil

Before the arrival of the Portuguese in 1500, present-day Brazil was inhabited by 2,000 different nations of semi-nomadic peoples. Some of these tribes still live according to ancestral customs in the Amazon and other regions of the country. Indigenous influences are felt to this day in the language, folklore, music, food and personal habits of Brazilians.



Between the 16th and the 19th centuries, more than 3 million African slaves were brought to Brazil. With them came the seeds of the best known aspects of Brazilian culture, such as samba and capoeira. African beliefs and traditions, together with Portuguese Catholicism, have played a main role in shaping the Brazilian religious identity.



Portuguese influences became specially prominent with the arrival of the Portuguese royal family to Rio in 1808, as they fled Napoleon in Europe. During their stay in Brazil, Rio came to boast a university, a bank, a botanical garden and several other improvements. This was also a formative period for Brazilian literature, with well known names such as Machado de Assis and José de Alencar.



Brazil reached independence in 1822 and became a republic in 1889. The 19th and 20th century witnessed waves of immigrants from Italy, Germany, Japan, Lebanon and other countries.



Brazilian Modernism in the 1920's left a strong mark, and in the 1930's populist dictator Getúlio Vargas fostered samba schools, nationalistic music, indigenous elements and other forms of eminently Brazilian culture. This brought a new degree of national self-consciousness to Brazilian culture that became one of its defining characteristics.

The 1960's and 1970's were difficult times, during which the country was ruled by a military junta. Perhaps unexpectedly, this resulted in a creative explosion in Brazilian music and fine arts. A slow return to democracy and a series of economic crises meant that the 1980's and 1990's were also turbulent times.



More recently, with newfound political and economical stability, Brazilian culture remains a dense combination of a large variety of ingredients, where boundaries between different traditions have proven quite fluid.



Music, dance and festivities

The infectious rhythms of samba, the sophisticated harmonies of bossa nova and the street festivities of Rio's Carnival are powerful symbols of Brazilian culture. They have helped cement Brazil's image as a festive country, where influences ranging from the European ballroom to the drums of Africa have given rise to one of the world's major musical cultures.

Over the 20th century there was an increasing tendency to fuse foreign musical forms with the many traditional strands of Brazilian music. Choro, an improvisational, mostly instrumental style that first appeared in Rio, and the erudite and nationalistic music of composers Villa Lobos and Camargo Guarnieri are early examples. The jazz-influenced bossa nova movement of Gilberto and Jobim made Brazilian music known worldwide. Recent years have seen both the revival of more traditional styles and the emergence of new genres such as funk carioca.



Cultural agenda

Rio de Janeiro offers many cultural activities. In addition to traditional cinemas, theaters, concert halls and nightclubs, there are also other typical Rio attractions, such as sambas de gafieira, capoeira exhibitions and choro groups playing on the streets (Learn more: <http://www.rioguiaoficial.com.br/en/o-que-fazer>).

Food

Rio de Janeiro offers a wealth of gastronomic options. Brazilian cuisine is characterized by a mix of African, Asian, European and native-Brazilian influences, and Rio is home to great regional speciality restaurants scattered around the city. One should not miss delicacies such as shrimp bobó, churrasco (Brazilian barbecue), moqueca stew, and feijoada, traditionally served on Saturdays and accompanied by caipirinha. Juice stores, where one can try a variety of exotic freshly squeezed fruit juices, are found everywhere in the city, and are considered a Rio institution. (Learn more: <http://www.rioguiaoficial.com.br/en/onde-comer>).

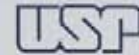


IMU General Assembly



"We are certain that the ICM in Rio de Janeiro, and the IMU General Assembly at our campus in the city of São Paulo, will be a pivotal moment in the history of Mathematics in our region..."

Marco Antonio Zago
Research Provost USP



Pró-Reitoria de
Pesquisa

OF.PRP-A-45/2012

São Paulo, October 2, 2012.

Prof. Ingrid Daubechies
President of The International Mathematical Union

Dear Prof. Daubechies

The University of São Paulo, USP, is proud to be associated with the Brazilian candidacy to host the International Congress of Mathematicians ICM-2018.

