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Cosmology with standard sirens - what's the state of play?

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Gravitational wave signals from compact binary mergers are of huge interest to the cosmology community due to their ability to act as standard sirens, providing measurements of luminosity distance which are independent of the cosmic distance ladder. Using standard sirens to measure the Hubble constant could shed light on the current tension, which lies above 4σ between early-universe and local measurements, and the cause of which is as-yet unknown. In this talk I will give an overview of the current ways in which standard sirens are being used for cosmological measurements, including the bright siren method (making use of electromagnetic counterparts), the dark siren method (using galaxy surveys to provide information about potential host galaxies) and the spectral siren method (utilising features in the compact binary mass distribution to break the mass-redshift degeneracy of detected signals). I will look at some of the latest measurements in the field of gravitational-wave cosmology and at how the field may change as we look to the future.

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