



# WELCOME TO LISHEP2013

## SESSION C

### WORKSHOP ON

#### HIGH ENERGY PHYSICS

##### IN NEAR FUTURE

MARS 17 - 24

RIO DE JANEIRO

**OPENING SESSION**

Março 17-24

Alberto



**XI LISHEP 2013**

International School on High Energy Physics

<http://www.lishep.uerj.br>

**Chairman**

Alberto Santoro

**Secretariat**

Márcio Farias de Almeida  
lishep2013@gmail.com

**Workshop on High Energy  
Physics in the near Future**

**March 17<sup>th</sup> to 24<sup>th</sup>**

UERJ - Universidade do Estado do Rio de Janeiro  
Rua São Francisco Xavier, 524  
Rio de Janeiro - Brazil

**Scientific Program**

**Session C:**

- Electro weak physics
- Higgs
- Forward physics and QCD
- Rare decays and new particles
- Flavour physics
- New physics
- Beyond Standard Model
- Upgrade of the experiment of the LHC
- Advance instrumentation and computing for HEP

**International Committee**

Michelle Arnesen  
Carlos Avila  
Ignacio Bediaga  
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(CERN, Swed)  
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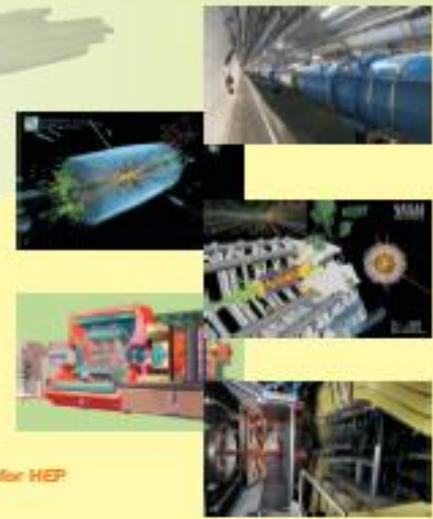
Piero Giubellini  
Gerardo Herrera  
Jose Incandela  
Harro Jens  
Luciano Montanari  
Uri Mose  
Harvey Newman  
Pierluigi Oddone  
Guido Tonello  
Christopher Tully

(ALICE/BNL, Switzerland)  
(INVEST/ Mexico)  
(CMS/CERN, Switzerland)  
(DESY, Germany)  
(Torino, Italy)  
(Tel Aviv, Israel)  
(CALTECH, USA)  
(FNAL, USA)  
(Pisa, Italy)  
(Princeton, USA)

**Local Committee and Local Technical Organizers**

(visit [www.lishep.uerj.br](http://www.lishep.uerj.br))

Registration deadline: March 1<sup>st</sup>, 2013.





**LISHEP 2013**

**International School on High Energy Physics**

**UERJ - Universidade do Estado do Rio de Janeiro**

**Rio de Janeiro**

**Session C: All last results from LHC, Phenomenology.**

**MARS 17-24**

## **OPENING SESSION**

# **WELCOME TO LISHEP2013**

Speakers and participants .

Good Morning to all of you and thank you for coming to LISHEP2013. It is very important to bring to Rio High Energy Physics discussions.

**I should inform you of some practical procedures during these days**

**PLEASE DO YOURSELF THE UPLOAD OF YOUR TALK**

# TRANSPORTATION

## By Taxis:

**Very easy. Take taxis on the door of the Hotel to come to UERJ and to return to Hotel you can go directly to the main entrance of the University, where you can find two taxi stands.**

**You can find more details at: [www.lishep.uerj.br/Transportation.pdf](http://www.lishep.uerj.br/Transportation.pdf)**

*Taxi stand, located in front of the UERJ entrance. (inside de Campus)*



*Taxi stand, located in front of the UERJ building. (outside de Campus)*





# TRANSPORTATION

## By Metro:

Drop off at Maracanã station and exit by the ramp over Radial Oeste Avenue. Go until a bifurcation when you take the right to go to UERJ. You can find more details at: [www.lishep.uerj.br/Transportation.pdf](http://www.lishep.uerj.br/Transportation.pdf)





## Restaurant Options for lunch around and inside UERJ

1. On the fifth, you have pizza and other popular brazilian dishes. You have also on 3<sup>rd</sup> and 5<sup>th</sup> floor. You get in walking by ramps or by elevator.







