The Abdus Salam
International Centre for Theoretical Physics

United Nations Educational, Scientific and Cultural Organization

IAEA International Atomic Energy Agency

7th International Conference on Mathematical Methods in Physics

16 - 20 April 2012

(Rio de Janeiro, Brazil)

in collaboration with:
CBPF-IMPA-ICTP-TWAS-SISSA

Co-sponsors:

The Abdus Salam International Centre for Theoretical Physics **(ICTP),** Trieste, Italy, Centro Brasileiro de Pesquisas Físicas **(CBPF),** Rio de Janeiro, Instituto Nacional de Matemática Pura e Aplicada **(IMPA),** Rio de Janeiro, The Academy of Sciences for the Developing World **(TWAS),** Trieste, Scuola Internazionale Superiore di Studi Avanzati **(SISSA),** Trieste, are jointly organizing the **7th International Conference on Mathematical Methods in Physics**. This event is co-sponsored **by ICTP, TWAS, SISSA, CLAF, CBPF, IMPA, CNPq, CAPES, FAPERJ** and **FAPESP.**

The Conference will take place in **Centro Brasileiro de Pesquisas Físicas (CBPF)**, **Rio de Janeiro - RJ, Brazil from 16 to 20 April 2012**.

The aim of the Conference is to present the latest advances in Mathematical Methods to researchers, young scientists and students of Latin America in general, and Brazil in particular, in the areas of High Energy Physics, Cosmology, Mathematical Physics and Applied Mathematics. The main goal is to promote updating of knowledge and interaction between mathematicians and theoretical physicists, through plenary sessions and seminars.

The Conference program will be intensive during the whole week from Monday 16 April to Friday 20 April, and will include plenary talks (1 hour each) and a number of short seminars (30 minutes each) given by Brazilian and international researchers. There will also be discussion sessions with participants, encouraging open debates on the themes of the Conference, as well as "round table" discussions on the perspectives and possible future investigations in theoretical and mathematical physics.

TOPICS WILL INCLUDE:

- Methods of Lie groups and Lie algebras;
- Differential, Algebraic Geometry and Topology in Physics;
- Topological Field theory, Non-commutative Geometry;
- Supersymmetry and Superstrings;
- Quantum Gravity;
- Cosmology.

PARTICIPATION

Scientists and students from all countries that are members of the United Nations, UNESCO or IAEA may attend the activity. Given the regional character of the initiative, applications from Latin America will be privileged. As it will be conducted in English, participants must have an adequate working knowledge of this language. As a rule, travel and subsistence expenses of the participants are borne by their home institutions. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants, who are nationals of, and working in, a developing country, and who are not more than 45 years old. Such support is available only to those attending the entire activity. There is no registration fee for attending the activity.

HOW TO APPLY FOR PARTICIPATION

The Application Form can be accessed at the activity website: ***http://agenda.ictp.it/smr.php?2383.*** Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form. Deadline for receipt of applications: **30 DECEMBER 2011**

SECRETARIAT in Rio de Janeiro, Brazil
Telephone: **+55-21-21417100; 55-21-21417358**
Telefax: **+55-21-2141-7511**
E-mail : **cris@cbpf.br**
Web page: **http://www.cbpf.br**

SECRETARIAT at ICTP Trieste, Italy
Telefax: **+39-040-224163**
E-mail: **smr2383@ictp.it**
ICTP Home Page: **http://www.ictp.it**

ORGANIZERS:

E. ABDALLA *(USP, Brazil)*
L. BONORA *(SISSA, Italy)*
H. BURSZTYN *(IMPA, Brazil)*
A. BYTSENKO *(UEL, Brazil)*
B. DUBROVIN *(SISSA, Italy)*
M.E.X. GUIMARÃES *(UFF, Brazil)*
J.A.* HELAYËL-*NETO *(CBPF, Brazil)*

ADVISORY COMMITTEE :

A.V. ASHTEKAR
(Penn State University, U.S.A.)
V.M. BUCHSTABER
(Steklov Mathematical Institute, Russia)
L.D. FADDEEV
(St. Petersburg Dept. of Steklov Mathematical Institute, Russia)
I.M. KRICHEVER
(Columbia Univ., U.S.A./Landau Institute of Theoretical Physics, Russia)
S.P. NOVIKOV
(Univ. of Maryland, U.S.A./Landau Institute of Theoretical Physics, Russia)
J. PALIS
(IMPA, Brazil)
A. QADIR
(National University of Sciences & Technology, Pakistan)
F. QUEVEDO
(ICTP, Italy)
S. RANDJBAR-DAEMI
(ICTP, Italy)
G. THOMPSON
(ICTP, Italy)
C. VAFA
(Harvard University, U.S.A.)

DEADLINE for receipt of applications:

30 December 2011

(Trieste September 2011)