The University of São Paulo is a state research university with about 80.000 students and 5.500 faculty members. Each year, 2.300 students obtain their degrees in one of its several graduate programs, the highest among the universities in the world.

USP has two institutes completely involved with mathematical sciences. They train some 3.300 undergraduate students in Mathematics, Statistics and Computer Sciences, host very successful graduate programs (with approximately 900 graduate students) and develop research in these areas intensely.

We are certain that the ICM in Rio de Janeiro, and the IMU General Assembly at our campus in the city of São Paulo, will be a pivotal moment in the history of Mathematics in our region that will command great enthusiasm from our students and professors.

We commit our full support to this initiative and hope it will receive a most positive reception from IMU.

With our best regards and wishes,

Marco Antonio Zago
Research Provost
University of São Paulo

IMU General Assembly

São Paulo, The Latin American City that Never Sleeps

Sampa, as it is affectionately called, is among the biggest metropolises on the planet. While the *paulistanos*, the locals from São Paulo, are secretly jealous of the stunning natural beauty of Rio de Janeiro, they are also proud of their city. After all, this is the cultural capital of the country, which seduces locals and visitors alike with endless offers, including first-rate museums, nightly concerts, experimental theater and dance. Its nightlife options and fine dining venues are among the very best in the world.

São Paulo was born in 1554, when Jesuit missionaries founded the village of São Paulo dos Campos de Piratininga, 68 kilometers inland from São Vicente, the first coastal settlement in Brazil and the first permanent Portuguese colony in the New World. The coffee industry in the 19th century brought great economic prosperity to São Paulo, and the waves of immigrants from all over the world in the 20th century turned this city into Brazil's most culturally diverse metropolis. By the 1950s São Paulo became the country's economic center, and today its huge market (about 20 million people in greater São Paulo) is a magnet for multinational corporations.

