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Welcome

Welcome to the MCA2013 Newsletter, a means for announcing developments and useful information prior to the Congress. Suggestions regarding content are more than welcome at mca2013@cimat.mx. In this issue you will find: approaching deadlines; a review of the history of Mathematics in Brazil, as well as their present and future; and *Dual Guanajuato*: about the nature of MCA2013 host city, Guanajuato, in which two worlds appear to be metaphorically blended.

Congress News

Deadlines Approaching

POSTER SESSIONS

The MCA2013 will hold two poster sessions in which young researchers are strongly encouraged to present their work.

Deadline for submission of proposals is the 1st of April, 2013, to be notified before April 21. Those needing early resolution should send the abstract before February 28, for notification on March 31. Please read the guidelines [here](#).

SPECIAL SESSIONS SPEAKERS

All invited special sessions speakers must submit abstracts through the AMS website. The form is found at www.ams.org/cgi-bin/abstracts/abstract.pl

The DEADLINE FOR UPLOADING is MAY 15, 2013; this must be strictly enforced. There will be no accommodation for late abstracts. Please consult [here](#) for further information.

FINANCIAL SUPPORT

Mexican researchers and professors, and graduate students, may apply for financial support consisting of registration and accommodation for the duration of the MCA. Please read about the requirements [here](#).

New deadline is now February 28th. All submissions must be sent to congresodelasamericas@smm.org.mx

Accepted applications will be announced in the Mexican Mathematical Society's web site: www.smm.org.mx

WORKSHOP ON MATHEMATICS OF CLIMATE CHANGE

Workshop on Mathematics of Climate Change, Related Hazards and Risks, July 29-Aug 2nd, CIMAT, Guanajuato, Mexico. Deadline for application to this workshop is March 31, 2013. Please visit

<http://www.mca2013.org/en/workshop-on-mathematics-of-climate-change.html> for more information.

Past and present, with a view to the future Brazilian Mathematics¹



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 Mauricio Matos Peixoto and Leopoldo

¹ Communicated by Marcelo Viana (IMPA and SBM)

Nachbin, 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.

A landmark is the organization of the first Brazilian Mathematics 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.

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.



Mathematical Olympiads award ceremony: President Dilma Rousseff speaking.

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.

Education, with a special role for mathematical education, has been a consistent top priority for 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.

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.

Dual Guanajuato²

The city of Guanajuato, well known as a major tourist attraction, is also the seat of the State Government, an academic center, attracting students from many parts, and, finally, a historical repository of past mining activity, preserved in a few of the remaining mines.

But, for those of us who live here, there is another Guanajuato, coexisting with its better-known part and intermingled with it. It is as if the former were looking over the shoulder of the latter with a roguish smile and a wink of the eye.

It is not easy to define what is its essence or where to start and (if at all) where this other Guanajuato ends. The best that can be said is that it is both product and vehicle of the imagination, of fantasy. As such, on the perceived reality is superimposed a second, tenuous and partly imagined reality, which is at times stronger than the first. Here are some examples.

To begin with, it is very possible that there are two Guanajuatos in a physical sense. This is confirmed by those who have worked on large houses downtown that line the underground street: many of them are built on ruins buried by river floods in years gone by. The Dieguino Museum displays a small sample of what may be found in these underground sediments.

If we confine ourselves to architecture, we note a number of buildings in Guanajuato that speak to us of this fantasy made real. These range from houses in the Modernist style (Art Nouveau or Jugendstil) in Paseo de la Presa to an imitation castle in the zone of San Javier and on to the vaguely Italianate style tower next to the Presa de la Olla dam and the combination of ages and styles of the University central building. To this architecturally imaginative grouping may be added the Escher-inspired Center for Mathematical Research (CIMAT). Evidently the themes are driven by the fashions of the era; witness the decorative crocodile and snake below the San Renovato dam which falls in the same category, none the worse for being the product of a fertile imagination.

Where the fantasy really takes off is in the more intangible field of legends that, in Guanajuato, take many different and unusual forms, such that there is even a museum dedicated to the subject. The names of several alleys of the city are associated with a legend, of which, perhaps the best known, is the Alley of the Kiss. But even here there is a curious element: depending on the teller, this legend can take various forms with different outcomes, all tragic of course. Many inhabitants of the city claim to have been

² By Santiago Roig. Translated by Stephanie Dunbar and Ian MacLeod. [Original version in Spanish.](#)

protagonists of events that could give rise to future legends, such as the University employee who claimed to have seen the ghost of Padre Mangas, the apocryphal founder of the University, wandering through the buildings.

Another example of popular fantasy is the feast-day of San Ignacio de Loyola. On that day, half Guanajuato climbs up to the cave of San Ignacio to spend the day eating and drinking among the hills. How did a cave in Guanajuato end up as the "twin" of that of Manresa in Spain? Purely by imagination.

This same imagination is an important ingredient of art and it is not surprising that Guanajuato has attracted artists from various disciplines. Many painters, for example, have made their homes here and left an interesting legacy in museums such as those of Olga Costa or Gene Byron, and, of course, the House of Diego Rivera, who was a native of Guanajuato. In terms of literature, we can mention writers like Carlos Fuentes and Jorge Ibarguengoitia (born in Guanajuato) as examples of writers who have used Guanajuato as a background for their stories, imparting them with its fantastic atmosphere.

Finally, as required in support of any hypothesis, **we can offer Guanajuato's attachment** to Cervantes as proof of its figurative alter ego. Don Quixote is a novel in which we are constantly made aware of two competing realities through the familiar tale of the giants of Don Quixote and the windmills of Sancho Panza, one imagined, the other real. It seems only natural that the people of Guanajuato should adapt this metaphor to their daily lives, resulting in the iconic Quijote Museum, the Cervantes Symposium, the International Cervantino Festival **and various presentations of Cervantes' *entremeses*** (short farces) throughout the year. Without this facility for fantasy and its consequences, how else could we explain their close association? Clearly, as some particularly well-informed tourist guides are quick to point out, the relationship is greatly fostered by the knowledge that Sancho Panza is buried here!