April 15, 2004.

Dear Professors
John Ball and Phillip Griffiths
President and Secretary
International Mathematical Union

Dear Profs. Ball and Griffiths,

The Brazilian IMU Adhering Organization, the National Council for Scientific and Technological Development – CNPq and its Committee for Mathematics, the Brazilian Mathematical Society – SBM, wish to present the candidacy of Brazil to move from Group III to Group IV in the IMU Membership scale. The Adhering Organization shall keep its commitment to paying annually the corresponding dues.

Motivation for this candidacy arises from a consistent advancement of Brazilian mathematics in terms of research, nurturing of new research mathematicians and its solid cooperation with the mathematical communities of Latin America and worldwide, which has actually been increasing considerably in recent years. As a symbol of such a policy of international cooperation, we can mention the IMU-UNESCO Declaration of Rio de Janeiro setting the year 2000 as the World Mathematical Year and three main aims for the Union: The great challenges of the 21st century, Mathematics keys for development and The image of mathematics. We may also mention the creation of UMALCA-Union Matematica de America Latina y Caribe, now an affiliate member of IMU, which took place in Rio de Janeiro in 1995.

The enclosed sample of research publications (Annex), based on the MathSciNet database, shows that a substantial fraction of the more than ten thousand articles produced by Brazilian scholars have been published in very prestigious journals. At the same time, this number represents a sharp increase in research articles produced in Brazil since its move from IMU - Group II to Group III. The articles also certainly cover more fields of mathematics than before. Recently a high level international evaluation commission asserted that there are research groups in Brazil that can be considered among the best ones worldwide (www.impa.br/AboutImpa/Avaliacao/evaluation.pdf).

Concerning Ph.D. Mathematical Programs, there are sixteen of them recognized as being in good standing by the proper Agency, CAPES, of the Ministry of Education (www.capes.gov.br). Such Programs grant about 70 degrees per year and their theses are often published in good journals. A sizeable portion of the students come from other countries in Latin America, such as Argentina, Chile, Cuba, Colombia, Mexico, Peru, Venezuela and Uruguay, all of them members of the IMU-affiliate member UMALCA. These countries are also IMU members, except for Colombia, which incidentally plans to apply for membership in the near future. There are as well some Ph.D. students coming from other regions in the world, including Europe, Asia and Africa.

We point out that a very expressive number of congresses, schools/workshops in different branches of mathematics and at a good scientific level take place every year in Brazil, in the range of fifteen to twenty of them, like algebra and algebraic geometry, differential geometry, dynamical systems, partial differential equations, probability, optimization, singularity theory, topology, mathematical economics, mathematical biology and computer graphics (www.impa.br/Galeria/index.html, www.milenio.br/eventos). Most traditional are the Brazilian Colloquia of Mathematics – CBM (www.impa.br), organized every other year since 1957, with an attendance of 1,100-1,200 mathematicians, mathematical students both graduate and undergraduate and the National Congresses of Applied and Computational Mathematics – CNMAC that take place every year with an attendance of 900-1,000 researchers and students (www.mec.puc-rio.br/sbmac). Another large event is the recently created Biennial of the Brazilian Mathematical Society having an attendance of about 900 students and researchers (www.sbm.org.br). The 2002 World Directory of Mathematicians lists 751 colleagues working in Brazil.

International cooperation has been strong with all Latin American countries mentioned above, as well as with France, UK, US, Portugal, Spain, Russia, Japan, Italy, Germany, China, Sweden, Switzerland, Netherlands, Israel, Hungary, Poland, Belgium and Canada, among others.

There are three main research mathematical journals edited in Brazil. The first one and probably better known is the Bulletin of the Brazilian Mathematical Society, distributed by Springer, also available online. Its editorial board consists of L. Carleson, J. Coates, D. de Figueiredo, M. do Carmo, L. Hormander, S. Kleiman, B. Lawson, J. Milnor, L. Nirenberg, J. Palis and S.R.S. Varadhan (www.sbm.org.br). The second one is Computational and Applied Mathematics published by the corresponding Society and having as editors J. Martinez, L. Pereira, J. Koiller and J. Douglas Jr and a large international editorial board. The third one is the Brazilian Journal of Probability and Statistics, whose editorial board is composed by P. Morettin, C. Dorea, J. Achcar and G. Paula and a large international board of associate editors (www.de.ufpe.br/rebrape).

Notably, well conceived and carried through book collections at all levels from research topics to texts for secondary schools teachers have produced a solid and most relevant Brazilian mathematical literature in the last few decades (www.impa.br, www.sbm.org.br). Finally, there are serious efforts directed to the improvement of mathematical teaching (www.sbm.org.br), including the use of video-conferences (www.impa.br, www.milenio.br). And for improving visibility, teaching and the discovering of young talents, there is the Brazilian Mathematical Olympiad, which is organized in several age levels and three different stages in each level, presently involving about 150.000 students from more than 3000 schools (www.obm.org.br).

Suely Druck
President of the Brazilian
Mathematical Society - SBM

Erney Camargo
President of the National Council for Scientific
and Technological Development – CNPq

ANNEX - CANDIDACY OF BRAZIL TO GROUP IV OF IMU

Research activity in Brazil currently covers most main areas of Mathematics and several areas of applications. As of today, the MathSciNet database lists just over 10,000 research articles by Brazilian authors, a clear majority of them published in the last 22 years or so, since Brazil became a member of Group III of IMU. The sample table below shows that a substantial fraction of these articles, by Brazilian mathematicians or corresponding to doctoral theses in Brazilian institutions, appeared in most prestigious journals and cover a very wide spectrum of fields.

JOURNAL	PUBLICATIONS
Annals of Math.	27
Annals of Probability	35
Annales Institut Henri Poincaré	66
Annales Sci. École Norm. Sup.	23
Annales Institut Fourier	19
Acta Mathematica	5
American J. Math.	12
Comm. Algebra	128
Comm. Math. Phys.	77
Commentary Math. Helvetici	20
Compositio Math.	16
Econometrica	6
Ergodic Theory Dynam. Systems	73
Inventiones Math.	23
Israel J. Math.	18
J. Algebra	94
J. Differential Equations	109
J. Differential Geometry	15
J. Graph Theory	9
J. Number Theory	22
J. Reine Angew. Math.	20
J. Statist. Physics	136
Math. Annalen	33
Math. Operations Research	11
Math. Programming	39
Math. Zeitschrift	34
Nonlinearity	55
Proc. Amer. Math. Soc.	119
Publ. Math. Inst. Hautes Études Sci.	8
SIAM J. Applied Math.	14
SIAM J. Control and Optimization	27
SIAM J. Math. Analysis	22
SIAM J. Matrix Anal. Appl.	12
SIAM J. Numer. Anal.	14
SIAM J. Optimization	31
SIAM Review	4
Topology	10
Transactions Amer. Math. Soc.	67
TOTAL	**1453**