# Restaurant Options for lunch around and in the UERJ

## 2. On the 3<sup>rd</sup>. Floor





## Restaurant Options for lunch around and in the UERJ

3. On the Ground floor, you have a restaurant too.  
It is a Self service style.







# RESTAURANTS OUTSIDE UERJ

You can find more details at: [www.lishep.uerj.br/Restaurants.pdf](http://www.lishep.uerj.br/Restaurants.pdf)



Rio 40 graus



Planeta do Choop



Kilograma

Door of UERJ





## **PEOPLE THAT RECEIVED FINANCIAL SUPPORT FROM LISHEP:**

Please present to our secretariat the **ARRIVAL AND DEPART BOARDING PASS**. In all cases, those that received only per diem and/or airticket. **Our Financial Support Agency need this too.**

**LISHEP2013 – Session C – Workshop on High Energy Physics in the near Future**  
**From 17-24 March 2013**  
**MONDAY 18 March**

**OPENING SESSION**

**Chair: A. Santoro**

**Scientific Secretary: Eliza Melo**

**Monday - Mars,18 2013**

**19:00 – 23:00**

**WELCOME COCKTAIL OF THE LISHEP2013**

**Welcome Cocktail from 19:00 - 23:00**



<b>LISHEP2013 – Session C – Workshop on High Energy Physics in the near Future</b>		<b>MONDAY Mars 18, 2013</b>
<b>Chair: Alberto Santoro</b>		<b>COLLABORATION SESSION</b>
		<b>Scientific Secretary: Eliza Melo</b>
<b>09:00 – 09:10</b>	<b>OPEN WORKSHOP</b>	Alberto Santoro (Brasil – UERJ)
<b>09:10– 10:00</b>	<b>CMS Overview</b>	David D’Enterria (CERN – SW )
<b>10:00 – 10:50</b>	<b>Overview of Recent ALICE Results on Hard Probes and Future Plans of ALICE.</b>	Daniel T. Takaki (France – Orsay)
<b>10:50 – 11:10</b>	<b>Coffee break</b>	
<b>11:10 – 12:00</b>	<b>LHCb Overview</b>	Alberto Reis (Brasil – CBPF)
<b>12:00 – 12:50</b>	<b>ATLAS overview and Main Results</b>	Krzystof Sliwa (USA-Tufts)
<b>12:50 – 14:20</b>	<b>Lunch Time</b>	
<b>Chair: Wagner Carvalho</b>		<b>AFTERNOON - QCD &amp; Forward and Small x Physics</b>
		<b>Scientific Secretary: Ewerton Belchior</b>
<b>14:20 – 14:50</b>	<b>QCD Results from ATLAS</b>	Nicola Orlando (Italy – INFN)
<b>14:50 – 15:20</b>	<b>Review of Diffraction Studies in D0 Experiments</b>	Carlos Avila (CO –UNIANDÉS)
<b>15:20 – 15:50</b>	<b>Diffraction at CMS</b>	Antonio V. Pereira (Brazil – URJ)
<b>15:50 – 16:10</b>	<b>Coffee Break</b>	
<b>16:10 – 16:40</b>	<b>pp cross section at 2, 7, 8 and 57 TeV</b>	Nicolo Cartiglia (Italy – INFN)
<b>16:40 – 17:10</b>	<b>Production on the Forward Region (LHCb)</b>	Murilo Rangel Brasil – UFRJ)
<b>17:10 – 17:40</b>	<b>Forward Jets</b>	Greg Brona (Poland –U.Warsaw)
<b>17:40 – 18:10</b>	<b>Forward Physics at ATLAS</b>	Edson Carquin (ChilUTFSM )
<b>18:10 – 18:40</b>	<b>ALICE Diffraction Studies, Status and Plans</b>	Gerardo Herrera (MX- Cinvestav)
	<b>Welcome Cocktail on the UERJ CHAPEL 19:00 - 23:00</b>	

Chairs: José Sá Borges		PHENOMENOLOGY AND THEORY	Scientific Secretary: Daniel
09:00 – 09:30	Towards Simplicity in Multi-Jets	Erik Gerwick (Germany – Gottingen)	
09:30 – 10:00	Does pp elastic Amplitude Athain Saturation at Recheable Energies?	Uri Maor (Israel – Telavive)	
10:00 – 10:30	Diffraction at LHC	Lazslo Jenkovsky (Ukraine – UASU)	
10:30 – 10:50	Coffee Break		
10:50 – 11:20	Hard Diffraction at the LHC using Proton Tagging	Christopher Royon (France – Saclay)	
11:20 – 11:50	Propbing the BFKL Pomeron with Future ATLAS Forward Detectors	Maciej Trzebinski (Poland – INV)	
11:50 – 12:20	Study on Central Diffraction F0(980) and F2(1270) Meson Production at LHC	Magno Machado (Brasil - UFRGS)	
12:20 – 14:20	<b>Lunch Time</b>		

