

Thursday, February 13, 2020
4:25PM in LL. 316



Physics Colloquium

Dragan Huterer

Department of Physics, University of Michigan

New Views of the Universe

I will discuss how progress in cosmology over the past decade has improved our understanding of dark matter, dark energy, and the physics of the early universe. I will particularly concentrate on the developments in mapping out the expansion rate of the universe and the growth of density fluctuations in order to better understand dark energy and, eventually, identify the physics responsible for universe's accelerated expansion.

***Dragan Huterer** works on trying to understand the nature and properties of "dark energy", a mysterious component that makes up about 75% of the energy in the universe. Dark energy causes the universe to expand at an increasing rate, but its physical nature is one of the top unsolved problems in physics and astronomy. To investigate what dark energy is, Huterer and his team use type Ia supernova measurements, galaxy surveys, and cosmic microwave background anisotropies as tools of precision cosmology.*

Another focus of Huterer's research is testing the statistical isotropy of the universe — whether, on average, the universe looks the same in every direction that we observe. Huterer is also interested in signatures of the early universe in the present-day astronomical observations, applying various methods to learn about the universe moments after the Big Bang.

Professor Huterer is a Fellow of the American Physical Society, recipient of the Henry Russel Award at the University of Michigan, and has recently been awarded the Bessel Research Prize by the Humboldt Foundation in Germany.