



## *Joint Physics & IA/FORTH Colloquium*

Thursday, 1 October 2020 | 17:00 – 18:00, Seminar Room, 3rd floor

### **New perspectives on the neutral interstellar medium: from the Milky Way to nearby galaxies**

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#### **ABSTRACT**

*The neutral interstellar medium (ISM) is a vital player in the star formation process, based on its major contribution to the ISM's mass, and bears the brunt of the stellar feedback. In particular, the diffuse ISM is not only the key for building seeds for star formation – interstellar molecules – it also shields molecules from the harsh effects of stellar feedback and therefore determines the duration of their survival. As numerical simulations of galaxy evolution continue to include more complex ISM physics, detailed understanding and inclusion of key sources of stellar feedback and the exact effects they have on the diffuse ISM are essential.*

*In this talk, I will highlight several key results from recent neutral hydrogen surveys of the Milky Way and nearby galaxies, specifically focusing on the neutral gas thermodynamics, transition from atomic to molecular medium, and interstellar turbulence. Current and upcoming observations of the neutral ISM with new radio telescopes, such as ASKAP, MeerKAT, ngVLA, SKA, promise great observational advances and the ability to guide numerical simulations of star formation and galaxy evolution.*