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New spin on LIGO-Virgo binary black holes SALVATORE VITALE, SYLVIA BISCOVEANU, MAX ISI, Massachusetts Institute of Technology MIT, VIJAY VARMA, Department of Physics, Cornell University — Gravitational waves from binary black holes have the potential to yield information on both their masses and spins. While the component masses are usually individually resolvable, a measurement of the component spins is generally elusive. This is partially a consequence of asking about the spins of the most and least massive objects in each binary, a question which becomes ill-defined for equal-mass systems. In this talk, I propose to ask a different question of the data: what are the spins of the most- and least-spinning objects in the binary? Using both simulated systems and the current gravitational-wave events detected by the LIGO-Virgo Collaboration, I will show that this can significantly improve estimates of the individual spins—especially for binary systems with comparable masses—and yield interesting constraints at the population level.

Salvatore Vitale
Massachusetts Institute of Technology MIT

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