

# Physics topics which pique my interest

- Exclusive and diffractive physics
  - Partonic imaging
  - Proton spin structure (new STAR analysis in progress on this front)
  - Neutron structure functions
  - EMC effect
  - **Worked on several impact studies (published and ongoing) on these topics.**
    - Obvious connection to FF detector design and integration.
    - Possible new directions which impact choices for detector 2.
- Nuclear PDFs
  - The topic which originally got me interested in EIC physics -> connections to understanding heavy-ion data.
    - I have a personal science goal of seeing the number of effective models for heavy-ion collisions shrink, and a better understanding of the initial state will help.
  - My PhD focused on D0-hadron correlations in STAR – heavy-flavor important for studying nuclear PDFs at high-x.