

The structure and dynamics of ISM: spiral arms, molecular clouds and the earliest formation of stellar clusters.

Wednesday 17 January 2024 10:30 (20 minutes)

The possibility that Gaia-NIR offers to extend the determination of distances and proper motions of stellar sources over a large fraction of the Galaxy and in dense star forming regions unlocks unprecedented potential to investigate the 3D structure and dynamics in the assembly process of star forming regions, once coupled to ancillary datasets provided by large-scale HI and CO Galactic surveys. Furthermore, the possibility to put together the proper motion information from relatively evolved YSOs, with the radial velocity of the early-stage millimeter cores from ALMA, will allow to trace the complete dynamical scenario in the formation and evolution of the youngest stellar clusters in the Galaxy, for which new detailed numerical simulations are being developed.

Primary author: MOLINARI, Sergio (Istituto Nazionale di Astrofisica (INAF))

Presenter: MOLINARI, Sergio (Istituto Nazionale di Astrofisica (INAF))