



## Workshop on "Flavour changing and conserving processes" 2015 (FCCP2015)

10-12 September 2015 *Villa Orlandi, Anacapri, Capri Island, Italy*  
Europe/Rome timezone

**Web page:** <http://fccp2015.na.infn.it>

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### FCCP2015

"International Workshop on Flavour changing and conserving processes"

Villa Orlandi, Anacapri – Capri Island, Italy

10 - 12 September 2015

### BULLETIN

#### 1. Place and Date.

The "International Workshop on Flavour changing and conserving processes" (FCCP2015), is organized by the Physics Department of the University of Naples "Federico II" and by INFN (Istituto Nazionale di Fisica Nucleare).

It will take place in Anacapri, Capri Island, from Thursday, September 10 to Saturday, September 12, 2015.

This is the first workshop of a series which aims to discuss the status and prospects of the physics of "Flavour changing and conserving processes" and addresses the scientific community involved in experiments like  $g-2$ ,  $\mu 2e$ , meg, mee, COMET, EDM and more generally to the physics of K and B mesons. It wants to be a "thinking effort" on the outlook, both theoretical and experimental, as well as a picture of the "state of the art".

#### 2. International Advisory Committee

F. Bedeschi (INFN, Pisa- Italy)  
P. Campana (INFN, Frascati- Italy)  
A. Czarnecki (University of Alberta- Canada)  
E. De Rafael (CPT, Marseille- France)  
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W. J. Marciano (Brookhaven- USA)  
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M. Nio (RIKEN Nishina center - Japan)  
B. L. Roberts (University of Boston - USA)

### 3. Local Organizing Committee

G. D'Ambrosio (INFN, Naples)  
G. Carlino (INFN, Naples)  
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### 4. Secretariat

#### Studiocongress

Via dei Mille 16

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### 5. Preliminary schedule of the workshop

([http://people.na.infn.it/~mastroia/FCCP2015\\_programme.pdf](http://people.na.infn.it/~mastroia/FCCP2015_programme.pdf))

Thursday 10 <sup>th</sup>		
08:00-09:00	<b>Registration</b>	
<b>Morning session</b>		
09:00 -09:20	<i>Welcome</i>	
09:20 -09:30	<i>Introduction</i>	
09:30 -09:55	<i>Theory review on the muon <math>g-2</math></i>	Kirill Melnikov (Th $g-2$ Rev)
09:55 -10:20	<i>Status of muon <math>g-2</math> experiment at FNAL</i>	David Herzog ( $g-2$ Experiment)
10:20 - 10:45	<i>Status of <math>g-2</math> and edm experiment at JPARC</i>	speaker TBA ( $g-2$ Experiment)
10:45 - 11:10	<i>Leading-order hadronic contribution to the electron and muon <math>g-2</math></i>	Fred Jegerlehner (Th $g-2$ ( $e+\mu$ ) Hadronic LO)
11:10-11:30	<b>Coffee break</b>	
11:30 -11:55	<i>Perspectives on the hadronic contribution to the muon <math>g-2</math></i>	Marc Knecht (Th $g-2$ Hadronic contribution)
11:55 -12:20	<i>Review of recent calculations of the hadronic vacuum polarization contribution to <math>a_\mu</math></i>	Zhiqing Zhang (Th $g-2$ Hadronic LO)
12:20 -12:45	<i>Leading-order hadronic contributions to the lepton anomalous magnetic moments from the lattice</i>	Marcus Petschlies (Th $g-2$ Hadronic LO Lattice)
12:45 -13:10	<i>VMD/HLS approach to the muon (<math>g-2</math>): a solution to the tau-<math>e+e-</math> puzzle</i>	Maurice Benayoun (Th $g-2$ tau puzzle)
13:10 -15:00	<b>Lunch time</b>	
<b>Afternoon session</b>		

