



6th International Conference on New Frontiers in Physics (ICNFP 2017)

August 17 – 26, 2017, Kolymbari, Crete, Greece

<http://indico.cern.ch/e/icnfp2017>

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, Astrophysics, Cosmology, Gravity, Mathematical Physics, Quantum Optics, Quantum Information, 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 meters 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 2017

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 crosstalk between neighbouring 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 crosstalk 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 neighbouring disciplines: Superconductivity, Neutron Stars, Quark Stars, Exotics.

C) Quantum Physics, Quantum Optics and Quantum Information:

Quantum Optics, Quantum Information, Foundations of Quantum Mechanics, Quantum information, Entanglement and the Universe: Black Holes and Cosmology, Quantum Non-Locality, Cold Atoms.

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.



Beach in Chania

Parallel Special Workshops and Sessions : a New Tool for Interdisciplinary Conferencing

The organization of topical workshops in parallel during the conference, boosts significantly the interdisciplinarity among fields, allowing to build up the “critical mass “ of a topical environment in each field, and at same time gives the opportunity to people to interact with each other in significant way.

Plenary talks introducing or representing the workshops in the main session of ICNFP, allow further to bring topical science from far fields to the attention of every participant. Also a number of offices in the conference center can be used for working meetings and collaborative work by the participants.

As far as we know no other conference offers such opportunities for interdisciplinarity at the moment. We hope that pioneering new ways of interdisciplinary interactions will open up new ways of “ conferencing “ and new research.



Chania

The ICNFP organizers receive in the mean time specific requests of people in a field to have parallel or after/before their workshop another workshop on another specific field , (for example Quantum Optics colleagues may want to have Astroparticle Physics and Cosmology Session in parallel) because they are interested to explore the interaction with this other field.

We welcome propositions among these lines. Please feel free to send us your suggestions.

Special Scientific Events and Workshops organized this year:

- *Walter Greiner Memorial Session*
- *Workshop on Continuous Variables and Relativistic Quantum Information*
- *Workshop on Quantum Foundations and Quantum Information*
- *Workshop on Exotic Hadrons*
- *Mini-workshop on New Searches in High Energy Particle Physics*
- *Mini-workshop on Highly Ionising Avatars of New Physics*
- *Mini-workshop on Correlations and Fluctuations in Relativistic Heavy Ion Collisions*
- *Workshop on Physics at FAIR-NICA-SPS-BES/RHIC*
- *Workshop on Future of Fundamental Physics*
- *Special session on QCD*
- *Special session on Astro-Cosmo-Gravity*
- *Special Session on Super Heavy Elements*
- *Spartak Belyaev Memorial Session*
- *Helmut Oeschler Memorial Session*
- *Gunnar Lovhoiden Memorial Session*



Venue

The conference will take place at the Orthodox Academy of Crete (OAC) in Kolymbari on the north coast of the west part of the island of Crete, Greece. The OAC is a modern Conference Center situated in an exceptionally beautiful location, only a few meters from the sea and next to the 17th century Gonia Monastery. The OAC offers all the facilities necessary to meet the most demanding requirements. It provides a multi-purpose hall with a capacity for **730 persons**. In addition, the OAC has 7 meeting rooms, offices for consultations, secretariats, areas for displays, posters, exhibits, and areas for outdoor events. Most facilities are air-conditioned. The OAC is fully equipped with modern technology tools to cover all conference needs.

The conference rooms are equipped with all technical means necessary even for the most demanding conferences. OAC technicians provide technical support during the whole conference. An internet room is at the disposal of the conference participants. Furthermore, the venue provides free wireless connection (in the rooms also).

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



Deadlines

Abstract submission deadline:	15 April 2017
Latest abstract acceptance notification:	20 April 2017
Registration deadline:	30 April 2017
Arrival day:	16 August 2017
Departure day:	27 August 2017
Deadline for proceedings:	15 November 2017

Conference registration and Conference Fees

For the registration, payment of conference fee and abstract submission please consult the conference webpage <http://indico.cern.ch/e/icnfp2017>

The conference fees are:

- **350 EURO regular**
- **250 EURO student**



How to pay :

For the payment of the conference fee please use the **bank account given in the conference webpage** of ICNFP 2017 at any given time. We plan to add more possibilities of payment on our webpage soon.

Payment of the conference fee will be possible also in place upon arrival.

Please note: if the conference fee could not be paid within two days after arrival, this will result in a “late payment” penalty of 50 EUR.



OAC

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 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. (Examples: A participant with one accompanying person will pay 90+60 EU per day. Two participants sharing a room, will pay 90+90 EU per day).

