

# Theoretical Insights into Star Formation: from the Early to the Present Day Universe

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## The first steps of star and planet formation

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Extremely low temperatures and relatively low densities characterize the interstellar clouds precursors of stars and planets. In these early stages, fundamental chemical and physical processes affect each other, ultimately regulating clouds' dynamical evolution toward the formation of stellar systems like ours, where at least one habitable planet is present. Here, I'll present a journey from clouds to planets, which started in Arcetri with the help of outstanding scientists, including one from Pisa, highlighting the open questions and future perspectives.

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