



**2016 ISAPP School on  
Physics and Astrophysics of Cosmic Rays in Space  
September 12-20, 2016 – Milano, Italy**

**Second Announcement**

ISAPP is a network of 36 European doctorate schools and institutes from nine European Union countries plus Russia and Israel. ISAPP's main goal is to create a real astroparticle community amalgamating the elementary particle and astrophysics communities. More information can be found on the ISAPP web site (<http://isapp.ba.infn.it/>). Every year, the ISAPP European network organizes schools in astroparticle physics at the doctoral level for experimentalists, observers and theorists. The present year the school is devoted to the discussion of Cosmic Ray physics in the energy range from a fraction of GeV to more than one TeV. The school will be held in Milano, 12-20 September 2016.

The new experimental results will be compared with the models of production and propagation inside the galaxy and the solar system, including the near-earth space. After AMS-02 on board of the International Space Station, Fermi and Pamela satellites, Cosmic Rays observations become precise at a level which requires a refinement, or a step forward, of the existing models. These results will be discussed in view of the impact on fundamental physics, astrophysics and cosmology.

The School is open to PhD students and post-docs working in the fields of astroparticles, cosmology, high energy astrophysics and particle physics. No prior experience in Cosmic Ray physics is required. Lectures will take place at the University of Milano Bicocca. Registration will be open until May 20<sup>th</sup>.

Please visit the website <http://isapp2016.mib.infn.it/>. Here you can fill in the on-line registration form or download it. The application form, together with a CV and a supporting letter of your advisor, must be sent to [isapp2016@ispp.it](mailto:isapp2016@ispp.it).

The program of the school will include:

**Basic Courses**

- *Standard model of Particle Physics and beyond*
- *Cosmology*
- *Astrophysics of Galaxies and Stars*

**Advanced Courses**

- *Cosmic Rays in the Earth's magnetosphere and atmosphere*
- *Cosmic Rays in the Heliosphere*
- *Solar activity and Particle emission*

- *Spacecrafts, experiments and observatories, devoted to solar and interplanetary studies*
- *Interstellar Space and GCR*
- *Sources, propagation and acceleration of GCR*
- *Dark matter*
- *Cosmology and Fundamental Physics with GCR*
- *Detectors, experiments and observatories in Space, devoted to GCR*
- *Space Environment and effects of radiations*

**Confirmed Lecturers**

- Bruna Bertucci (University and INFN, Perugia, Italy)
- Marco Cirelli (LPTHE Jussieu, Paris, France)
- Stefan Ferreira (North-West University, South Africa)
- Bernd Heber (University of Kiel, Kiel, Germany)
- Guolaugur Johannesson (University of Iceland, Iceland)
- Paolo Lipari (INFN, Roma, Italy)
- Alessandro Melchiorri (Università Sapienza, Roma, Italy)
- Igor Moskalenko (Stanford University, USA)
- Petteri Nieminen (ESA-ESTEC, Noordwijk, The Netherlands)
- Oscar Straniero (INAF-OAT, Italy)
- Ilya Usoskin (Oulu University, Finland)

For more details, please consult the School's website: <http://isapp2016.mib.infn.it/>.