



3rd International Conference on New Frontiers in Physics (ICNFP 2014)

28 July – 6 August 2014, Kolymbari, Crete, Greece

<http://indico.cern.ch/event/icnfp2014>

1st Bulletin

The **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, Heavy Ion Physics, Astrophysics, Cosmology, Gravity, Mathematical Physics, Quantum Optics, 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 ICNFP 2014

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.

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 (Higgs boson, SUSY, top quarks, extra dimensions, flavor physics, precision electroweak measurements and other), hadron physics, neutrino physics.

B Heavy Ion Collisions and Critical Phenomena :

The properties of QCD matter at extreme conditions and the QCD phase diagram. Branching out to neighboring disciplines: Superconductivity, Neutron Stars, Quark Stars, Exotics.

C Quantum Physics and Quantum Entanglement :

Quantum Optics, foundations of Quantum Mechanics, Quantum information, Quantum Entanglement and the Universe: Black Holes and Cosmology, Quantum Non-Locality.

D Cosmology, Astrophysics, Gravity, Mathematical Physics :

Cosmic Microwave Background, Dark Energy, Modified Gravity, Dark Matter, Astroparticle Physics, Quantum Gravity, String Theory, Non Commutative Geometry, Holography.

While the main body of the conference builds mostly on the above mentioned topics, presentations on yet different disciplines are invited, and vary every year. Such topics include nuclear structure, atomic physics, plasma physics, physics applications (biophysics, medical science), biology, mathematics, computing science and other.

28.07-29.07 2014 ICNFP Workshop on “Opportunities from FAIR to other low energy facilities”



The conference will host a workshop focusing on different physics topics pursued at the FAIR facility. In addition, opportunities at other low energy facilities, such as NICA, SPS, RHIC and fixed target experiments at LHC will be discussed.

Topics of the Workshop:

- Heavy ion collisions at low energies in present and future facilities: FAIR, NICA, CERN and RHIC
- Nuclear Structure Physics
- Antiproton Physics
- Nuclear Matter Physics
- Nuclear Astroparticle Physics
- Plasma Physics
- Atomic Physics
- Applications (Biophysics, Medical Science and other).

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
Tel.: 0030-28240 22245/22500
Fax: 0030-28240-22060
E-mail: oac@otenet.gr
www.oac.gr



Deadlines

Abstract submission opening: 1 February 2014

Abstract submission deadline: 30 May 2014

Abstract submission acceptance notification: 1 June 2014

Registration deadline : 15 June 2014

Earliest possible date of arrival at OAC: 27 July 2014

Latest possible date of departure from OAC: 7 August 2014

Payment of the conference fee will be possible via bank transfer to the OAC Bank account and also in place upon arrival (only cash). Please note: failure to pay the conference fee upon arrival will result in a “late payment” penalty of 50 EUR.

Conference registration and fees

Registration, payment of conference fee and abstract submission are possible via the conference webpage <http://indico.cern.ch/event/icnfp2014>

Conference fees : 275 EURO regular

195 EURO for students

The conference offers limited financial support for young students as well as post doctoral researchers with up to 5 years scientific experience after their Thesis. For more informations please consult our webpage.

Proceedings

There will be peer reviewed proceedings of the conference (EPJ Web of Conferences) for both oral and poster presentations.

Accommodation

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 occupation room and **90 Euros per person per day** in sharing 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) only on site in Crete
- 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:

PIREUS BANK

Branch: 1377, Tzanakaki 82, Chania, Crete

Account holder: Orthodox Academy of Crete

Address: Orthodox Academy of Crete,
GR – 73006 KOLYMPARI

Account number: 6377101637911

IBAN: GR 04 0171377000 6377101637911

BIC: PIRBGRAA



Webpage of the conference

<http://indico.cern.ch/event/icnfp2014>

Agenda

The Program of the Conference foresees:

- Arrival and Registration **Sunday July 27th**.
- **FAIR Workshop Monday July 28th and July 29th (part of the day)**
- Introductory (student) lectures **Tuesday July 29th – Wednesday July 30th**.
- **Main part of the conference Thursday July 31st – Wednesday August 6th**
- Presentations will take place between **8h30-13h20**, and **14h30-16h30**
with two coffee breaks per day.
- An **Opera Gala** will take place on **Thursday 31th July**.
- The **Conference Excursion** is organized on **Sunday August 3rd**.
- A **poster session** will be organized on **Monday August 4th**.
- The **Conference Dinner** will take place on **Tuesday August 5th**.
- The **Conference** will be **closed Wednesday August 6th at 16h30**.

Contacts

Email of the conference: icnfp2014@gmail.com

Emails of organizers :

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OAC administration

730 06 Kolymbari – Chania

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oac@otenet.gr

Social events

Conference Dinner

The **Conference Dinner** will take place on **Tuesday August 5th, 2014**, 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.

Opera Gala

The **Opera Gala** will take place Thursday July 31st, 2014 in the OAC auditorium and will feature a soprano, a pianist and flautist. Please consult our webpage for the full program of the event.

Conference Excursion

The **Conference Excursion** will take place on **Sunday August 3rd, 2014**, 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 conference helpdesk.

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 60 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.

Please have a valid passport with you (even if not required for EU Nationals), to avoid problems that appeared sometimes with european ID cards at the local airports.

Local transport

Once the flight schedule of participants is settled, the conference will offer options for transportation **Airport-OAC by bus (only on the arrival days – July 27th, 28th and 30th July, and the departure days – August 6th-7th).**

The conference will also organize **bus transfer between Hotels and OAC.**



Crete

Crete is the biggest island in Greece and the fifth in the Mediterranean. It consists of four prefectures: **Chania, Rethymnon, Heraklion 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.**

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

July and August are usually the hottest months. Temperature averages range between 30 – 35 degrees: <http://www.weather-and-climate.com/average-monthly-Rainfall-Temperature-Sunshine,chania,Greece>
By the sea, the feeling is moderated by the breeze, however do not forget your sunscreen !



Chrysoskalitissa - Elafonnisos