

# Conference on Neutrino and Nuclear Physics (CNNP2017)



**Sunday, 15 October 2017 - Saturday, 21 October 2017**

**Monastero dei Benedettini, University of Catania, Catania, Italy**

## **Scientific Programme**

<div style="text-align: justify;">

The main objective of CNNP2017 is to promote a collaborative framework of researchers from the fields of nuclear, neutrino, astro and dark-matter physics to discuss experiments and theories in which nuclear physics aspects are particularly relevant. The overlap between different communities is an unavoidable, despite demanding, feature in order to face several challenges of modern fundamental physics. The sharing of different experimental and theoretical techniques, the exchange of technical experiences and know-how is perhaps the best resource to build a unified view of the afore mentioned scientific problems.

A preliminary list of the topics to be developed during the Conference is below:</div>

<div style="text-align: justify; margin-left: 40px;">

- Nuclear double beta decays
- Nuclear structure in connection with neutrino physics
- Nuclear reactions as a probe for weak decays
- Neutrino-nucleus interaction at low and high energy
- Supernova models and detection of supernova neutrinos
- Solar models and detection of solar neutrinos
- Direct and indirect dark-matter searches
- Rare beta decays of nuclei for neutrino-mass measurements
- Neutrino oscillations and matter effects
- Anomalies in reactor neutrinos
- New related detection technologies</div>

<div style="text-align: justify;">

At present nuclear structure plays an ever growing role in the mentioned fields of fundamental physics, but still a lot needs to be done. In this context, it is of utmost importance to allow people working at the intersections of these fields to meet regularly to exchange ideas and results. For this reason, the CNNP17 aims at evolving in the long term into a periodic meeting.</div>

## **Nuclear double beta decays**

## **Nuclear structure in connection with neutrino physics**

## **Nuclear reactions in connection with weak probes**

**Neutrino-nucleus interaction at low and high energy**

**Supernova models and detection of supernova neutrinos**

**Solar models and detection of solar neutrinos**

**Direct and indirect dark matter searches**

**Rare beta decays of nuclei for neutrino-mass measurements**

**Neutrino oscillations and matter effects**

**Anomalies in reactor neutrinos**

**New related detection technologies**