The Abdus Salam International Centre for Theoretical Physics

7th International Conference on Mathematical Methods in Physics (Joint Conference: CBPF-IMPA-ICTP-SISSA-TWAS)

Cosponsor(s): CBPF, IMPA, TWAS, SISSA, CLAF, CAPES, CNPq, CAPES, FAPERJ and FAPESP.
Organizer(s): E. ABDALLA, L. BONORA, H. BURSZTYN, A. BYTSENKO, B. DUBROVIN, M.E.X. GUIMARAES and J.A. HELAYEL-NETO
Collaboration(s): CBPF-IMPA-ICTP-TWAS-SISSA
Rio de Janeiro - Brazil, 16 - 20 April 2012

Final programme

MONDAY, 16 APRIL 2012

16 April 2012

09:30 - 10:00 **G. MARTINELLI (SISSA) and F. LAZARO (CBPF DIRECTOR)**
OPENING CEREMONY

10:15 - 10:45 **G. MARTINELLI** / *SISSA, Italy*
SEMINAR: Flavour symmetry and CP violation in the standard model and beyond

10:55 - 11:10 --- Coffee break ---

11:10 - 11:40 **R. COQUEREAUX** / *CPT-Marseille and IMPA, Brazil*
SEMINAR: Fusion graphs for quantum doubles of finite groups and RCFT

11:50 - 12:20 **S. SONTZ** / *CIMAT, Mexico*
SEMINAR: Some topics in non-commutative geometry related to analysis

12:30 - 14:00 --- Lunch Break ---

14:00 - 15:00 **L. BONORA** / *SISSA, Italy*
PLENARY TALK: Is there a north-west passage for String theory?

15:15 - 15:45 **M. DORIA** / *UFRJ, Brazil*
SEMINAR: Einstein-Cartan theory and the coexistence of superconductivity, charge and spin

16:00 - 16:15 --- Coffee break ---

16:15 - 16:45 **E. ABDALLA** / *USP, Brazil*
SEMINAR: The AdS/CFT relation, quasi normal modes and applications

16:55 - 17:30 **PLENARY DISCUSSION**

TUESDAY, 17 APRIL 2012

17 April 2012

09:00 - 10:00 **A. ASHTEKAR** / *Penn State University, U.S.A.*
PLENARY TALK: A quantum gravity completion of the inflationary scenario

10:15 - 10:45 **G. MENEZES** / *IFT/UNESP, Brazil*
SEMINAR: Quantum field theory and light-cone fluctuations

10:55 - 11:10 --- Coffee break ---

11:10 - 11:40 **M. CARIGLIA** / *UFOP, Brazil*
SEMINAR: Using hidden symmetries to study integrability and separation of variables in curved space-time

11:50 - 12:20 **B.P. DIAS** / *CBPF, Brazil*
SEMINAR: Considerations on the graviton excitations of Horava-Lifschitz gravity

12:30 - 14:00 --- Lunch Break ---

14:00 - 15:00 **A. QADIR** / *National University of Sciences & Technologies, Pakistan*
PLENARY TALK: Insights obtained from Lie symmetry analysis for a complex electromagnetic Lagrangian

15:15 - 15:45 **A. PETROV** / *UFPB, Brazil*
SEMINAR: On the perturbative generation of higher derivative Lorentz-breaking terms

16:00 - 16:15 --- Coffee break ---

16:15 - 16:45 **S. KHODAEE** / *CBPF, Brazl*
Supersymmetry from one-dimensional viewpoint - I

16:55 - 17:30 **S. KHODAEE** / *CBPF, Brazil*
Supersymmetry from one-dimensional viewpoint - II

WEDNESDAY, 18 APRIL 2012

18 April 2012

09:00 - 10:00 **E. SHARPE** / *Virginia TECH, U.S.A.*
PLENARY TALK: An introduction to heterotic mirror symmetry

10:15 - 10:45 **C.M. DORIA** / *UFSC, Brazil*
SEMINAR: Blow-Up of the 4D Seiberg-Witten theory

10:55 - 11:10 --- Coffee break ---

11:10 - 11:40 **D. PEREIRA** / *UFJF, Brazil*
SEMINAR: Universality and ambiguity in fermionic effective actions

11:50 - 12:20 **F.O. SALLES** / *UFJF, Brazil*
SEMINAR: Gravitational waves and stability of cosmological solutions in the theory with anomaly-induced corrections

12:30 - 14:00 --- Lunch Break ---

14:00 - 15:00 **F. BONECHI** / *INFN, Italy*
PLENARY TALK: Quantization of the symplectic grupoid

15:00 - 15:00 **FREE AFTERNOON**

THURSDAY, 19 APRIL 2012

19 April 2012

09:00 - 10:00 **M. ZABZINE** / *Uppsala Univ., Sweden*
PLENARY TALK: Contact geometry and gauge theories

10:15 - 10:45 **J. RAMON** / *IMPA, Brazil*
SEMINAR: Minitwistor correspondence and the Casimir effect

10:55 - 11:10 --- Coffee break ---

11:10 - 11:40 **R. SOBREIRO** / *UFF, Brazil*
SEMINAR: Gauge theories and gravity

11:50 - 12:20 **S.A. DIAS** / *CBPF, Brazil*
SEMINAR: Gauge anomaly cancellation in chiral gauge theories

12:30 - 14:00 --- Lunch Break ---

14:00 - 15:00 **S. CECOTTI** / *SISSA, Italy*
PLENARY TALK: Quivers, algebras, and the mass spectrum of N=2 theories

15:15 - 15:45 **J. HELAYEL-NETO** / *CBPF, Brazil*
SEMINAR: A superfield approach to Lorentz-violating gauge theories in a supersymmetric frame

16:00 - 16:15 --- Coffee break ---

16:15 - 16:45 **S. ZOHREN** / *PUC-RJ, Brazil*
Exploring the quantum nature of gravity with random graphs

16:55 - 17:30 **PLENARY DISCUSSION**

FRIDAY, 20 APRIL 2012

20 April 2012

09:00 - 10:00	**I. AREF'EVA** / *V.A.Steklov Mathematical Institute, Russia* **PLENARY TALK: Holografy for heavy-ion collisions**
10:15 - 10:45	**M. TORRES** / *UFRJ, Brazil* **SEMINAR: Relativistic Skyrmions**
10:55 - 11:10	--- Coffee break ---
11:10 - 11:40	**F. JUGEAU** / *UFRJ, Brazil* **SEMINAR: Hadron potentials within the gauge/string correspondence**
11:50 - 12:20	**H. BOSCHI-FILHO** / *UFRJ, Brazil* **SEMINAR: Holographic description of Drell-Yan process in p-p collisions**
12:30 - 14:00	--- Lunch Break ---
14:00 - 15:00	**R. HELUANI** / *IMPA, Brazil* **PLENARY TALK: Mathieu's Moonshine and string theory on K3**
15:15 - 15:45	**A. CABRERA** / *UFRJ, Brazil* **SEMINAR: Topological field theories and geometric reduction by symmetries**
16:00 - 16:15	--- Coffee break ---
16:15 - 16:15	**ROUND TABLE AND CLOSING SESSION**