Contribution ID: **55** Type: **not specified**

The Importance of White Dwarfs in Modern Astrophysics

Monday, 12 November 2018 13:00 (45 minutes)

White dwarfs are the remnants of the evolution of most stars in the galaxy, all those up to masses of around 8 times that of the Sun. Study of their production sheds light on enrichment of the interstellar medium, through mass loss from the progenitor, while detection of the coolest examples provides estimates of the age of the Galaxy and, by implication, an independent lower limit on the age of the Universe. They are also implicated in the the production of type Ia supernovae which underpin measurements of the expansion of the Universe, its age and the Nobel Prize winning discovery of "Dark Energy". More recently, we have realised that they provided an opportunity to probe possible variations of the fine structure constant in strong gravity.
This talk will review our understanding of the physics of white dwarfs and discuss key results from a variety of observations including those made by the Hubble Space Telescope and the recent second data release from the Gaia astrometry mission.

Presenter: Prof. A. BARSTOW, Martin (University of Leicester, UK)

Session Classification: Plenary