

TUESDAY

OCTOBER 27

12:30 P.M.

RM 184 NSH

## Beyond Planet Occurrence Rates: Kepler and New Frontiers in Extrasolar System Demographics

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The detection of thousands of transiting planet candidates by the Kepler mission has allowed for an unprecedented view into the statistical properties of exoplanet systems. Beginning with the central fundamental question of how a catalog of \*candidates\* can be justifiably treated as mostly consisting of \*planets\*, I will review what Kepler has taught us about exoplanet system demographics. In particular, I will explain how I have used Kepler data in conjunction with targeted ground-based observations and hierarchical inference to support the suggestion that single-planet Kepler systems may represent a population of planets fundamentally different from the Kepler multiple-planet systems. I will conclude by looking forward to what future insights into exoplanet system demographics are just on the horizon, enabled by productive synthesis of space- and ground-based observational efforts.