PHYSICS DEPARTMENT

COLLOQUIUM

"Stellar Populations in Star Clusters and Galaxies"

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Physical Science Building 1.119 (Edinburg)

LHSB 1.104 (Brownsville)

10:50am – 12:20pm

Abstract: Stellar population synthesis models have advanced to the level that we can extract the information such as stellar masses, star formation histories, and chemical abundances from the observations of galaxies. The globular clusters, once known as simple stellar populations, are now considered as multiple stellar populations. In this talk, I present the stellar population synthesis models that can validate the integrated spectrophotometric properties of multiple stellar populations (star clusters and/or galaxies), while successfully reproducing the detailed features in the color-magnitude diagrams. Also, I will look into the "kink" feature along the main-sequence in the infrared color-magnitude diagrams and compare some stellar models from different groups to the observational data of milky way globular clusters. Moreover, the effects of thermally pulsing asymptotic giant branch stars on the surface brightness fluctuation magnitudes and broadband colors will be contrasted to the early-type galaxies.

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