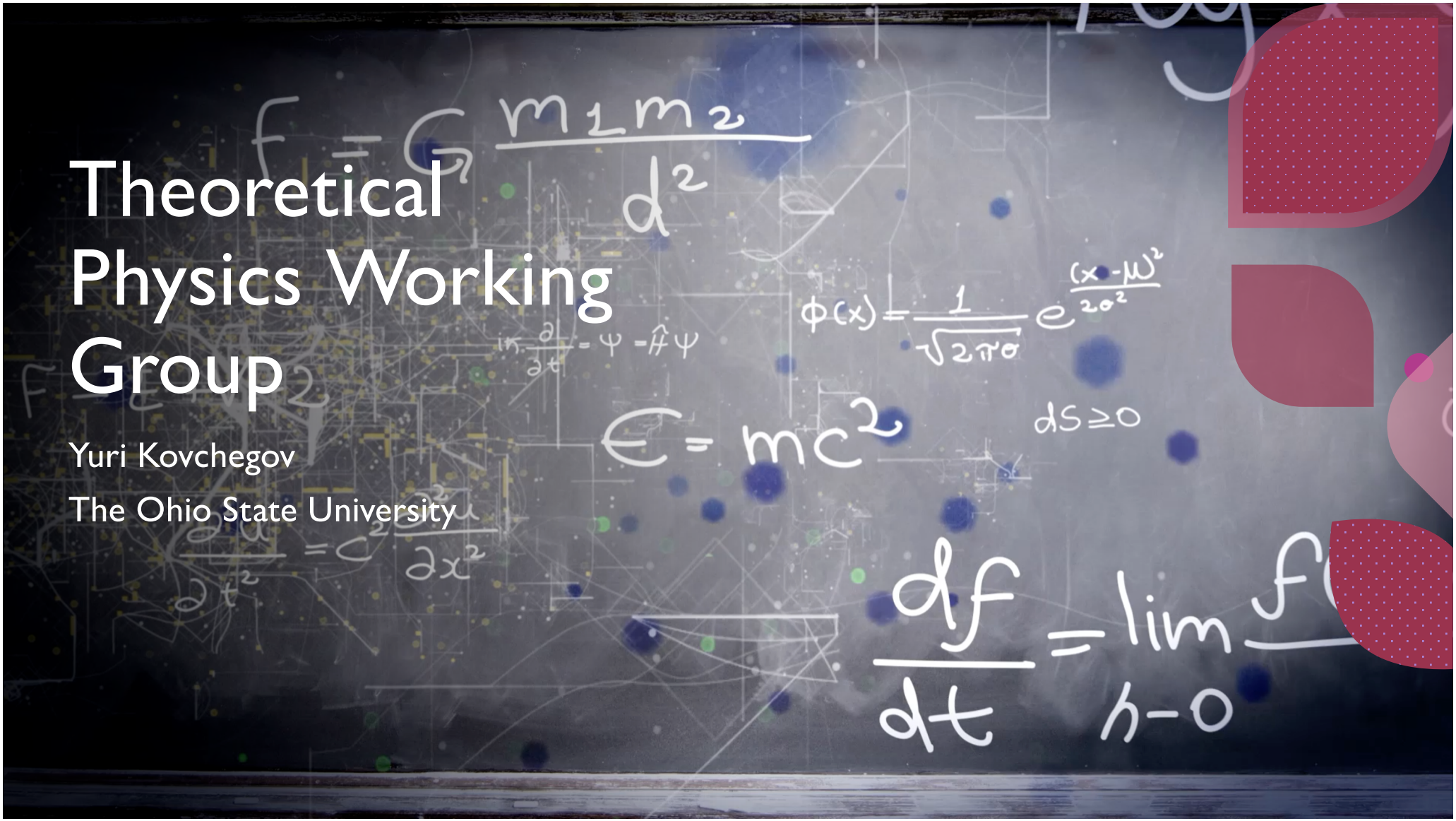


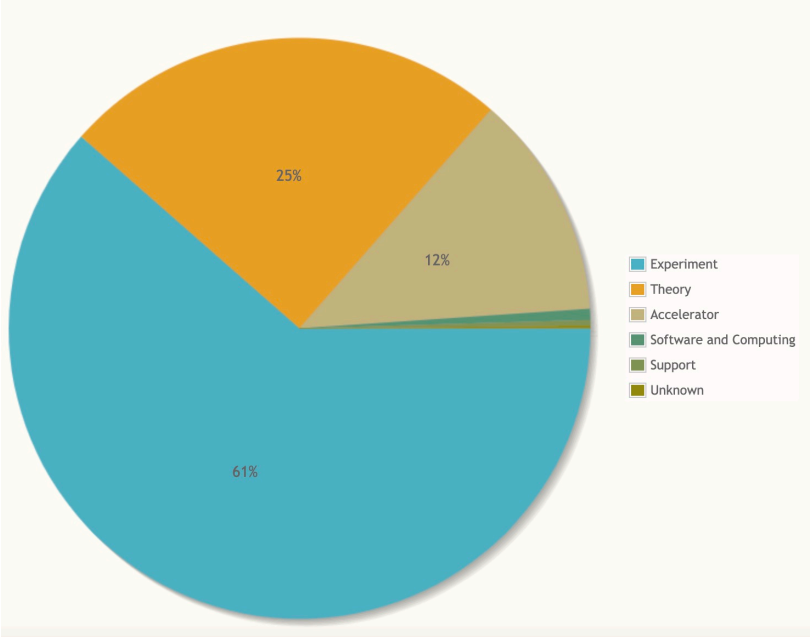
Theoretical Physics Working Group

Yuri Kovchegov

The Ohio State University

ROLE OF THEORISTS IN EIC

- Theorists are a large fraction of the EIC UG (25%).
- There is a desire in the community to preserve the momentum of the theorist+experimentalists interactions developed during the work on Yellow Report.
- We had multiple discussions on how to do this in the SC and a EIC UG-wide discussion in the Summer 2021 EIC UG Meeting.
- The conclusion was to set up a Theoretical Physics Working Group (ThPWG or TPWG), with a rotating group of conveners.



- The conveners represent main EIC physics sub-fields. However, at any given time not all the subfield may be represented, with the conveners relying on the expertise of their colleagues.

First TPWG Conveners




- Alessandro Bacchetta (Pavia) – TMDs++
- Wim Cosyn (Florida International) – light nuclei, GPDs
- Felix Ringer (Stony Brook) – jets
- Anna Stasto (Penn State) – small *x*

TPWG Convener Responsibilities

- Solicit overarching questions/topics from the EIC community for joint theorists+experimentalists discussions. (perhaps through an online interface)
- Set up a Wiki page for each topic being discussed.
- Organize and lead joint theorists+experimentalists meetings, either in hybrid (preferred, if possible), online or in-person format. The meetings would aim to resolve the open questions from item 1. (logistics: CFNS, thanks Abhay!)
- Document resolved issues/questions on the Wiki page and present the resolution at the EIC UG quarterly meeting.
- *Beyond that: think broadly about theoretical work to be done for EIC and lead the way in doing it.*

Activities and Outlook

- The group has just been formed in recent weeks and is still ramping up its work.
- First question that is being addressed is about the impact of the non-zero beam crossing angle at the EIC (~25 mrad). How does this impact analysis and physics (frame choice, spin asymmetries)? Work is being led by Wim – please contact him if you want to join the effort.
- In the future, if you have a good overarching theory-related question, please feel free to contact the TPWG conveners.