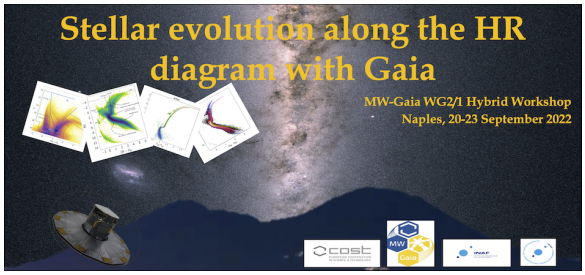

Contribution ID: **45** Type: **not specified**

White dwarfs and the Gaia revolution (Invited)

Tuesday, 20 September 2022 15:00 (30 minutes)

Over 95% of all the stars in the Galaxy will, one day, evolve into white dwarfs: small stellar remnants slowly cooling and fading over billions of years. The unique properties of these objects make them powerful tools with applications in diverse areas of astrophysics, from cosmochronology to exo-planetary science.

However, because of their sparse sky density and intrinsic low luminosity, identifying large numbers of white dwarfs has historically been an extremely challenging task.

Until 4 years ago we could only rely on small and severely biased samples, often constructed from serendipitous discoveries.

Then, Gaia changed everything⋯

This talk will describe the transformative impact that Gaia had in the field of white dwarfs by enabling the identification of over 359,000 of these stars, nearly ten times more than what was known before. It will briefly outline the process that led to the identification of the Gaia white dwarfs and illustrate the properties of this unprecedented sample highlighting some of the most impactful discoveries enabled by it. It will then conclude with an overview of the latest additions brought by the recent DR3 and with a look at future perspectives.

Presenter: GENTILE FUSILLO, N.

Session Classification: Overview on Gaia data/products and their use