15:00 -15:25	<i>A new approach to evaluate the leading hadronic corrections to the muon <math>g-2</math></i>	Luca Trentadue (Th $g-2$ Hadronic LO - new approach)
15:25 -15:50	<i>Recent developments in the calculation of the hadronic light-by-light contribution to the muon <math>g-2</math></i>	Massimiliano Procura (Th $g-2$ Hadronic LBL Recent develop)
15:50 -16:15	<i>Recent developments in the calculation of the hadronic light-by-light contribution to the muon <math>g-2</math></i>	Marc Vanderhaeghen (Th $g-2$ Hadronic LBL Recent develop)
16:15 -16:40	<i>What does holographic QCD predicts for the light-by-light scattering contribution to <math>(g-2)_\mu</math></i>	Luigi Cappiello (Th $g-2$ Hadronic LBL Holograph)
16:40-17:00	<b>Coffee break</b>	
17:00 -17:25	<i>Hadronic light-by-light contribution to <math>a_\mu</math>: extended Nambu-Jona-Lasinio and chiral quarks models</i>	Johan Bijnens (Th $g-2$ Hadronic LBL)
17:25 -17:50	<i>Hadronic contributions to the muon anomaly in the Constituent Chiral Quark Model</i>	David Greynat (Th Hadronic $g-2$ muon)
17:50 -18:15	<i>Review on gamma-gamma physics at KLOE</i>	Dario Moricciani (Exp gamma-gamma KLOE Rev)
18:15 -18:40	<i>On the precision of a data-driven estimate of the pseudoscalar-pole contribution to hadronic light-by-light scattering in the muon <math>g-2</math></i>	Andreas Nyffeler (Th $g-2$ Hadronic LBL Recent develop)
18:40 -19:05	<i>Lattice calculation of the hadronic contribution to the muon <math>g-2</math></i>	Christoph Lehner (Th $g-2$ Hadronic LBL Lattice)
20:00	<b>Welcome party</b>	
<b>Friday 11<sup>th</sup></b>		
<b>Morning session</b>		
09:00 -09:25	<i>Higher-order hadronic and heavy-lepton contributions to the muon <math>g-2</math></i>	Matthias Steinhauser (Th $g-2$ Hadronic HO HeLep)
09:25 -09:50	<i>Recent developments on the MSSM contribution to the muon <math>g-2</math></i>	Dominik Stockinger (Th $g-2$ Supersymm contrib)
09:50 -10:15	<i>The muon <math>g-2</math> in two-Higgs-doublet Models</i>	Eung Jin Chun (Th $g-2$ Two Higgs doublets)
10:15 - 10:40	<i>The muon <math>g-2</math> and degenerate supersymmetry</i>	Ketan Patel
11:00 -15:30	<b>Boat excursion around Capri Island</b>	
<b>Afternoon session</b>		
15:30 -15:55	<i>Review on measurement of the R ratio at Novosibirsk and ISR, and radiative corrections</i>	Simon Eidelman (Exp $g-2$ R Rev)
15:55 -16:20	<i>Radiative corrections and Monte Carlo generators for low energies</i>	Guido Montagna (MC $g-2$ Rad Corr (low energies))
16:20 -16:45	<i>Review on transition form factors</i>	Andrzej Kupsc (Exp Trans Form Fact Rev)

16:45 -17:10	<i>Pseudoscalar transition form factors: rare decays, <math>g-2</math>, and mixing angles</i>	Pere Masjuan
17:10 -17:35	<i>Review on Dark Photon</i>	Francesca Curciarello
17:35-17:55	<b>Coffee break</b>	
17:55 -18:20	<i>On the interrelationship among leptonic <math>g-2</math>, EDMs and lepton flavor violation</i>	Paride Paradisi (Th Flavor EDM)
18:20 -18:45	<i>The EDM in the <math>g-2</math> experiment</i>	Rebecca Chislett ( $g-2$ Experiment EDM)
18:45 -19:10	<i>Radiative mu and tau leptonic decays and the possibility to determine the tau dipole moments</i>	Matteo Fael (Th Flavor – EDM)
19:10-19:35	<i>Review on the fine-structure constant and the electron <math>g-2</math></i>	Saida Guellati
21:00	<b>Social dinner</b>	
<b>Saturday 12<sup>th</sup></b>		
<b>Morning session</b>		
09:00 -09:25	<i>Experimental review on Lepton Universality and Lepton Flavour Violation tests at the B-factories</i>	Alberto Lusiani (Exp Flavour – Rev)
09:25 -09:50	<i>Charged lepton flavor violation – recent developments</i>	Francesca Borzumati (Th Flavor Rev)
09:50 -10:15	<i>Status of the Mu2e experiment</i>	Stefano Miscetti (Exp Flavour)
10:15 - 10:40	<i>Status of the Mu3e experiment at PSI</i>	Ann-Kathrin Perrevoort (Exp Flavour)
10:40 – 11:05	<i>Status of the MEG experiment at PSI</i>	Fabrizio Cei (Exp Flavour)
11:05-11:20	<b>Coffee break</b>	
11:20-11:45	<i>The SHIP Facility at CERN</i>	Giovanni De Lellis (Exp Flavour)
11:45 -12:10	<i>Status of the COMET experiment</i>	Peter Dornan (Exp Flavour)
12:10-12:35	<i>Lepton-flavour-violating decays in theories with Dim-6 operators</i>	Marco Pruna (Th Flavour)
12:35 -13:00	<i>Two-Higgs-doublet model facing experimental hints</i>	Julian Heeck (Th Flavour)
13:00 -13:25	<i>New Physics effects in flavour physics</i>	Andreas Crivellin (Th Flavour)
13:25 -14:50	<b>Lunch time</b>	
<b>Afternoon session</b>		
14:50 -15:15	<i>Status of the NA62 Experiment</i>	TBA (Exp Flavour)
15:15 -15:40	<i>Search for edm at storage ring</i>	Yannis Semertzidis (EDM Experiment Review)
15:40 -16:30	<i>Outlook</i>	Arkady Vainshtein

