



**1st International Conference on New Frontiers in Physics (ICFP 2012)
10-16 June 2012, Kolymbari, Creta, Greece**

1st Bulletin

The First International Conference on new Frontiers in Physics aims to promote scientific exchange and development of novel ideas in science with a particular emphasis on interdisciplinarity. The conference will bring together worldwide experts and promising young scientists working on experimental and theoretical aspects of Particle and Nuclear physics, Astrophysics, Cosmology, Gravity, Mathematical Physics, Quantum Physics, Quantum Entanglement, studies of Foundations of Quantum Mechanics and other.

The conference will be hosted in the Conference Center of the Orthodox Academy of Crete (OAC), a beautiful location only a few metres from the Mediterranean sea. OAC offers a rare combination of a modern conference center, full accommodation with excellent local cuisine, in an inspiring environment of pure nature near Chania, the most charming city of Crete, and other cultural and natural beauties.





Aim and Scientific program of ICFP 2012

*The conference series "New Frontiers in Physics" aims to promote **interdisciplinarity** and **cross-fertilization of ideas** between different disciplines addressing **fundamental physics**. While different fields each face a distinct set of field-specific challenges in the coming decade, a significant set of commonalities has emerged in the technical nature of some of these challenges, or are underlying the fundamental concepts involved. A Grand Unified Theory should in principle reveal this underlying relationship.*

For instance, techniques from string theory have become relevant in recent years for improving perturbative techniques in high energy physics or identifying material properties of non-abelian plasmas that share essential features with the systems studied in heavy ion collisions. Fluctuation analyses of the cosmic microwave background involve techniques and concepts that are becoming increasingly relevant for the study of the quickly expanding little bangs in heavy ion collisions. Cosmological models are developed in close interplay with searches for new physics at the LHC. There is a multitude of examples illustrating that cross-talk between neighboring fields is relevant or even crucial for progress in either field.

The conference series "New Frontiers in Physics" aims at identifying interdisciplinary topics on which cross-talk between different disciplines of fundamental physics can contribute to further progress. The conference series aims at bringing together key scientists of different fields to discuss the state of the art and the nature of open questions in a language suitable for a physics educated interdisciplinary audience, and to discuss avenues for further progress.



Main topics of the Conference :

A High Energy Particle Physics :

Searches for new particles and new phenomena at the LHC and other colliders (Higgs boson, SUSY, top quarks, extra dimensions, flavour physics, precision electroweak measurements and other), neutrino experiments, and related theoretical topics.

B Heavy Ion Collisions and Critical Phenomena :

Establishing the properties of QCD matter at extreme conditions and the QCD phase diagram with Heavy Ion Collisions and related theoretical topics. Branching out to neighboring disciplines, including Superconductivity and Critical Phenomena, Neutron Stars, Quark Stars, Exotics.

C Quantum Physics and Quantum Entanglement :

Quantum Physics, Quantum Optics, Quantum Entanglement, Foundations of Quantum Mechanics, Entanglement and our Universe: Black Holes and Cosmology, Quantum Non-Locality.

D Cosmology, Astrophysics, Gravity, Mathematical Physics :

Cosmic Microwave Background, Dark Energy, Modified Gravity, direct and indirect searches for Dark Matter, Astroparticle Physics, Quantum Gravity, String Theory, Non Commutative Geometry, Holography, Black Holes.



Venue

The conference will take place at the Orthodox Academy of Crete (OAC) in Kolymbari on the north western coast of the island of Crete, Greece. The OAC is a modern Conference Center, inaugurated in 1995, and next to the 17th century Gonia Monastery. The OAC provides a multi-purpose main hall, with a capacity for ~700 persons, 7 meeting rooms, offices for consultations, areas for posters, and areas for outdoor events. Most facilities are air-conditioned. An internet room is at the disposal of the conference participants. Furthermore, there is wireless internet connection on the ground floor and in the area outside.

The conference rooms are equipped with video projector, screen, speaker-podium with microphone, table microphones for the panel as well as standing microphones for the aisles, laser pointer, but also OH-projector, slides-projector, 30 poster boards [can be used on both sides, dimensions 1,40x1,40m and 0,90x1,40m]).

