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## **Kinematic scaling relations of CALIFA and MaNGA galaxies: A dynamical mass proxy for galaxies across the Hubble sequence.**

*Friday 26 October 2018 16:00 (30 minutes)*

We used gas and stellar kinematics for spatially resolved galaxies from CALIFA and MaNGA surveys with the aim of studying dynamical scaling relations as the Tully&Fisher, Faber&Jackson and also a combination of them through the SK parameter defined as  $SK^2 = KV_{rot}^2 + \sigma_{disp}^2$ . TF and FJ generalized relations (early+late types) present larger dispersions and deviations from the classical ones. When we use the SK parameter all galaxies, regardless of the morphology, lie in the same scaling relation with the scatter smaller or equal to the TF and FJ ones. We interpret this relation as a consequence of the relation between dynamical mass and stellar mass in central regions of galaxies, what implies that the SK parameter is a better proxy of this dynamical mass. We compared our estimations of the dynamical mass based on the SK parameter with results based on more complex dynamical models, finding a good agreement within 0.14dex between both quantities.

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**Session Classification:** Afternoon session