University of Crete
Department of Physics

40 Year Anniversary Colloquium Series

Thursday, 22 February 2018 | 17:00 – 18:00, Seminar Room, 3rd floor

Monsters of the deep: Rogue Waves

Prof. Theodoros Horikis
Department of Mathematics, University of Ioannina, Greece

ABSTRACT

It is common for mid-ocean storm waves to reach seven meters in height, and in extreme conditions such waves can reach heights of fifteen meters. However, for centuries maritime folklore told of the existence of vastly more massive waves that could appear without warning in mid-ocean, against the prevailing current and wave direction, and often in perfectly clear weather. These waves are called rogue waves. A rogue wave is a highly localized phenomenon both in space and duration, most frequently occurring far out at sea. Historically oceanographers have discounted these reports as tall tales, i.e. the embellished stories of mariners with too much time at sea. But in the last years scientists have discovered strong evidence indicating that such massive rogue waves do exist and while the phenomenon has become the subject of recent scientific study, their origin still remains a mystery of the deep. The generating mechanisms of these waves in water (as well as in other contexts such as nonlinear optics) will be the focus of this talk.