Chairs: Gilvan Alves		PHENOMENOLOGY AND THEORY	Scientific Secretary: Walter Aldá
14:20 – 14:50	Scattering Amplitude at 1.8 TeV and total Cross Section	Erasmio Ferreira (Brazil – UFRJ)	
14:50 – 15:20	Diffraction Production of Gauge Bosons and Heavy Flavors: Beyond Factorization	Boris Kopeliovich (Chile – UTFSM)	
15:20 – 15:50	Amplitudes and Cross Sections at LHC	Errol Gotsman (Israel – Telavive)	
15:50 – 16:20	Coffee Break		
16:20 – 17:20	Manipulating Atoms with Light <b>(COLLOQUIUM)</b>	Claude Cohen-Tannoudji (France - College de France)	



<b>Chair: Helena Malbouisson</b>		<b>MORNING EXOTICA / SUSY</b>	<b>Scientific Secretary: Lina Huertas</b>
<b>09:00 – 09:30</b>	Exotica/Susy Results at CMS	Jeremy Mans (USA – U.Minesota)	
<b>09:30– 10:00</b>	Susy Researchers with ATLAS detector	Carsten Hensel (Germany – Goettingen)	
<b>10:00 – 10:30</b>	Exotica ATLAS results	Elisa Pueschel (SW –Massachusetts)	
<b>10:30 – 10:50</b>	<b>Coffee Break</b>		
<b>Chair: Clemencia Mora</b>	<b>CP-VIOLATION &amp; Rare Decays</b>	<b>Scientific Secretary:</b>	<b>Marcos Martins</b>
<b>10:50 – 11:20</b>	Mixing and CP-Violation in Charm System	Matt Coombes (UK – Bristol)	
<b>11:20 – 11:50</b>	Rare Decays	Francesco Polci (France –LPNHE)	
<b>11:50 – 14:00</b>	<b>LUNCH TIME</b>		
<b>14:00 – 14:30</b>	CP-Violation in Bs to final states including Charmonia	Bruno Souza de Paula (Brazil – CBPF)	
<b>14:30 – 15:00</b>	CP-Violation in Charmless Hadronic B-Decays	Luis Fernando F. Rodrigues (Brasil – CBPF)	
<b>15:00 – 15:20</b>	<b>Coffee Break</b>		
<b>Chair: Clemencia Mora</b>	<b>AFTERNOON : ELECTROWEAK</b>	<b>Scientific Secretary: Marcos Martins</b>	
<b>15:20 – 16:00</b>	Electroweak Results from CMS	Matthew Herndon (USA – Wiscouncin)	
<b>16:00 – 16:40</b>	Electroweak Results from ATLAS	Marilyn Marx (UK – U. Manchester)	

Chair: Helio Nogima

UPGRADE

Scientific Secretary: Eduardo Coelho

<b>09:00 – 09:50</b>	LHC Future: The CMS Perspective	Tiziano Camporesi (SW – CERN)
<b>09:50 – 10:30</b>	ATLAS Upgrade	Theodore Todorov (France – LAPP)
<b>10:30 – 10:50</b>	ATLAS The Calorimetry Readout Electronics Upgrade Program for the High Luminosity	Augusto Cerqueira ( Brasil – U.Juiz de Fora)
<b>10:50 – 11:10</b>	Coffee Break	
<b>11:10 – 11:30</b>	<b>Calibration and Performance of the ATLAS Calorimety</b>	Bernardo Sotto-Maior Peralva ( Brasil – U.Juiz de Fora)
<b>11:30 – 12:10</b>	<b>LHCb Upgrade</b>	André Massafferri (Brasil – CBPF)
<b>12:10 – 14:00</b>	Lunch Time	
<b>Chair : Carley Martins</b>	<b>AFTERNOON - HEAVY ION</b>	<b>Scientific Secretary: Luciana</b>
<b>14:00 – 14:50</b>	CMS Upgrade	Gilvan Alves (Brasil – CBPF)
<b>14:50 – 15:40</b>	Overview of Recent ALICE Results on Bulk and Soft Observation	Yiota Foka (SW – CERN)
<b>15:40 – 15:10</b>	Heavy Ion Physics in CMS	Magdalena Malek (Brasil – UERJ)
<b>15:10 – 15:30</b>	Coffee Break	
<b>15:30 – 16:00</b>	D Meson production with ALICE	Ricardo Russo ((Italy – INFN)
<b>16:00 – 16:30</b>	Understanding Partonic Matter with CMS	Michael Murray (USA – U. Kansas)
<b>16:30 – 17:00</b>	Flow of Phi Meson in Pb + Pb Collisions at 2.76 TeV with ALICE	Ajay Kumar Dash (Brasil – Unicamp)
<b>17:00 - 17:30</b>	New Probes for QGP: Quarkonium Polarization at LHC	Jão Seixas (Portugal – LIP)



