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## Recent highlights in high-energy-neutrino and ultra-high-energy-cosmic-ray research and implications for astrophysical candidate sources

*Thursday 11 July 2019 09:30 (30 minutes)*

The origin of ultra-high energy cosmic rays (UHECRs) is a long-standing mystery. In 2013 the IceCube experiment announced the observation of an astrophysical high-energy neutrino flux, adding the question of the origin of high-energy neutrinos to the mysteries in astroparticle physics. Recent highlights from the quest for the sources of UHECRs and high-energy neutrinos include the discovery of a dipole anisotropy in the arrival directions of UHECRs and the observation of high-energy neutrinos in the direction of the blazar TXS 0506+056. In this talk, I will review the implications of the most recent observations for astrophysical source models. One point of focus will be models of the origin of high-energy neutrinos in blazar flares, motivated by the first plausible association of a high-energy neutrino with an astrophysical source.

**Presenter:** OIKONOMOU, Foteini (Penn State University)

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