The Ghostly Messengers of the Universe

Neutrinos are key particles in a wide range of astrophysical sources. Neutrinos affect the stellar dynamics, drive the formation of new elements, carry information about the physics of the most energetic events in our Universe, and reveal hints of possible physics beyond the one foreseen by the Standard Model. Recent developments on the role of neutrinos in cosmic sources will be reviewed. The detection perspectives of neutrinos will be outlined.