Kolymbari is about 30 km away from Chania, the most beautiful city of Crete.

Contact details:

OAC administration

730 06 Kolymbari, Chania

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Deadlines

Abstract submission opening: 10 March 2012

Abstract submission deadline: 30 April 2012

Late abstract submission: 10 May 2012

Abstract submission acceptance notification: 10 May 2012

Registration deadline : 30 May 2012

Registration will continue after the 30th May and will be possible also during the conference. However, in that case the conference fee will be increased by 50 EU. This additional fee will not be applied for participants that do not have a Bank Card able to do the transaction online.

Conference registration and fees

Registration, payment of conference fee and abstract submission are possible via the conference webpage <https://indico.cern.ch/conferenceDisplay.py?ovw=True&confId=176361>

Conference fees : 2000 NOK (ca. 265 EU) regular

1400 NOK (ca 185 EU) for students

The conference fee includes: Conference Proceedings, Conference Dinner and Excursion.

Proceedings

There will be peer reviewed proceedings of the conference (Journal to be announced).



Accomodation

OAC has 60 rooms, which are all double, with either two beds or a double bed, and out of which 5 are suites. All have their own bathroom and most have a sea-view and air-conditioning. The cost, which includes accommodation at OAC, full board, coffee breaks and conference facilities is 115 Euros per day per person in a single room and 90 Euros per person per day in a double room.

The cost for accompanying persons staying in OAC and sharing a double room is 60 Euros per day including accommodation and meals. OAC provides breakfast and two meals per day, following the traditional Cretan cuisine.

Payments at the academy can be made in one of the two following ways:

- In cash (in Euros only). Note that there is a bank with an ATM in Kolymbari accepting VISA, Master, and Maestro cards.

- By Credit Card (Mastercard or Visa)

- By bank transfer to the OAC Bank Account (see the conference web page).

For Bank Transfers the participants should make sure to provide their name, the name of the conference, the dates of conference and they have to send to OAC an email with a confirmation of the payment.

OAC bank account

Cooperative Bank of Chania

Accountholder: Orthodox Academy of Crete

AccountNo.: 113505004

IBAN: GR20 0690 0080 0000 0011 3505 004

BIC: STXAGRA104

BIC: STXAGRA1





Webpage of the conference

<http://indico.cern.ch/event/icfp2012>

Agenda

The Program of the Conference foresees:

- Registration, reception and dinner Sunday the 10th June 2012, OAC.*
- Presentations will take place from 9h00-13h00, and from 17h30-20h00, with two coffee breaks per day.*
- A poster session will be organized on Tuesday.*
- On Wednesday the Conference Excursion is organized.*
- The Conference Dinner and a Cultural Event will take place Thursday evening.*
- After the Saturday morning session the Conference will close at 13h00.*



Agenda

A draft agenda of the conference is shown below:

Sunday 10/June	Monday 11/June	Tuesday 12/June	Wednesday 13/June	Thursday 14/June	Friday 15/June	Saturday 16/June
	09h00-10h30 Session I	09h00-10h30 Session I		09h00-10h30 Session I	09h00-10h30 Session I	09h00-10h30 Session I
	10h30 Coffee break	10h30 Coffee break		10h30 Coffee break	10h30 Coffee break	10h30 Coffee break
	11h00-13h00 Session II	11h00-13h00 Session II		11h00-13h00 Session II	11h00-13h00 Session II	11h00-13h00 Session II
	13h00 Lunch	13h00 Lunch	Conference Excursion	13h00 Lunch	13h00 Lunch	13h00 Lunch
	17h30-18h20 Session III	17h30-18h15 Session III		17h30-18h20 Session III	17h30-18h20 Session III	End of the Conference
Registration 18h00	18h20 Coffee break	18h15 Coffee break		18h20 Coffee break	18h20 Coffee break	
	18h50-19h45 Session IV	18h30-20h00 Poster Session		18h50-19h45 Session IV	18h50-19h45 Session IV	
19h30 Reception 20h00 Dinner	20h00 Dinner	20h00 Dinner	20h00 Dinner	20h00 Conference Dinner	20h00 Dinner	



Contacts

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For accommodation in OAC please contact

OAC administration

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Social events

Conference Dinner

The Conference Dinner will take place on Thursday the 14th June 2012, including a “Cretan night” with traditional dances and songs. Cretan musicians and a dancing group dressed in traditional costumes will present musical treasures of Crete and the whole of Greece. The conference participants have the opportunity to sing, dance and enjoy an unforgettable night.