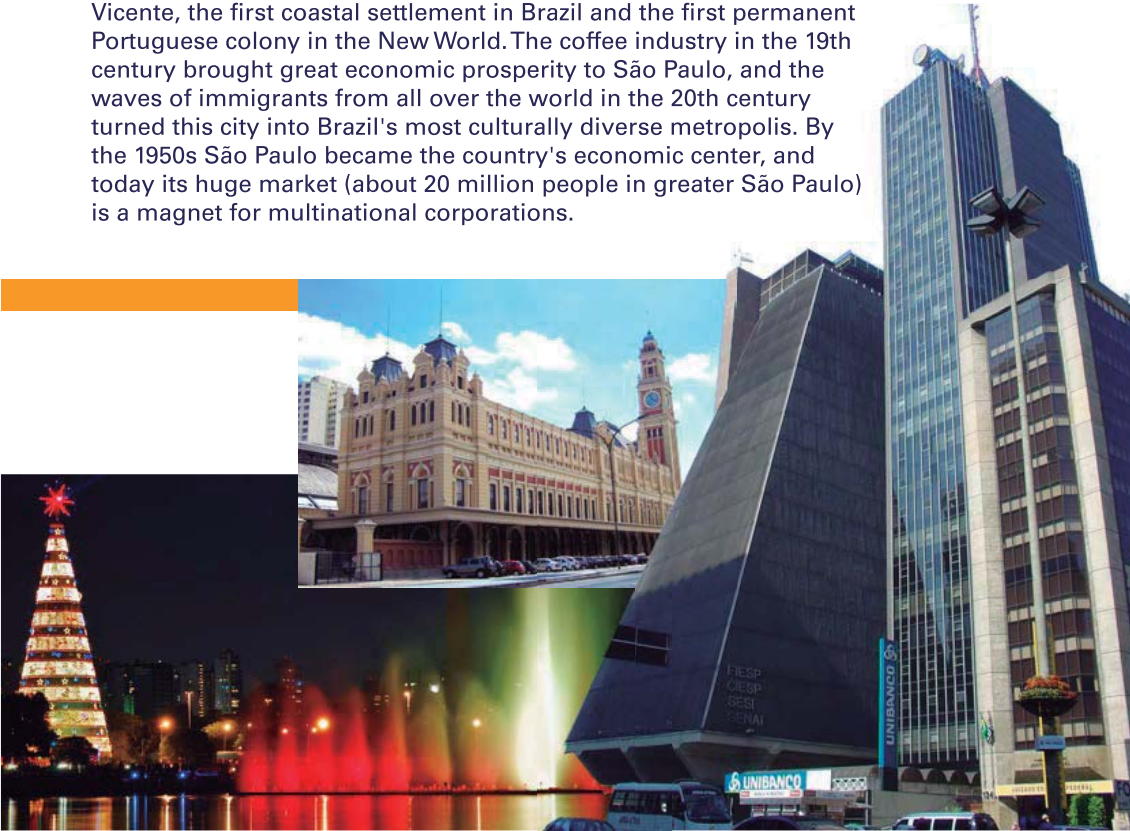
City of São Paulo

Attractions and accommodation

Boasting one of the richest cultural scenes, and many of the best restaurants in the country, São Paulo has a lot to offer:

- Ibirapuera Park (Parque Ibirapuera): its 2 million square meters of green space host some of the best highlights of the city including the Japanese Pavilion, Museum of Modern Art, Planetarium, Auditorium and many others.
- São Paulo Museum of Art (Museu de Arte de São Paulo (MASP)): features a collection of over 7,000 art pieces by such painters as Van Gogh, Renoir, Delacroix, Cézanne, Monet, Rembrandt, Picasso and Degas.
- State Art Gallery (Pinacoteca do Estado): an excellent place to study and understand Brazilian art by such renowned artists as Tarsila do Amaral and Cândido Portinari.
- Metropolitan Cathedral (Catedral da Sé): São Paulo's geographical center, Praça da Sé is the location of many historical and religious sites, most notably the Metropolitan Cathedral, whose construction began in 1913.
- Avenida Paulista (Paulista Avenue): the business center of Latin America stretches over 2.8 kilometers. Its surroundings are rich with museums, shops and restaurants.

The participants of the IMU General Assembly will be accommodated in hotels along the Faria Lima Avenue, located about 15 minutes (by the GA transfer) from the campus of the University of São Paulo. The avenue itself and its surroundings have a prominent nightlife, with elegant restaurants, numerous bars and night clubs.



IMU General Assembly

About USP

USP is a public university in the Brazilian state of São Paulo. It is the largest Brazilian university and the country's most prestigious academic institution. According to reports by the Ministry of Science, Technology and Innovation, more than 25% of the articles published by Brazilian researchers in high quality conferences and journals are produced at the University of São Paulo.

USP is one of the largest institutions of higher education in Latin America, with approximately 80,000 enrolled students and close to 5,500 faculty members. It has seven campuses, with the main one in the city of São Paulo, which covers an area of 7,443,770 square meters. Each year, 2,300 students obtain their degrees from one of USP's several graduate programs.



USP - University of São Paulo

From São Paulo to Rio de Janeiro

Transportation from São Paulo to Rio de Janeiro after de General Assembly will be offered to all delegates and invited guests. The trip will include a stop for lunch and a visit to Parque Nacional do Itatiaia, Brazil's first national park (<http://www.icmbio.gov.br/parnaitatiaia/>).



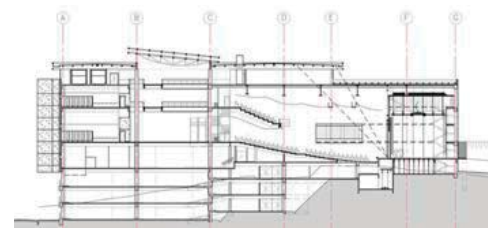
Proposed venue

The proposed venue for the IMU General Assembly is the Convention Center of the University of São Paulo. This center is currently under construction and its opening is scheduled for July 2014.

The center is a 33,500 square meter complex, on campus, located next to the Museums Complex of the University of São Paulo (Archeology and Ethnology Museum, Zoology Museum, and Science Museum).

