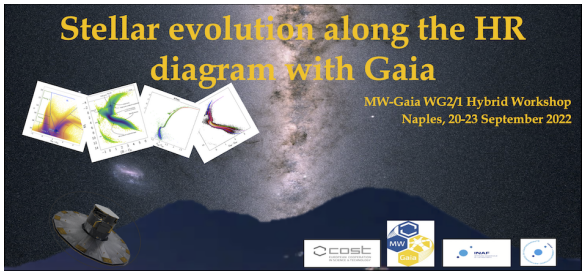

Contribution ID: **81** Type: **not specified**

X-Shooter characterization of YSOs selected with Gaia DR2

Friday, 23 September 2022 10:00 (20 minutes)

I will speak about the full characterization of the young stellar objects (YSOs) with VLT/X-Shooter that were originally selected based on their consistent kinematic properties with either a stellar system or a stellar association. I will discuss the essential role that Gaia DR2 played in selecting our candidates and how the catalog further contributed to our final analysis (with flags such as RUWE for hints on binarity or passing maximum velocity difference tests indicated in Majidi et al. 2020 & 2022). Interestingly, we found both cases where the consistent kinematic properties hinted at finding new members of a stellar association or wide companion candidates of a stellar system and cases that failed to do so. For determining the genuine members of spatially overlapped stellar associations at young ages, the criterion of consistent kinematic properties is essential but the follow-up spectroscopy is indispensable for obtaining the stellar properties of the candidate members and approving their membership. I will thus focus on what we can learn from selecting candidates resolved by Gaia, and how combined with other powerful facilities such as OmegaCAM, identifying YSOs can be substantially facilitated.

Presenter: MAJIDI, F.

Session Classification: Synergies