

# “Small Solar System bodies tell rich stories”

The small bodies of the Solar System (asteroids, comets, and the like) are the most numerous objects in the Solar System. They are compositional and dynamical tracers of both the formation of the Solar System and also present-day evolutionary processes. The coming Large Synoptic Survey Telescope (LSST), which will revolutionize astronomy when it comes online in 2023, has as one of its four science pillars "cataloging the Solar System" -- meaning, specifically, the small body populations. In this talk I will present some of the LSST Solar System science goals and expected results. I will also highlight some new research on Solar System small bodies that LSST cannot do. I will demonstrate that Solar System small bodies have rich stories to tell, both individually and as an ensemble. .

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- **David Trilling\***
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## PHYSICS COLLOQUIUM

THURSDAY, APRIL 11, 2019

4:10PM IN LL. 316

*REFRESHMENTS AT 3:45PM*

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\* **David Trilling** is Professor of Physics and Astronomy at Northern Arizona University, where he is in his eleventh year. He uses telescopes all over the world and in space to study the formation and evolution of the Solar System and planetary systems. He has a broad research portfolio that also includes instrumentation, astrobiology, and spacecraft and human exploration of the Solar System.