

DNP17-2017-000092

Abstract for an Invited Paper  
for the DNP17 Meeting of  
the American Physical Society

**Hydrodynamic modelling of heavy-ion collisions**

JACQUELYN NORONHA-HOSTLER, Rutgers University

The Quark Gluon Plasma (QGP), nature's first and most perfect liquid, has been successfully reproduced in heavy-ion collisions at RHIC and the LHC. The dynamics of the QGP can be well described by relativistic viscous hydrodynamics, allowing for precise comparisons to experimental data in order to extract the properties of the QGP. While a small shear viscosity is well-established, questions still remain regarding the precise initial state, the magnitude of bulk viscosity effects, the smallest system that displays QGP-like properties, and the equation of state at large densities. In this talk, the most recent advances in hydrodynamic modeling, current hot topics, and open-ended questions will be explored.