



The Abdus Salam
**International Centre
for Theoretical Physics**



Spring School on Superstring Theory and Related Topics

Organizer(s): E. Gava (INFN), S. Minwalla (Tata Institute), K.S. Narain (ICTP), S. Randjbar-Daemi (ICTP), E.M. Silverstein (Stanford University)

Collaboration(s): the Asia Pacific Center for Theoretical Physics (APCTP), the International School for Advanced Studies (SISSA) and the Italian Institute for Nuclear Physics (INFN)
Trieste - Italy, 18 - 26 March 2013

Venue: Leonardo da Vinci Building Main Lecture Hall

Final programme

Monday, 18 March 2013 (Room:Leonardo da Vinci Building Main Lecture Hall)

18 March 2013

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| 08:30 - 10:00 | (Room: Leonardo da Vinci Building, Lobby)
--- REGISTRATION ---
Administrative Formalities |
| 10:00 - 10:15 | Opening Remarks |
| 10:15 - 11:15 | J. Gomis / <i>Perimeter Institute for Theoretical Physics, Canada</i>
Supersymmetric Gauge Theories and Applications - Lecture 1 |
| 11:30 - 12:30 | J. Gomis / <i>Perimeter Institute for Theoretical Physics, Canada</i>
Supersymmetric Gauge Theories and Applications - Lecture 2 |
| 12:30 - 14:30 | (Room: Leonardo da Vinci Building Cafeteria)
--- Lunch Break --- |
| 14:30 - 15:30 | J. Gomis / <i>Perimeter Institute for Theoretical Physics, Canada</i>
Supersymmetric Gauge Theories and Applications - Lecture 3 |
| 15:45 - 16:45 | DISCUSSION SESSION |

Tuesday, 19 March 2013 (Room:Leonardo da Vinci Building Main Lecture Hall)

19 March 2013

- 09:00 - 10:00** **P. Vieira** / *Perimeter Institute for Theoretical Physics, Canada*
The Space-time S-matrix and the Flux-Tube S-matrix - Lecture 1
- 10:15 - 11:15** **J. Penedones** / *Universidade Do Porto, Portugal*
Mellin Amplitudes - Lecture 1
- 11:30 - 12:30** **P. Vieira** / *Perimeter Institute for Theoretical Physics, Canada*
The Space-time S-matrix and the Flux-Tube S-matrix - Lecture 2
- 12:30 - 14:30** (Room: Leonardo da Vinci Building Cafeteria)
--- Lunch Break ---
- 14:30 - 15:30** **J. Penedones** / *Universidade Do Porto, Portugal*
Mellin Amplitudes - Lecture 2
- 15:45 - 16:45** **DISCUSSION SESSION**
- 17:30 - 19:30** (Room: Leonardo da Vinci Building Cafeteria)
--- RECEPTION ---

Wednesday, 20 March 2013 (Room:Leonardo da Vinci Building Main Lecture Hall)

20 March 2013

- 09:00 - 10:00** **S. Kim** / *Perimeter Institute for Theoretical Physics, Canada & Seoul National University, R. of Korea*
Exploring M5-branes from 5d gauge theories - Lecture 1
- 10:15 - 11:15** **J. Penedones** / *Universidade Do Porto, Portugal*
Mellin Amplitudes - Lecture 3
- 11:30 - 12:30** **S. Minwalla** / *Tata Institute of Fundamental Research, India*
Chern Simons Theories with fundamental matter and their bulk duals - Lecture 1
- 12:30 - 14:30** (Room: Leonardo da Vinci Building Cafeteria)
--- Lunch Break ---
- 14:30 - 15:30** **S. Kim** / *Perimeter Institute for Theoretical Physics, Canada & Seoul National University, R. of Korea*
Exploring M5-branes from 5d gauge theories - Lecture 2
- 15:45 - 16:15** **DISCUSSION SESSION**
- 16:30 - 18:00** **A. Smirnov** / *ICTP*
--- ICTP COLLOQUIUM - Neutrinos: Flavors of the Invisible ---

Thursday, 21 March 2013 (Room:Leonardo da Vinci Building Main Lecture Hall)

21 March 2013

- 09:00 - 10:00** **S. Minwalla** / *Tata Institute of Fundamental Research, India*
Chern Simons Theories with fundamental matter and their bulk duals - Lecture 2