How to reserve a room in OAC:

The request for reserving a room in OAC has to be done **via your registration** to ICNFP2017 (not by sending email to OAC).

If you select OAC in your registration, you will receive later email from ICNFP2017 organizers confirming your pre-reservation (or otherwise).

After receiving your pre-reservation, you will be informed that you can proceed to the payment of the OAC room to the bank account(s) displayed on the ICNFP 2017 webpage, at any given time.

Only your payment will allow final confirmation of your reservation in OAC.

The cancellation policy will be posted in our webpage soon.



OAC

Summary of Informations on Payments

Please find informations on prices in : <https://indico.cern.ch/event/559774/page/8017-payments-and-support-information>

For all payments :

- of conference fee and/or
- of OAC room if you have a pre-reservation and/or
- for expenses of the accompanying persons

please pay using the **bank accounts** displayed on the conference webpage of ICNFP 2017 at any given time.



Knossos Palace

We plan to add more possibilities of payment modes on the ICNFP 2017 webpage soon, allowing also online direct payment with credit card via our webpage.

Payments on site at Crete can be made:

- 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 bank accounts displayed in the conference web page at any time.

Before proceeding to pay for your room in OAC, **please make sure that you have received explicit confirmation** of your pre-reservation from the conference organizers.

When proceeding to pay **please make sure**

1) that you have selected the **bank** account given in our **current** webpage

<https://indico.cern.ch/event/559774/overview>

2) that you have entered **your name** and the conference name **ICNFP2017 and dates** as comment in the **bank transfer**

3) That you have **emailed** to the icnfp2017@gmail.com the **receipt** of your payment (with amount, date, time and Bank from/to which the transfer was done) and the **detail** of the payment (example: 350 EU conf fee + 7 x 115 EU for 7 nights at OAC single room= sum 1155 EU).

Gramvoussa peninsula



For the moment all payments (of conference fee, OAC room (after you have received confirmation for your pre-reservation by the ICNFP2017 organizers) or accompanying person expenses) can be done only via bank transfer to:

"Academia Europaea -Bergen" (Den norske Bank)

DNB bank

Torgallmenningen 2, 5020 BERGEN

(Norsk Kontonummer: 15034464135)

Account number - IBAN: NO42 1503 4464 135

BIC/SWIFT code: DNBANOKKXXX

Please add as said previously the following message while doing the bank transfer :

ICNFP2017, Full Name of the participant



Mountains of Crete with sea view

Webpage of the conference

<http://indico.cern.ch/e/icnfp2017>

Abstract Submission:

<https://indico.cern.ch/event/559774/abstracts/>

Registration:

<https://indico.cern.ch/event/559774/registrations/30727/>

Agenda

The Program of the Conference foresees:

- Arrival Wednesday the 16th or Thursday the 17th of August
- Introductory (Student) Lectures Thursday the 17th of August
- Main part of the conference Friday the 18th - Saturday the 26th of August
- The Conference will be closed on Saturday the 26th of August at 13h30.

Proceedings

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



Samaria Gorge





Chania Cathedral

Social events

The conference will include several cultural events, among which public talk, a concert of Classical Music, an Opera Gala Event, excursion (on Friday the 25th August) to the medieval city of Chania, old harbor and castle, excursions (on Sunday the 20th of August) to the archeological Museum of Heraklion and the ancient Palace of Knossos or to Monasteries in the mountains of Crete.

For the updated complete list of cultural events please consult the webpage: <https://indico.cern.ch/event/559774/page/8007-events>

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 Chania - Castelli). However, the bus stop is located at a distance of about 1 km from OAC.

If you decide to fly to **Heraklion**, located in 165 km from OAC, you can reach the conference site by taxi (one-way fare around 200 Euros) or by bus from Heraklion to Chania (bus price about 20 EU, 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.



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 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.)

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



Chrysoskalitissa - Elafonnisos

Weather in Crete

August is almost as hot as July while boasting the warmest sea temperatures of the year across the whole Greek archipelago. During August, average daytime temperature is similar to July's and stays at around 26 degrees Celsius. Daytime high peaks typically reach up to 29 degrees with lows rarely going below 21 degrees.

Seawater temperature rises up to a perfect 25 degrees, the warmest it gets during the year. The sun shines practically for 12 hours each day, while clouds are a rare sight.

Suggestions: Useful to have a hat, a high protection level Sunscreen Cream and good walking shoes for some excursions. A light jacket and/or scarf is sometimes needed in the evenings.



Falassarna beach



Cretan specialities and wine

Contacts

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Organizers contacts:
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Furthermore, you can find emails of convenors of Special Workshops and Special Sessions on the ICNFP2017 webpage



Cretan endemic flower