



University of Crete
Department of Physics



FORTH
INSTITUTE OF ASTROPHYSICS



Joint Physics & IA/FORTH Colloquium

Thursday, 16 May 2024 | 17:00 – 18:00, Seminar Room 3rd Floor

Realtime multimessenger astronomy with IceCube, ZTF & ULTRASAT

Prof. Marek Kowalski

Humboldt University of Berlin & DESY, Germany

ABSTRACT

During the last years we have witnessed several breakthroughs in the field of astroparticle physics and astronomy, ranging from the detection of optical counterparts of the gravitational wave sources to the first likely identification of a source of high-energy cosmic neutrinos. Multimessenger observations performed with electromagnetic observatories in near realtime, such as those of the Zwicky Transient Facility (ZTF), play an essential role in this. Focusing on high-energy neutrinos, I will discuss the multimessenger techniques, the significance of the various neutrino associations and what we can say about the sources of cosmic neutrinos. I will then turn to the future ULTRASAT telescope, which will provide unique survey capacities in the UV, and with that, promises to enable a new chapter in transient multimessenger astronomy.