The building comprises:

- 3 auditoriums (seating capacities of 1,450, 620 and 218)
- 1 projection room (seating capacity of 157)
- Exhibitions hall (a 600 square meter hall + 20 rearrangeable rooms)



ICM in the Americas



UNION MATEMATICA DE AMERICA LATINA Y EL CARIBE

at Santiago, August 29th, 2012

Dear Professor Ingrid Daubechies,
President of IMU

We are writing to you on behalf of UMALCA (the LatinAmerican and Caribbean Mathematical Society) to express our complete, unreserved and emphatic support for Brazil's candidacy to host ICM 2018 in Rio de Janeiro.

UMALCA congregates the national mathematical societies of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela. The Union represents all the latinAmerican societies which undertake and promote scientific activity in our discipline.

The Brazilian mathematical community is the largest in the region and has played a leading role in both our Union and our LatinAmerican Mathematics network. A significant number of active LatinAmerican mathematicians attained their PhD's and Masters degrees in Brazil, and many of these have been at the forefront of mathematical development in their own countries. Brazil's support to the whole region explains, in large part, the growth of Mathematics as a discipline in LatinAmerica. Further, Brazilian institutions, societies and agencies give strong human and financial support not only to UMALCA's activities, but also to the ongoing training of young researchers and the dissemination of mathematics (via the UMALCA Schools) in regions of LatinAmerica which have high economic and education needs.

UMALCA feels that holding ICM 2018 in Rio de Janeiro will constitute a landmark moment in the history of Mathematics in LatinAmerica. In addition to giving the region the opportunity to demonstrate its capacity to successfully host such a prestigious meeting, holding an event of this magnitude would raise awareness of our region's contribution to mathematics and lend a sense of recognition to our community, a benefit whose contribution to the future growth and development of mathematics in LatinAmerica, cannot be valued highly enough.

With my best regards,


Servet Martínez
President UMALCA

"ICM in Rio de Janeiro will constitute a landmark moment in the history of Mathematics in Latin America."

Servet Martínez
President, UMALCA



México, D.F. september 11, 2012

Professor Ingrid Daubechies,
President of International Mathematical Union (IMU).

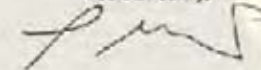
This letter is to support the nomination of Brazil, presented by the Mathematical Society of Brazil, to host the 2018 International Congress of Mathematicians in Rio de Janeiro.

Mexico has close academic ties with Brazil and the collaboration between mathematicians of these two countries has proved to be very fruitful and helpful for both. There are already several mathematicians in our community that have got their Ph. D. degrees in Brazil, mostly but not exclusively at IMPA. There are also several students from Brazil that have got their degrees in Mexico. And the joint research projects between people of these two countries have already produced many interesting articles in several areas of mathematics, as for instance in dynamical systems, geometry, combinatorics and algebra, to name a few. It is important to point out here that the well recognized Mexican prize "Premio Mexico" was awarded to Jacob Palis, one of the most influential Brazilian mathematicians, for his contribution to the development of Mexican mathematics.

We should mention also that having the support of Brazil for meetings held in Mexico has already become a tradition, and this has been a very helpful support for building up a solid mathematical tradition in our country.

It is also striking to see the significant role that Brazil is playing, and has played for decades already, to develop mathematics in Latin America. No doubt that having the ICM in Brazil will be a significant support for mathematics in our region. Amongst many other reasons, this would give many young mathematicians of Latino America, the opportunity to be part of the most important mathematical congress in the world. This will also settle an example in our communities, that we can aim for the highest mathematically speaking.

Yours sincerely,



Luis Montejano

President of the Mexican Mathematical Society

"It is also striking to see the significant role that Brazil is playing, and has played for decades already, to develop Mathematics in Latin America."

Luis Montejano
President, Mexican Mathematical Society

"...the International Congress of Mathematicians at Rio will be a clear sign of IMU of recognizing this leadership and will also give a strong impulse to the development of mathematics in our region."