<b>Chair: André Nepomuceno</b>			<b>HIGGS Session</b>			<b>Scientific Secretary: Diego Figueiredo</b>		
09:00 – 09:50	To Higgs or not To Higgs					John Ellis (UK -King's College London)		
09:50 – 10:40	Higgs Search at ATLAS					Sofia Maria Consonni (Italy – INFN)		
10:40 – 11:00	Coffee Break							
11:00 – 11:50	CMS Higgs Search: Discovery, Measurements,...					Harvey Newman (USA – CALTECH)		
11:50 – 12:30	CMS Measurements of a New Boson and ZZ→Four Leptons Channel					Guenakh Mitselmakher (USA – U.Florida)		
12:30 – 14:30	Lunch Time							
<b>Chair ; André Nepomuceno</b>			<b>HIGGS SESSION</b>			<b>Scientific Secretary: Diego Figueiredo</b>		
14:30 – 15:10	CMS Measurements of a New Boson in the Gamma Gamma Channel					Chris Palmer (USA – UCSD)		
15:10 – 15:40	CMS Higgs Searches: Measurements					Roberval Walsh (Germany – DESY)		
15:50	<b>CLOSE SESSION</b>					Albert Santoro (Brasil - UERJ)		
<b>Workshop Dinner 19:30 – 24:00</b>								



## Secure Yourself

- If you decide to go out, Please do with a group not alone.
- Don't react if you are attacked by a pickpocket.
- Do not use attractive Cameras, too much rings and gold.

### Doctors & Health



•Any type of Bad experience, eventual health problems, even if you consider not important please communicate with us, **WE HAVE TO CONTACTED A DOCTOR THAT** will be happy to see you if necessary (but it is a private doctor). Please communicate with us

Alberto Santoro – 2.334.0386 – Office

2.551.8489 – Residence

8117.7771 - Cellular Phone

Telephones:



**Hospital Copa D'Or: Rua Figueiredo Magalhães,875 [55-21-2545-3600]**

**Policlinica de Botafogo: Av. Pasteur, 72 – Botafogo [55-21-2543-1804]**





## Secretariat Office:

Sandra Rocha

Marcio Faria

Kirsti Aspola

## Compute Room



You have access to your email directly by your Laptop  
WPA2-PSK (Encryption: AES) password: **darkmatter**

## Talks

Talks will be available in the WEB page. Please upload your talk to Indico page.

Thank you.



## LISHEP PROCEEDINGS

Due to severe budget cuts in the Lishep, the Proceedings will be no more done with Acta Physica Polonica, as announced before.

We are now planning to use the eConf (Electronic Conference Proceedings Archive) of Slac. For more details, see <http://www.slac.stanford.edu/econf/>

Therefore, each author should create his ArXiv file, using LaTeX, containing his full contribution for the Proceedings and then contact the editor Francisco Caruso by email at [francisco.caruso@gmail.com](mailto:francisco.caruso@gmail.com)

Papers should be submitted until 1<sup>st</sup> May.

# TOUR

We will do a Tour in Rio stopping on the old historical Streets of the old Rio de Janeiro – Capital of Brazil. Please see the program in our webpage.

It is absolutely necessary to do registration for this TOUR. We need to have a minimum of 15 persons. We have to decide today with the Tourism Agency

On the hall of the conferences we have people from a Tourism Agency. There are two different tours:

- a) **Conference Tour:** It is free for those having paid the fees
- b) Tours offered by the Tourism Agency this is an extra offer mainly for people from family that would like to go away during the workshop.





## **City Tours Date 23 March**

**Visit the most beautiful tourist spots.**

**Door of Mengo Hotel - Departure time 9:30 am**

**Return time 3:30 pm**

### **MAC - CONTEMPORARY ART MUSEUM**

~~Price: adults - R\$ 5,00 / Students: R\$ 2,50~~

### **SANTA CRUZ FORTRESS**

~~Prices: adults - R\$ 6,00 / Students (registered): R\$ 3,00~~

**Stop for Lunch**

**XV Square**

**Lapa Arches**



## Number of Participants per Country Session C

Country (16)	2013	Country	2013
CERN (Switzerland)	3	Brasil	66
Colombia	6	Amazonas	1
		Rio de Janeiro	52
		Rio Grande do Sul	2
		São Paulo	5
		Juiz de Fora	3
		Bahia	1
		Ceará	2
France	6	Italy	6
Germany	5	Mexico	5
Puerto Rico	2	Chile	3
Israel	2	UK	2
Poland	3	Finland	1
Portugal	1		
Spain	2		
Ukraine	1		
USA	9		
<b>TOTAL</b>	<b>40</b>		<b>83</b>



**BACK HOME**  
*for some of you.*

Thank you





**Have a good Session C – LISHEP2013**