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## The High-Dimensional ISM As A Tool To Explore Galaxy Evolution

*Wednesday 13 June 2018 09:45 (35 minutes)*

Because large molecules (including PAHs and other carbonaceous particles) straddle the divide between molecular gas and dust grains, their spatial and dynamical distributions carry information on both of these phases and their interface. This talk will explore the power of harnessing this information using a few case studies of molecular absorption spectroscopy combined with absorption-based dust maps. I will describe how this approach allows us to tackle such diverse galaxy evolution questions as spiral arm formation and molecular cloud dissolution, and discuss the prospects for expanding high-dimensional ISM studies in the next several years.

### Consider for a poster?

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**Session Classification:** Molecules and dust

**Track Classification:** What is dust?