

J. XAVIER PROCHASKA

UC Santa Cruz

PROBING THE UNIVERSE WITH FAST RADIO BURSTS

12 April 2022 · 3:30 pm EST

Hybrid Seminar: Rutherford Bell Room & YouTube Live*

I will highlight recent results leveraging well-localized fast radio bursts (FRBs) to study cosmology and galaxy formation in the $z < 1$ universe. The fundamental signals inherent in FRBs – dispersion measure (DM), rotation measure (RM), and fluence – offer unique constraints on properties of the matter along the sightline to Earth. In turn, we may map out the cosmic web, assess the density of gas surrounding galaxies, and infer the magnetic fields of the interstellar medium from a diverse population of galaxies. I will describe the standard observational and analysis techniques and conclude by emphasizing areas poised for tremendous growth in the next few years due to the ongoing or upcoming commissioning of new facilities and systems (e.g. CRACO on ASAP and the CHIME outriggers project).

**Note: In-person attendance will be limited. You must sign up to reserve a spot.*

