



Contribution ID: 72

Type: **Oral**

## Neutrino interactions with nucleons and nuclei in the few-GeV region

*Monday, 16 October 2017 15:10 (20 minutes)*

The precise determination of neutrino properties in current and future accelerator-based oscillation experiments requires a good understanding and realistic modeling of neutrino interactions in the detectors; it is crucial to distinguish signal from background, reconstruct the neutrino energy and minimize systematic uncertainties. Our present theoretical description of quasielastic and inelastic scattering on nucleons and nuclei is discussed in the light of recent experimental results. This includes efforts to take into account realistic descriptions of the ground state, relativistic kinematics and final state interactions. The example of photon emission induced by neutral current interactions, both coherent and incoherent, and its impact for the Mini-BooNE and T2K experiments is presented in more detail.

**Primary author:** Dr ALVAREZ RUSO, Luis (Instituto de Física Corpuscular (IFIC), Valencia)

**Presenter:** Dr ALVAREZ RUSO, Luis (Instituto de Física Corpuscular (IFIC), Valencia)

**Session Classification:** Parallel