

The background features a dark blue field with a white circular gradient in the center. On the left, there are numerous white stars of varying sizes and shapes. On the right, there are stylized, swirling patterns representing galaxies in shades of white and light blue.

Stellar populations in Galaxies

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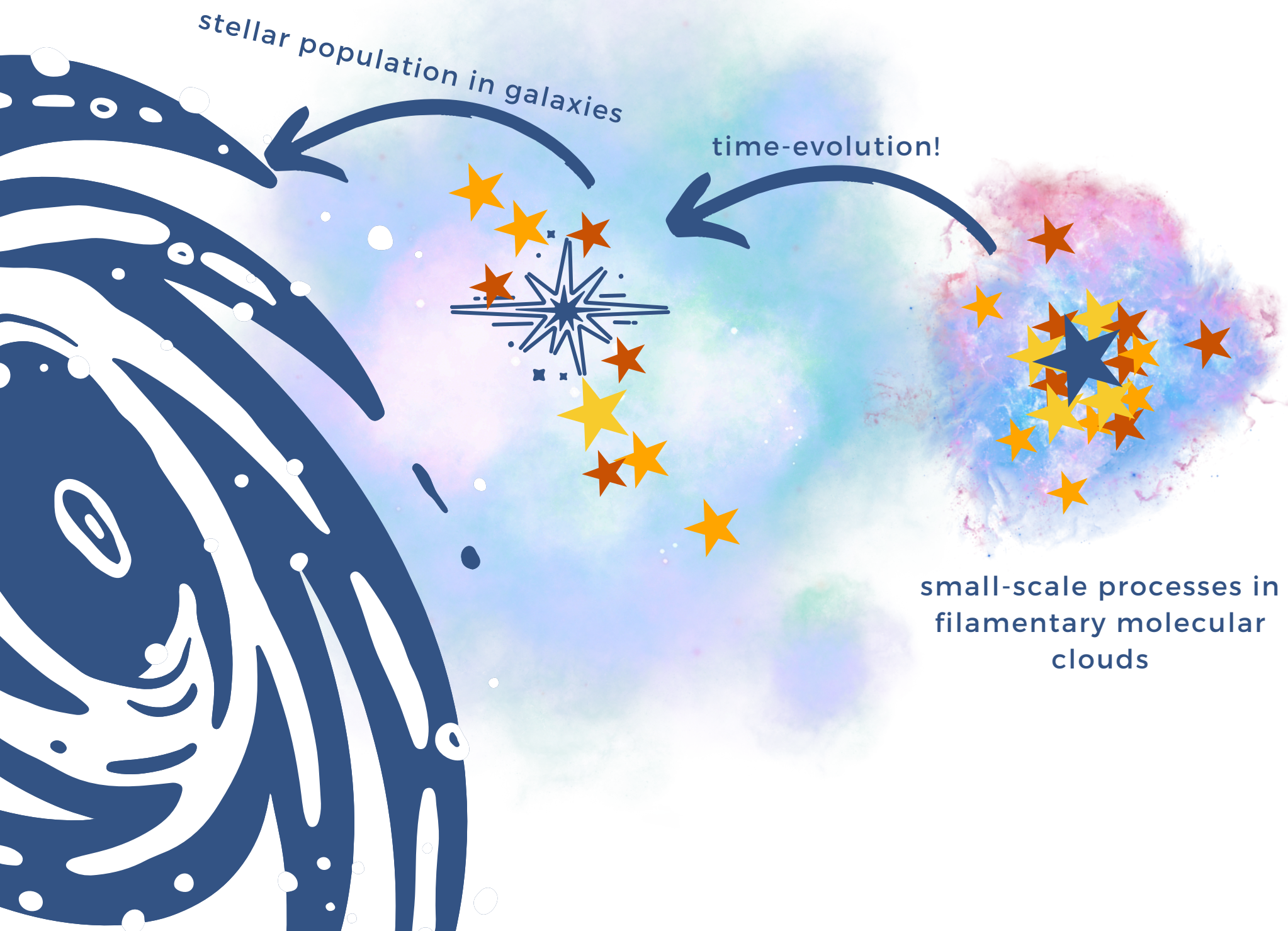
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How and what stars form is at the nexus of modern astrophysics

It governs the production of chemical elements in the Universe, affects the formation and evolution of galaxies and is important also on the smallest scales of the formation of planets and dust.

