



**INTERNATIONAL COLLABORATION**  
**BILATERAL MEETING IN PISA BETWEEN THE INFN AND JINR FROM DUBNA**

The INFN and JINR (Joint Institute for Nuclear Research) based in Dubna held a bilateral meeting on 12 and 13 October at the Rector's office of the University of Pisa to discuss their respective research activities and explore potential areas of common interest with a view to expanding their collaboration. Russia and Italy have a long history of scientific collaboration. Physicists at the INFN and JINR are currently working together on several projects, specifically the Borexino, SOX, DarkSide and GERDA experiments at the Gran Sasso National Laboratory (LNGS), the JUNO project in China and the mu2e and CDF (Collider Detector at Fermilab) experiments at Fermilab in Chicago.

During their two-day annual meeting, the INFN and JINR also attended a series of conferences on history and science focused on the legacy of Bruno Pontecorvo, one of the "Via Panisperna Boys", who carried out some of his research into neutrinos in Dubna. In 1957 this Pisa-born physicist had the brilliant idea that neutrinos might oscillate and, just a few days prior to the bilateral meeting, the 2015 Nobel Prize in Physics was awarded to the physicists who experimentally demonstrated of such a phenomenon. ■



**DISSEMINATION**  
**INFN AT THE MAKER FAIRE ROME 2015 WITH HOMEMADE DETECTORS**

As from this year, the INFN has joined the list of partners for the Maker Faire, the important exhibition for new digital artisans. The Italy 2015 edition was hosted by the Sapienza University in Rome. Makers from the

INFN showed the public how to build a homemade particle detector, using simple ingredients. The instruments presented at the event, a cosmic ray detector and accelerated particle beam scanner, were built using "ArduSiPM" Arduino Shield software and board, developed for research purposes by the INFN's Rome division.

With the addition of a few electronic components, it was possible to build a particle detector data acquisition and control system, creating a small-scale replica of the large physics experiments built by the INFN.

The homemade detector is very similar to the larger versions used for instance in the LHC accelerator at CERN, but its very low production costs mean it has numerous applications in education.

As well as presenting the work of its makers, the INFN also took part in the Maker Faire Rome 2015 with a contribution to the exhibition called "La Scienza illumina" (Science illuminates), the aim of which was to raise awareness among people of all ages about sustainability and energy saving. The exhibition was designed and realized by the Sapienza University in Rome. ■