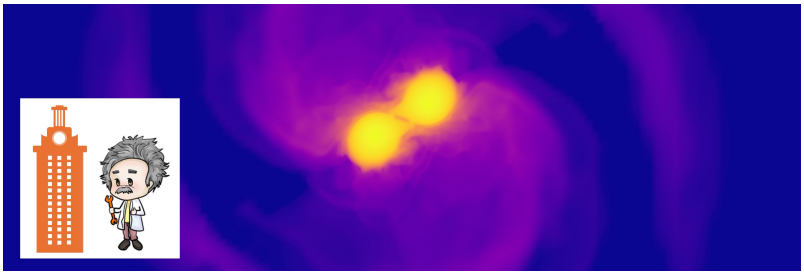

Contribution ID: **16** Type: **not specified**

SPHINCS-BSSN: Relativistic Hydrodynamics Using Particles

Thursday 12 June 2025 15:30 (1 hour)

I will describe SPHINCS-BSSN: a code that combines spacetime evolution on a grid with a Lagrangian treatment of the matter. That is, the matter is evolved using the method of Smoothed Particle Hydrodynamics (SPH). I will describe the advantages (and disadvantages) of using particle methods and will describe how we overcame the technical challenges of coupling the matter to the spacetime. I will finally present some basic tests of the code as well as some new results.

Presenter: DIENER, Peter (Louisiana State University)