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GW170817: Joint Constraint on the Neutron Star Equation of State from Gravitational Waves and Electromagnetic Observations DAVID RADICE, Princeton University, ALBINO PEREGO, Istituto Nazionale di Fisica Nucleare, FRANCESCO ZAPPA, BERNUZZI SEBASTIANO, Universitá di Parma — Gravitational wave data for the binary neutron star merger event GW170817 constrained the neutron star equation of state by placing an upper bound on certain parameters describing the binary's tidal interactions. In my talk, I will show that using new numerical relativity simulations it is possible to infer a complementary lower bound on the tidal deformability parameter using the UV/optical/infrared counterpart of GW170817. The joint constraints tentatively rule out both extremely stiff and soft neutron star equations of state.

David Radice
Princeton Univ

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