Accompanying persons wishing to join the conference dinner are kindly asked to arrange it on site with the OAC administration.



Conference Excursion

*The Conference Excursion will take place on Wednesday 13th June 2012, and will include a full day's guided visit to the archeological site of **Knossos**, the archeological **Museum of Herakleion**, and **Rethymnon**. Accompanying persons wishing to join the conference excursion are kindly asked to arrange it on site with the OAC administration.*

Knossos



*Disc of Phaistos, Archeological
Museum of Herakleion*





Travel

There are many direct flights to Heraklion and Chania from various European cities.

*The **recommended airport**, closest to the conference site, is Chania International Airport (CHQ). OAC is located 39 km west of CHQ airport. The best way to reach the conference site from the airport is by taxi. The full fare including airport surcharge is about 50 Euros. A cheaper way is by bus (line Hania - Castelli). However, the bus stop is located at a distance of about 1 km from OAC. If you decide to fly to **Heraklion**, you can reach the conference site by taxi (one-way fare around 140 Euros) or by bus from Heraklion to Chania (one bus per hour, line Heraklion-Rethymnon-Hania, duration about three hours) and then to the OAC as explained above.*

*Chania can also be reached from Athens daily by **boat**. The company operating the route is ANEK Lines (see ferry schedules at this link). Boats dock at Chania's port Souda bay, which is located about 7 km east of the city of Chania. From there you can reach Chania and Kolymbari by bus or taxi.*

Local transport

Once the flight schedule of participants is settled, OAC will offer options for transportation to the centre by bus.





Crete

Crete is the biggest island in Greece and the fifth in the Mediterranean. It consists of four prefectures: Chania, Rethymnon, Heraklio and Lasithi. The OAC is located at Kolymbari, a small scenic village on the coast, situated at the inlet of the homonymous bay. Kolymbari is in the prefecture of Chania, about 30 km from the city of Chania.

Kolymbari is a waterfront village at the base of the Rodopou Peninsula with a long, pebble beach. Once a rural village with olive-trees and vineyards, today Kolymbari is a quiet, natural, holiday resort with a developing touristic village.

Kolymbari has several quality tavernas serving seafood and traditional food. You can try these special dishes in one of the downtown fish tavernas or at the waterfront next to the beach. There are few cafes and bars for a coffee or a drink. The village is served by a Post Office, the Bank of Chania, and several ATMs.

A short walk from downtown Kolymbari takes you to the 17th century **Gonia Monastery**, which is located 1 km to the north of the village and offers a magnificent view. The monastery was built as a fortress overlooking the bay and is surrounded by verdant vegetation. A centre of resistance during the revolution of 1821, today it hosts an important collection of precious post-Byzantine icons, relics, and other rare religious treasures.

A short boat trip takes you to the north-eastern edge of the Rodopou Peninsula, where you can visit the ruins of the ancient town of **Diktyнна**, the **Gramvousa** island with the **Gramvousa castle** at its top, and the beach **Balos**. (Balos can also be reached on foot from Kolymbari.)



Crete

*The nearby beaches of Falasarna and Balos are regarded as **two of the purest beaches of Crete**. The famous Elafonissi beach is within one hour driving distance from Kolymbari.*

Weather in Crete

The weather in Crete in June normally is sunny with moderate-to-hot temperatures. Note that the hottest season in Greece begins in July. In June the sea water is warm enough for swimming. Day time Temperature peaks between 23 and 29 degrees.



Chrysoskalitissa - Elafonnisos