

Dear prof. Wilson,
according to a suggestion by Sergio Bertolucci, I send you information about the request of the Lecce group to join DUNE Collaboration.
At the moment we are only two staff people. As usual in Italy, we are from University and from INFN.

Best wishes,

Paolo

Our possible contributions to the DUNE program:

- MC simulation of near detector and its physics reach
- contribution to SBL program at FNAL, mainly simulation and data analysis
- contribution to the activities required to install and operate detector components that will be contributed by INFN

The group:

Paolo Bernardini Associate Professor, Dipartimento di Matematica e Fisica "Ennio De Giorgi", Università del Salento, Lecce, Italy

Born on 1954 and graduated on 1978, Paolo Bernardini is an Italian experimental particle physicist. At the very beginning of the career he was at N. Bohr Institutet in Copenhagen and at the ENEA Frascati laboratories. On 1983 he got a position at the Università di Urbino, Italy. Presently he is associate professor at the Dipartimento di Matematica e Fisica and member of the Administration Council at the Università del Salento, Lecce, Italy. P. Bernardini wrote more than 130 papers on peer-review journals and gave talks in many international conferences. His research activity has been focused on astroparticle and neutrino physics, indeed he contributed to the analysis of neutrino-induced events collected with the MACRO detector in the Gran Sasso underground laboratory. This measurement of the atmospheric neutrino flux supported the claim on neutrino oscillation in 1998. After the MACRO experience, P. Bernardini was active in the ARGO-YBJ experiment in Tibet devoted to cosmic-ray studies and gamma-ray astronomy. He contributed also to define the concept of a short-baseline neutrino experiment (NESSiE). Presently he analyzes the data collected by the DAMPE satellite searching for dark matter clues in the flux of cosmic rays (nuclei and electrons) at TeV energies and takes part in the NU@FNAL project. P. Bernardini is also chairman of the Neutrino Oscillation Workshop (www.slac.stanford.edu/spires/conf/series.shtml), since 2000 a biennial conference in Otranto, Italy.

Antonio Surdo **Researcher, 2nd level - Istituto Nazionale di Fisica Nucleare, Lecce, Italy**
Born on 1963 and graduated in Physics on 1988 at the University of Salento (Lecce, Italy). I have a position of researcher at INFN-Lecce since the year 1991. In 2007 I became First Researcher of INFN. Since the degree thesis I was involved in MACRO experiment, at the Gran Sasso underground laboratory. I worked on the DAQ system, of which I had the responsibility since 1996 up to the experiment closing on 2000, and on the measurement of atmospheric neutrino flux, which allowed to verify the neutrino oscillation properties. Starting on 1998, I contributed to the design, installation and operation of the ARGO-YBJ detector in Tibet (at 4300 m a.s.l.), a full-coverage extensive air shower array for low energy threshold gamma-ray astronomy and the study of cosmic rays in the energy range between direct and ground-based measurements. Within ARGO-YBJ, my activity mainly concerned the developing of the Monte Carlo program of the experiment, while my data analysis was focused on the measurement of: a) p-air and p-p cross section, b) cosmic ray all-particle and light-component (p+He) energy spectrum. Successively, I contributed also to define the concept of a short-baseline neutrino experiment (NESSiE). Since 2015, I am involved in the DAMPE satellite-based experiment (the detector is in orbit and smooth data taking since December 2015), for detection of dark matter clues in lepton spectra, gamma-ray astronomy searches and direct studies of cosmic ray spectra and composition. My present DAMPE analysis is devoted to measure the cosmic-ray proton and helium energy spectra.

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