## 6. Social Events

- Thursday, September 10: Welcome cocktail at 20:00;
- Friday, September 11: Boat tour of the island (starting at 11:00)
- Friday, September 11: Social Dinner (21:00 h) at Restaurant "Da Gelsomina" Via Migliara, 72 – Anacapri (<http://www.dagelsomina.com>)

## 7. Workshop Site

The Workshop will be held in Villa Orlandi, Anacapri, Capri Island.  
All information can be accessed online through the web page:

<http://fccp2015.na.infn.it>

A valid passport is required for entry in Italy from outside of the European Schengen area. Participants from some countries will also need a visa. Please see <http://vistoperitalia.esteri.it/home/en> for details.

## 8. Registration and Accommodation

People willing to participate should carefully fill in the Registration Form on the web page of the workshop (<https://agenda.infn.it/confRegistrationFormDisplay.py?confId=9430>) not later than July 31, 2015.

## 9. Accommodation and Fee

All participants are kindly requested to reserve their accommodation on their own. Special deals have been made with the following hotels. Please fill this form for Hotel reservation and payment fee ([docx](#), [pdf](#)).

For any questions on Hotel reservation contact:

### **Studiocongress**

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The registration fee is 250 euros for participant and 80 euros for accompanying person.

The registration fee includes proceedings, lunches, coffee breaks and social events. Accompanying people will have to pay 80 euros for social program, namely boat tour on Friday 11th and social dinner.

Please fill the form you find in the Accommodation and fee page (<https://agenda.infn.it/internalPage.py?pageId=4&confId=9430>).

## 10. Travel and information

You can get a fast boat to Capri from Naples' main port *Molo Beverello*. There are also some slower boats (car ferries) leaving from *Porta di Massa*, which is 500m from Molo Beverello ([picture](#)). Information about timetables can be found at the following link <http://www.capri.net/salsa/lang/en/page/transport.html> Please note that the timetables usually change end of March.

**Arriving by plane:** From Napoli [Capodichino-Airport](#) it takes 45 min. to reach the Port of Naples. The company *Alibus* runs a bus that leaves in front of terminal 1 every 20 minutes (approximately at .00, .20, .40). The bus makes two stops, one at the central train station, the second at Piazza Municipio. The port (Molo Beverello) is at the bottom of the square. The ride costs 3 euro and the ticket can be bought on the bus. Taxis are also available (ride to Molo Beverello about 25 euro, verify price BEFORE boarding the car!)

**Arriving by train:** Stazione Centrale (15 minutes from the Molo Beverello) is connected with the port by bus and tram.

**Anacapri** is one of the two main villages in the island of Capri (the other one is called "Capri", like the whole island). The hotels where we are staying are located in Anacapri. To reach them, you can choose one of these ways:

1. From Marina Grande (the port where the boat leaves you) take the direct [bus to Anacapri](#) (runs on average every hour; cost=1,80 Euro; it takes 15 min.; buy a ticket at the ticket-desk). Tell the driver the name of your hotel.
2. At Marina Grande (the port where the boat leaves you) buy at the ticket-desk a ticket for the "Funicolare"=cable-car to Capri village (runs every 15 min.; it takes 4 min.); then, from Capri take the [bus to Anacapri](#) (runs every 10 minutes; it takes 15 min.). You need a second ticket for this ride. Tell the driver the name of your hotel.
3. From Marina Grande (the port where the boat leaves you) take a taxi (it costs about 25 Euros; it takes 15 min.; verify the price before boarding the taxi).

**How to reach [Villa Orlandi](#):** from the Piazza Vittoria bus stop in Anacapri, follow the suggested route [to Villa Orlandi](#).

### Useful links:

[www.capritourism.com](http://www.capritourism.com)  
[www.capri.net](http://www.capri.net)

## 11. Proceedings

The Proceedings of the Workshop will be published on-line by the Open Access Journal "EPJ Web of Conferences" (<http://www.epj-conferences.org>).

All contributing authors will be asked to prepare a contribution to be included in the proceedings and submit it within the deadline of **October 31, 2015**. More information can be found on the web page of the Workshop.

(<https://agenda.infn.it/internalPage.py?pageId=7&confId=9430>)

## 12. Internet Connection

A wifi connection will be available for participants.

## 13. Contact

If you have any questions or comments, please send an e-mail message to the following address: [loc\\_fccp2015@na.infn.it](mailto:loc_fccp2015@na.infn.it)

## 14. Important dates

Deadline of the registration: July 31, 2015

Arrival: September 9, 2015

Beginning of the meeting: September 10, 2015

End of the meeting: September 12, 2015

Deadline for the proceedings: October 31, 2015