Star Formation in Nearby Galaxies: Disk Galaxies, Dense Gas, and Starbursts

I will present results from low resolution mapping of nearby galaxies, including the HERACLES and THINGS surveys, comparing star formation to different phases of the ISM. In particular, I will highlight the high normalized rates of star formation per unit gas in galaxy centers and (apparently) in low metallicity dwarf galaxies. I will show how new ALMA observations of the nearest nuclear starburst reveal the drivers of this enhanced efficiency at cloud scales. I will also show how several new surveys of the dense gas tracers HCN and HCO+ across a wide range of environments reveal apparently variable star formation efficiencies within the dense gas, contrasting with simple models that have emerged from Milky Way clouds.