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Decades of excitement! Why we remain enthusiastic about multimessenger science with gravitational-waves?

Abstract: The discovery of gravitational waves and their multimessenger fingerprint has opened tremendous opportunities for astrophysics. Extraordinary instrumental breakthroughs in gravitational-wave detectors on Earth and in Space, in electromagnetic and in neutrino observatories lead to an information explosion, rapidly expanding humanity's cosmic and scientific horizons. In this talk, I will discuss the history and promise of seamlessly integrating data streams of gravitational-wave, neutrino, and electromagnetic observatories. I will elaborate on the evolution of the idea that multimessenger science can lead to a uniquely precise understanding of the astronomical sources and the underlying physical processes. Multimessenger astrophysics with gravitational-waves has a rich history that I will also describe. LIGO, Virgo, Kagra, and LISA invested in multimessenger astrophysics for decades, and it shall open new windows on the universe that I will highlight.