

Andrew Mann – Colloquium – March 19, 2026
UNC Chapel Hill

Title:
Planetary Systems through Time

Abstract:
Planets are not born in their final state; they are sculpted by interactions with their host star, sibling planets, and the birth environment. While mature exoplanet populations (e.g., from Kepler) provide a "static" snapshot of planetary outcomes, they tell us little about the formative early years. Studying planets in their first few hundred million years allows us to observe evolutionary processes—such as migration, mass-loss, and radius contraction—in real time. The combination of refined stellar ages and membership lists from Gaia, coupled with high-precision photometry from *K2* and *TESS*, has enabled the discovery of dozens of transiting planets in 3–700 Myr clusters and moving groups. I will highlight new results in these areas, ranging from the discovery of the Greater Pleiades Complex to new constraints on the radius evolution and migration of young planets. Finally, I will present first glimpses into the atmospheres of these infant worlds via *JWST* transmission spectroscopy, revealing the initial chemical and physical structures of planets at the dawn of their lives.