## High Energy neutrino flux from blazar flares

Blazar gamma-ray flares are ideal periods for high-energy neutrino production in many theoretical models. The detection of the high-energy neutrino IC-170922A in the direction of the blazar TXS 0506+056 during a gamma-ray flare in 2017, is the first association of a high-energy neutrino with an astrophysical source inconsistent with arising by chance at the 3 sigma level. To better understand how the neutrino signal expected to be detected with IceCube depends on the properties of the source and of the individual flares, we have modelled the neutrino emission from past, individual blazar flares, visible with IceCube, with a self-consistent lepto-hadronic model. I will present the results of this study, and inferences about the expected neutrino signal as a function of the source properties, which include the unknown baryon content, and details of the physical conditions in the blazar emitting region.

## Primary author: Dr OIKONOMOU, Foteini (ESO)

**Co-authors:** Prof. RESCONI, Elisa (TUM); Dr MURASE, Kohta (Penn State University); Dr PADOVANI, Paolo (European Southern Observatory); Prof. MESZAROS, Peter (Penn State)

Presenter: Dr OIKONOMOU, Foteini (ESO)