

Gravitational-wave and electromagnetic signatures of binary black holes

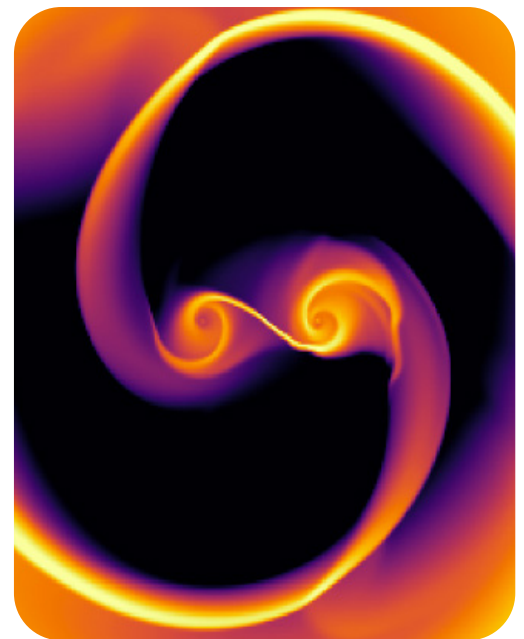


Colloquium talk
by

Zoltan Haiman

Institute of Science and Technology Austria (ISTA)
Austria

Binary black holes (BHBs) hold the promise of “multi-messenger astrophysics”: their detections in both gravitational waves (GWs) and electromagnetic (EM) observations will help reveal their astrophysical origin and yield novel probes of cosmology, fundamental physics, and accretion physics. This is true for massive BHBs expected to be discovered by the future GW satellite LISA and by pulsar-timing arrays, and for stellar-mass BHBs already detected by ground-based detectors. I will describe how circumbinary gas may produce characteristic EM signatures for both massive and stellar-mass BHBs, based on analytic models and hydrodynamical simulations and discuss some binary candidates identified in optical surveys.



 Tuesday, 14 April, 16:30

 HS C, Victor-Franz-Hess-Haus

Organizers: Katrin Erath-Dulitz, Francine Marleau, Hanns-Christoph Nägerl