Eleonor Harboure
President, Argentinian Mathematical Union

THE NATIONAL ACADEMIES

Advisers to the Nation on Science, Engineering, and Medicine

Policy and Global Affairs Division
Board on International Scientific Organizations


500 Fifth Street, NW
Washington, DC 20001
Phone: 202 334 2807
Fax: 202 334 2231

To: Hilário Alencar, César Camacho, Jacob Palis, Marcelo Viana
From: The U.S. National Committee for Mathematics
Date: November 3, 2012

Thank you for sharing your proposal to host the 2018 International Congress of Mathematics in Brazil. The U.S. National Committee for Mathematics discussed the proposal at length at their most recent meeting. We were very impressed by the case you have made and the groundwork you have laid for a successful congress. The strong Brazilian mathematical network, the Rio location, and the level of support you have from the Brazilian government and institutions are all very attractive, and we find the prospect of the first ICM to be held in South America, or even in the southern hemisphere, very exciting.

We would be delighted to come to Brazil for the ICM in 2018.

Sincerely,

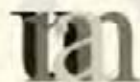


Carol Wood,
Chair, U.S. National Committee for Mathematics

NATIONAL ACADEMY OF SCIENCES • NATIONAL ACADEMY OF ENGINEERING • INSTITUTE OF MEDICINE • NATIONAL RESEARCH COUNCIL

The strong Brazilian mathematical network, the Rio location, and the level of support you have from the Brazilian government and institutions are all very attractive, and we find the prospect of the first ICM to be held in South America, or even in the southern hemisphere, very exciting.

Carol Wood
Chair, U.S. National Committee for Mathematics



UNION
MATEMÁTICA
ARGENTINA

Santa Fe, September 19, 2012

Professor Ingrid Daubechies
President of the
International Mathematical Union

Dear Prof. Daubechies,

On behalf of the Unión Matemática Argentina, I would like to strongly support the candidacy of Rio de Janeiro, Brazil, as host of the 2018 International Congress of Mathematicians.

There is no doubt that such important event will benefit all the Latin-American mathematical community. In particular, it will be a clear opportunity for many Argentinians mathematicians to participate, most probably for the first time, of the most relevant mathematical worldwide meeting that covers all branches of our discipline.

Cooperation on mathematical research between Argentina and Brazil has a long and fruitful history. I would like to point out that Brazilian Institutes and Universities have developed along the last decades an active policy of hospitality for foreign mathematicians that have played an important role in the advance of mathematics in our country. Besides, very often, students from Argentina choose to follow graduate studies at Brazilian universities and that contributes to strengthen joint research projects as much as to open new lines of investigation.

Mathematics research has steadily grown in our region and certainly Brazil has been one of the leaders in this process. We believe that the attainment of the International Congress of Mathematicians at Rio will be a clear sign from IMU of recognizing this leadership and it will also give a strong impulse to the development of mathematics in our region.

Hoping that ICM will take place in South America for the first time in 2018, I send my best regards to you.



Eleonor Harboure
President

ICM related meetings

ICM in the Americas

Several groups of mathematicians across the Americas have expressed their interest in organizing ICM related meetings, either conferences or schools, in 2018. A formal call for proposals will be made in due time.

Brazil

Differential Geometry and Global Analysis, Continuous Optimization, Probability and Statistics
Manaus, AM
Org: Celso Cabral, Flávia Jacinto, Renato Tribuzy and Roberto Mesquita Silva.

New trends in nonlinear elliptic PDEs.
Fortaleza, CE
Org: Eduardo Teixeira, Fábio Montenegro and Djairo de Figueiredo.

Statistical Methods in Dynamics
Rio de Janeiro, RJ
Org: Maria José Pacífico, Vitor Araújo, Lorenzo J. Diaz, Enrique Pujals, Isabel Rios and Juan Rivera-Letelier.

Algebras, Representations and Applications
Ubatuba, SP
Org: Ivan Shestakov and Vyacheslav Futorny.

Recent trends in Geometric Analysis
University of São Paulo, SP
Org: Paolo Piccione and Fernando Codá Marques.

Codes and Cryptography
Campinas, SP
Org: Marcelo Firer, Sueli Costa, Carlile Lavor, José Plínio Santos, Reginaldo Palazzo Jr., Max Henrique Costa, Ricardo Dahab, Julio César López Hernández, Cristiano Torezzan and Paulo Barreto.

