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Discovery, Characterization and Physics Implications of the electromagnetic signatures of GW170817

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GW170817 was the first binary neutron star merger observed with gravitational wave detectors. The impact of this much anticipated event was greatly amplified by subsequent observation of their electromagnetic signatures in multiple wavelengths. In this talk, I present the discovery of the electromagnetic counterpart of GW170817 and discuss its astrophysical properties and physics implications. Such implications touch several fields, from astrophysics to cosmology. I also overview the landscape of this world-wide community enterprise and discuss prospects for future discoveries.