- 10:15 - 11:15** **S. Kim** / *Perimeter Institute for Theoretical Physics, Canada & Seoul National University, R. of Korea*
Exploring M5-branes from 5d gauge theories - Lecture 3
- 11:30 - 12:30** **S. Minwalla** / *Tata Institute of Fundamental Research, India*
Chern Simons Theories with fundamental matter and their bulk duals - Lecture 3
- 12:30 - 14:30** (Room: Leonardo da Vinci Building Cafeteria)
 --- Lunch Break ---
- 14:30 - 15:30** **S. Kachru** / *Stanford University, USA*
A very elementary introduction to Mathieu Moonshine - Lecture 1
- 15:45 - 16:45** **DISCUSSION SESSION**

Friday, 22 March 2013 (Room:Leonardo da Vinci Building Main Lecture Hall)

22 March 2013

- 09:00 - 10:00** **S. Kachru** / *Stanford University, USA*
A very elementary introduction to Mathieu Moonshine - Lecture 2
- 10:15 - 11:15** **E. Silverstein** / *Stanford University, USA*
Primordial Cosmology: updates, upgrades, and uplifts - Lecture 1
- 11:30 - 12:30** **S. Kachru** / *Stanford University, USA*
A very elementary introduction to Mathieu Moonshine - Lecture 3
- 12:30 - 14:30** (Room: Leonardo da Vinci Building Cafeteria)
 --- Lunch Break ---
- 14:30 - 15:30** **E. Silverstein** / *Stanford University, USA*
Primordial Cosmology: updates, upgrades, and uplifts - Lecture 2
- 15:45 - 16:45** **DISCUSSION SESSION**

Saturday, 23 March 2013 (Room:Leonardo da Vinci Building Main Lecture Hall) (**Saturday**)

23 March 2013

- 09:00 - 10:00** **S. Hartnoll** / *Stanford University, USA*
Holographic phases of matter - Lecture 1
- 10:15 - 11:15** **E. Silverstein** / *Stanford University, USA*
Primordial Cosmology: updates, upgrades, and uplifts - Lecture 3
- 11:30 - 12:30** **S. Hartnoll** / *Stanford University, USA*
Holographic phases of matter - Lecture 2

Monday, 25 March 2013 (Room:Leonardo da Vinci Building Main Lecture Hall)

25 March 2013

- 09:00 - 10:00** **J.M. Maldacena** / *IAS, Princeton, USA*
Black holes in quantum gravity - Lecture 1

- 10:15 - 11:15** **S. Hartnoll / *Stanford University, USA***
Holographic phases of matter - Lecture 3
- 11:30 - 12:30** **C. Grojean / *CERN, Switzerland***
LHC implications for Higgs and BSM physics - Lecture 1
- 12:30 - 14:30** (Room: Leonardo da Vinci Building Cafeteria)
 --- Lunch Break ---
- 14:30 - 15:30** **J.M. Maldacena / *IAS, Princeton, USA***
Black holes in quantum gravity - Lecture 2
- 15:45 - 16:15** **DISCUSSION SESSION**
- 16:30 - 18:00** **J.M. Maldacena / *IAS, Princeton, USA***
 --- ICTP COLLOQUIUM - Gauge theories, strings and gravity ---

Tuesday, 26 March 2013 (Room:Leonardo da Vinci Building Main Lecture Hall)

26 March 2013

- 09:00 - 10:00** **C. Grojean / *CERN, Switzerland***
LHC implications for Higgs and BSM physics - Lecture 2
- 10:15 - 11:15** **J.M. Maldacena / *IAS, Princeton, USA***
Black holes in quantum gravity - Lecture 3
- 11:30 - 12:30** **C. Grojean / *CERN, Switzerland***
LHC implications for Higgs and BSM physics - Lecture 3
- 12:30 - 14:30** (Room: Leonardo da Vinci Building Cafeteria)
 --- Lunch Break ---
- 14:30 - 15:30** **J.M. Maldacena / *IAS, Princeton, USA***
Black holes in quantum gravity - Lecture 4
- 15:30 - 15:35** --- Distribution of Certificates of Attendance ---
 c/o Mail Boxes