Extremal and Probabilistic Combinatorics
University of São Paulo, SP
Org: Béla Bollobás and Yoshiharu Kohayakawa.

International Conference on Mathematical Modelling in Industry
Campinas, SP
Org: José Mário Martinez and José Alberto Cuminato.

Random Structures of the Brain
University of São Paulo, SP
Org: Antonio Galves and Nancy Garcia.

Trends in Computational and Applied Mathematics
Foz do Iguaçu, PR
Org: Yuan Jin Yun.

Latin America

School on Information and Randomness
Centre for Mathematical Modeling (CMM), Santiago, Chile
Org: Joaquín Fontbona, Alejandro Maass, Servet Martínez and Jaime San Martín.

Complex geometry and Discrete Holomorphic Dynamics
Cuernavaca, Mexico
Org: Serge Cantat, Nikolay Gusevskii, John Parker, Michael Lyubich and José Seade.

Recent advances in Real and Harmonic Analysis and its Applications
Buenos Aires, Argentina
Org: Hugo Aimar, Carlos Cabrelli, Emanuel Carneiro, Michael Lacey and Ursula Molter.

Model Theory and its applications
Universidad de los Andes, Bogotá, Colombia
Org: Alf Onshuus, Alexander Berenstein, Xavier Caicedo, Andrés Villaveces and John Goodrick.

School of Algebraic Geometry and Dynamical Systems
Instituto de Matemática y Ciencias Afines (IMCA), Lima, Peru
Org: Felix Escalante, Renato Benazic and Percy Fernandez.

Groups, Dynamics and Ergodic Theory
Montevideo, Uruguay
Org: Juan Alonso, Roberto Markarian, Matilde Martínez, Miguel Paternain, Martín Sambarino and José Vieitez.

North America

Partial Differential Equations and Applications
University of Florida, Gainesville FL, USA
Org: Yunmei Chen, Zheng-chao Han, Yanyan Li, Eduardo Teixeira and Lei Zhang.

Interaction between harmonic analysis and geometric measure theory with applications to PDEs
ICERM, Providence RI, USA.
Org: Svitlana Mayboroda, Jill Pipher and Tatiana Toro.

Global and semilocal properties of smooth dynamical systems
Chicago, IL, USA
Org: Amie Wilkinson and Keith Burns.

Directed Polymers: Universality and KPZ scalings
BIRS, Banff, Canada
Org: Konstantin Khanin and Jeremy Quastel.



Math Popularization



Mathematics popularization activities prior to and during the ICM2018 will be organized at Casa SESI da Matemática, a center for popularization and teaching of mathematics due to open in 2014. The center is part of a program held by SESI/RJ - Industrial Social Service, in Rio, and has IMPA as a partner.

The center will have a permanent exhibition of more than 2000 m², small and medium room for lectures, video presentations and theater performances, a library and an auditorium for 600 people, besides space for temporary exhibitions.

Activities:

- cinema, theater plays with mathematical content for the general public
- popularization lectures by ICM participants
- outdoor sculptures of mathematical interest
- publicity action to create awareness of the ICM2018 and of its historical importance

The opening ceremony will be transmitted live in the auditorium and regular transportation will be provided between the ICM venue and Casa SESI da Matemática.



Math in the Media

Educação

UMA EQUAÇÃO VENCEDORA

Um grupo de professores conseguiu a façanha de formar jovens campeões de matemática em locais cheios de adversidades e com os piores indicadores de ensino do país. Eles combinaram seu esforço com meritocracia

GABRIELA ROMERO E HELENA BORGES

Violência, indisciplina e precariedades são básicas como falta de livros e luz são alguns dos obstáculos enfrentados diariamente pelos professores que ilustram as páginas desta reportagem. Eles seriam iguais a tantos outros não fosse o nível de excelência que alcançaram em sala de aula. E tanta disciplina tão tenida quanto odiada. O sucesso desse grupo foi verificado na última Olimpíada Brasileira de Matemática das Escolas Públicas, que reuniu 19 milhões de alunos, 0,02% deles laureados com medalhas. No ranking que mediu o desempenho das docentes de todo o país — com base nas notas de seus alunos na competição —, tais professores ocupam o topo da lista de seus estados. Outros no Brasil empacaram até mais estudantes no pódio, mas o feito desses aqui retratados foi considerado extraordinário pelo cenário no qual emergiram: seus estudantes colecionam os piores indicadores de ensino na área. "Eles são a prova de que é possível lutar talentos para os números mesmo em lugares que mais parecem desertos de ideias", diz Jacob Palis, do Instituto Nacional de Matemática Pura e Aplicada, que organizou a olimpíada.

