

Membership Proposal for University of California-Riverside



Yanou Cui

DUNE collaboration meeting May 22 2019

University of California-Riverside (UCR)



- One of the ten general campuses of UC systems, 55 miles (89 km) east of downtown Los Angeles
- Counted among the Top 35 public universities in the US, UCR is America's fastest rising ranked university.
 - U.S. News 2019 rankings

University of California-Riverside (UCR)

- 2018 fall enrollment: 20,581 undergraduate students, 3341 graduate students
- Offers: 101 BS' degrees, 55 MS' degrees, 42 Ph.D's degrees
- On the faculty: 2 Nobel Laureates (1 in physics), and 10 members of the National Academies of Science and Medicine

Department of Physics and Astronomy at UCR:

45 faculty engaged in research programs in Condensed Matter Physics, Nanoscale Materials and Electronic Device Physics, Biophysics, High Energy Physics, Relativistic Heavy Ion Physics, Astrophysics and Space Physics, and Extragalactic Astronomy and Cosmology.

Our Contribution to DUNE

Dr. Yanou Cui (faculty, assistant professor)

- High energy theorist specialized in beyond the Standard Model particle physics, interface between particle physics and cosmology;
- **One of the original proposers** for the idea of **Boosted Dark Matter** that has now gained substantial interest/recognition by SuperK, DUNE collaborations.

*(JCAP 1410 (2014) 062, **YC** w/Agashe, Necib, Thaler;
JCAP 1502 (2015) , **YC** w/Berger, Zhao)*

- Most senior theorist on the current BDM working group for DUNE, **already contributed to DUNE TDR**
- **We will continue to contribute**: analyze benchmark models, provide theory-motivated advice, help optimize opportunities for searching for BDM and other DM-related new physics at DUNE

Resources

- YC's current research group: 1 postdoc, 2 graduate students
- The UCR physics department has (*preliminary*) near-future [hiring-plan](#) for multiple [experimentalists](#) faculty members in cosmology/early-universe physics, DUNE is one of the highlighted relevant experiments
- [Funding](#): YC is currently [funded by a DOE HET grant](#), theoretical studies related to BDM@DUNE is one of the projects that is being funded; actively seeking for additional funding resources to support DUNE related studies

Thank you!