

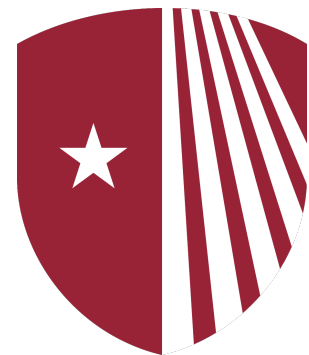
Density frame viscous hydrodynamics

Ref: [2403.04185](#) (to be published in PRC)

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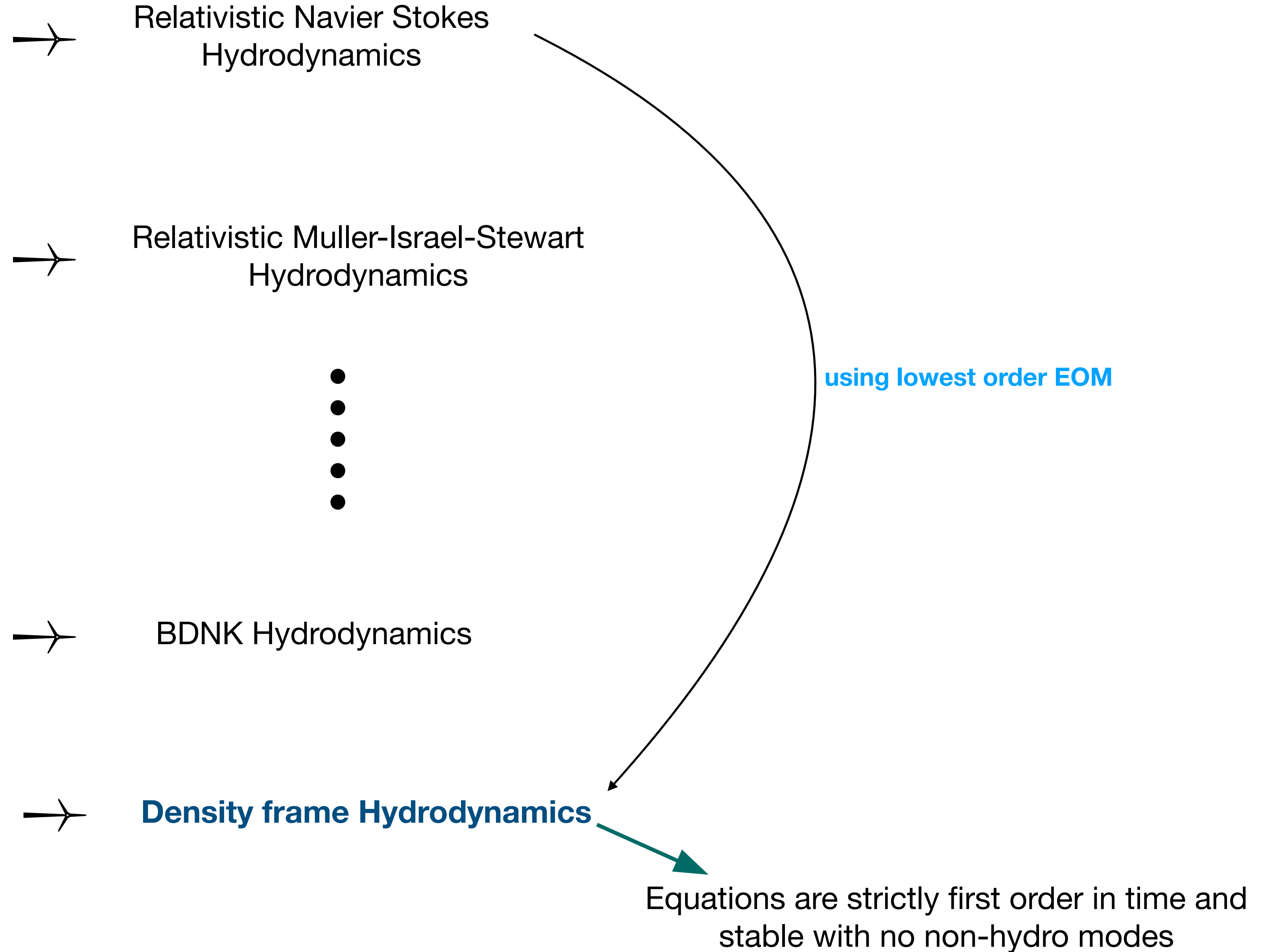


Chirality 2024, Timișoara

22 July 2024



Relativistic viscous hydro formulations



Start at $t = 0$ with $N(x)$ as a Gaussian and $J_D = 0$ in lab frame with

$$L/l_{\text{mfp}} = \text{width in fluid frame in units of } l_{\text{mfp}} = 2c\tau_R$$

The dissipative steady state is approached on a timescale τ_R/γ

$$J = Nv + J_D \quad \leftarrow \quad \text{with } J_D = \frac{D}{\gamma^3} \partial_x N$$

