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**Hidden Friends to Gravitational Wave Sources<sup>1</sup>**

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The recent gravitational wave detections by LIGO/Virgo revolutionized the way we sense our Universe. These detections have resurfaced a long-standing question about the formation channels of merging black holes and neutron stars. In this talk, I review some of the challenges posed by the new data and will suggest how few-body gravitational interactions in a dense environment can alleviate some of the tension. I will particularly focus on the dense stellar clusters surrounding supermassive black holes at the center of galaxies. I will show how this channel can leave a clear signature on the gravitational-wave signals, allowing differentiation between different merger mechanisms. The Laser Interferometer Space Antenna (LISA) can potentially be used to distinguish between channels.

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