

The Milky Way Bulge as seen by Gaia DR2 and APOGEE (No 1723)

🕒 12:00 - 12:30 🗨️ Plenary talk 🔗 Plenary 5

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The lack of large samples of stars with spectroscopic information tracing large areas around the Galactic Bulge has been a long-standing missing information piece for Galactic Archaeology studies. This has prevented so far a clearer picture of how the Bulge/bar formed, its connection to the thin disk inside-out grow as well as to a pristine thick disk and halo. In this talk I show how, in the Gaia era, the combination of photometric and spectroscopic surveys is impacting this field, with a particular focus on APOGEE and Gaia DR2. By combining Gaia DR2 parallaxes and optical photometry with other photometric bands from PANSTARRS, 2MASS and AllWISE we derive Bayesian distances and extinctions for stars brighter than $G=18$ (Anders et al. 2019). Additional information is obtained by using spectroscopic information from the APOGEE Near Infrared high-resolution spectroscopic survey that can pier into the dust. This data provide the first opportunity to start dissecting the inner-disk/bar/bulge region. After presenting some recent results which show clearly the presence of the MW bar, I discuss the chemistry and ages of the several overlapping populations co-existing in this innermost region of the MW. I close this talk with a look into the future, presenting our plans for the 4MOST Milky way Disk And BuLgE Low-Resolution Survey (4MIDABLE-LR), which will be the largest spectroscopic follow-up of the Gaia mission. I close this talk by discussing two opportunities not to be missed by the European Galactic Archaeology community in the era of massive spectroscopic follow-up of Gaia, namely: to obtain a large number of red giant stars with seismic information using PLATO, and to extend our knowledge up to now based on red giants to the MS turnoff up to and beyond the Bulge, with multi-object spectroscopy on ELT-MOSAIC.