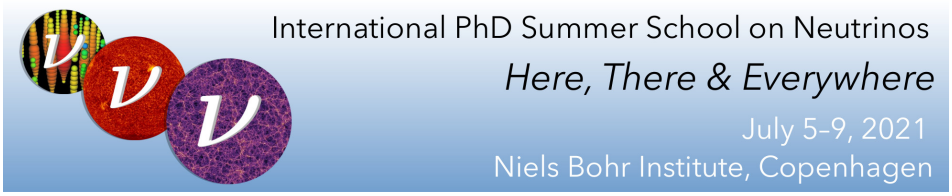

Contribution ID: **12** Type: **Oral**

Multi-wavelength and multi-messenger studies of extragalactic high-energy particle sources

Thursday, 8 July 2021 16:00 (15 minutes)

The detection of high energy astrophysical neutrinos at hundreds of TeV is an important step towards the understanding of cosmic-rays origin. However, the origin of such energetic neutrinos is still an open issue. Among the potential extragalactic neutrino sources, blazars are particularly interesting, as suggested by the detection of a high-energy neutrino in the direction of the flaring Blazar TXS 0506+056 in 2017. My PhD research project is focused on the computation and characterization of the broadband spectral energy distribution (SED) of blazar sources, with particular attention to very high energies (VHE). Part of my work is dedicated to the drawing of proposals for simultaneous and multiwavelength observations of interesting sources, together with the data analysis from raw data up to high-level products such as SEDs and lightcurves. The analyses I am working on focus on high energies (Fermi/LAT data) and VHE (MAGIC and LST-1 data). Then, a substantial part of my PhD will comprise a phenomenological description of the SEDs through the development of lepto-hadronic emission models further developing an already existing python code to include all hadronic radiative processes. They will be tested on the candidates in order to better understand the origin of the jet emission and the possible neutrino emission and cosmic-ray acceleration.

Primary author: VIALE, Ilaria (University and INFN Padova)

Presenter: VIALE, Ilaria (University and INFN Padova)

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