Mathematics is often present in Brazilian mainstream media. The ICM 2018 in Rio de Janeiro will be a powerful tool to enhance that presence, further contributing to public awareness of the mathematical world.

veja Rio
www.vejario.com.br
22 de março de 2013

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o 80 milhões
Alagoas
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MENTES BRILHANTES
Conheça o Instituto Nacional de Matemática Pura e Aplicada, centro de excelência carioca cujos resultados superaram os de algumas grandes universidades internacionais

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ENTREVISTA Cédric Villani

O gênio que ama aranhas



CIDADE: se você vai passar pela Nossa Senhora de Copacabana, prefira o ônibus
DIVERSÃO: crianças e jovens usam limusines para comemorar ocasiões especiais



...a matemática é uma ciência que se desenvolveu ao longo da história da humanidade. Ela é uma linguagem que nos permite entender o mundo ao nosso redor e a natureza. A matemática é a base de todas as ciências exatas e é essencial para o desenvolvimento tecnológico e científico. Ela nos ajuda a resolver problemas complexos e a descobrir novas coisas sobre o universo.

...o mais importante

ENSINO Matemática mais atraente

Aprendizagem na disciplina ocorre a longo prazo. Levar o aluno a entender o contexto, usar jogos e tecnologia podem tornar processo mais agradável



Tatiana Duarte
A tecnologia aliada à criatividade dos professores tem ajudado a tornar a matemática mais atrativa para os estudantes. Avaliações de desempenho mostram que dominar a disciplina não é o forte dos brasileiros. O Sistema Nacional de Avaliação da Educação Básica (Sbep) de 2007, último resultado disponível, mostra que estudantes brasileiros da 8ª série do ensino fundam...

Matemático brasileiro ganha prêmio por estudos sobre a teoria do caos

Jacob Palis é o primeiro do país prestigiado por fundação italiana

rente, sua evolução pode se dar de forma totalmente distinta. Esta conclusão tem como base a teoria do caos, cuja origem remonta aos estudos do matemático francês Henri Poincaré (1854-1912). De acordo com levantamentos realizados a partir daí, boa parte dos fenômenos seria previsível, caso sua situação inicial fosse conhecida. Palis, no entanto, reconhece a impossibilidade de controlar todos os fatores de um sistema caótico — o movimento dos astros ou a expansão de epidemias, por exemplo. O brasileiro justificou essa dificuldade três anos atrás, em uma conferência em Madrid, afirmando que "a incerteza é muito comum em nossas vidas". A Fundação Balzan, baseada em Milão e Zurique, entregou os prêmios em Roma, no dia 15 de novembro. A entidade foi criada em 1956 por Angela Lind Balzan em homenagem a seu pai, Eugenio. O jornalista italiano fugiu de seu país em 1933, para evitar que seu periculosidade fosse transformado em uma ferramenta de propaganda fascista. A cada ano, a fundação termina as áreas prestigiadas com o prêmio. No ano que vem, será a vez de estudos sobre fenômenos naturais do Instituto Histórico antigo, humanismo e biologia teórica.



IS. DESTAQUE com sistemas dinâmicos

Olimpíada revela novos talentos da Matemática

Millhões de estudantes participaram da competição. Paraná tem o melhor desempenho entre os Estados do Sul



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Trabalho de equipe recompensado
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Aluno de Cianorte é fã de trigonometria
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ENTREVISTA

Gerard Vergnaud, diretor do Centro Nacional de Pesquisas Científicas, em Paris.

As crianças sabem, mas não conseguem se expressar

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**SOCIEDADE
BRASILEIRA
DE MATEMÁTICA**

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icm2018@sbm.org.br

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