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Spin and integrability in the relativistic two-body problem

Monday, 11 September 2023 15:00 (30 minutes)

As the reach and sensitivity of gravitational-wave detectors continues to grow, so do the requirements on our understanding of the evolution of compact binaries. When the components of the binary spin at general inclinations, there is, in principle, a sufficient number of degrees of freedom to break integrability of the evolution. However, layer after layer various integrable structures appear in the equations of motion and it is unclear in which regime exactly non-integrability might emerge in binary inspirals. In this talk, I will discuss the exploration of the frontiers of integrability in the two-body problem both in the post-Newtonian as well as the large-mass-ratio regimes.

Presenter: WITZANY, Vojtěch

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