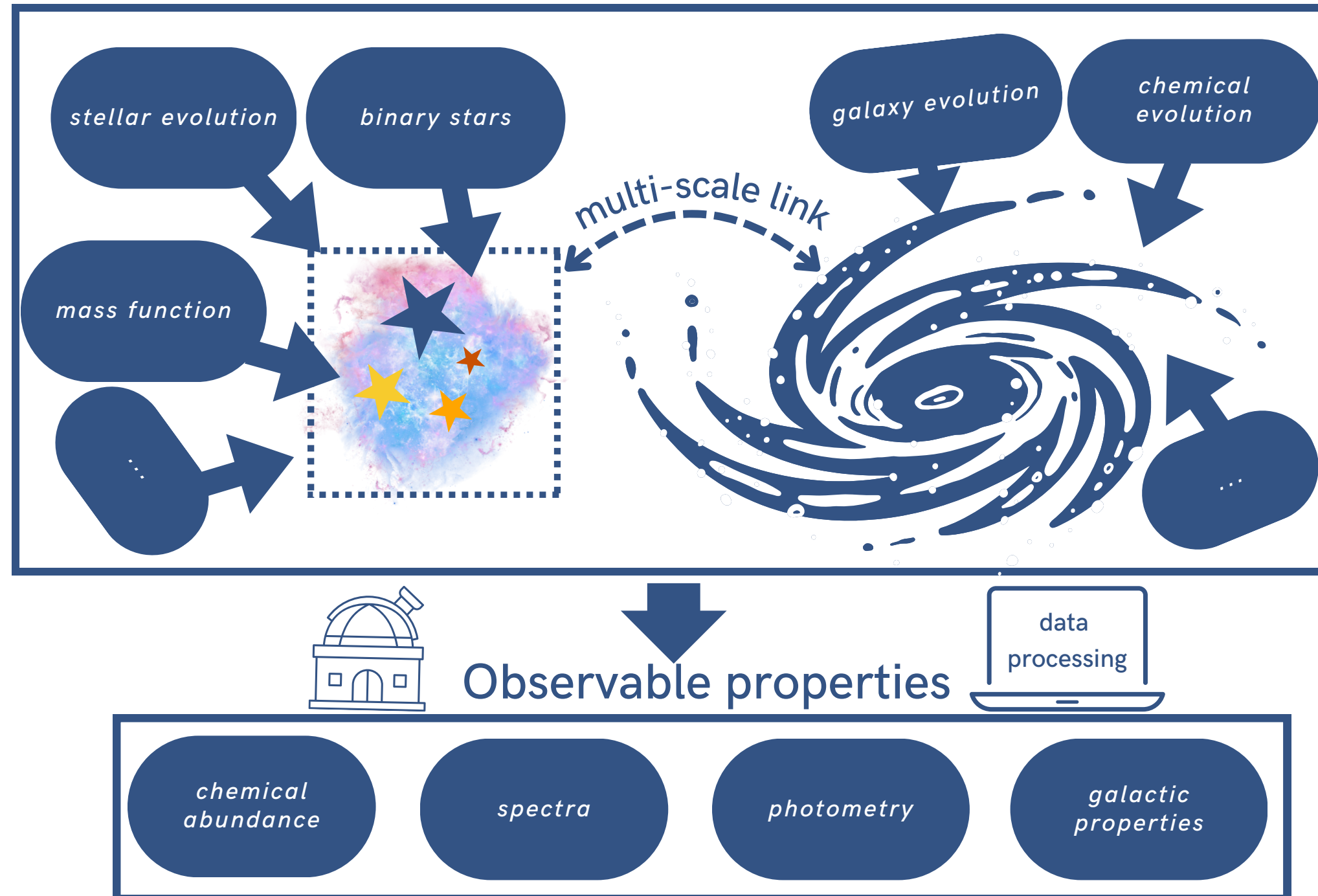
Despite being at the forefront of astrophysical research, full understanding of star-formation remains elusive



- What are the initial conditions of star formation?
- Do stars form the same in the Milky Way and in distant galaxies?
- How did the first galaxies form?

How and what stars form is at the nexus of modern astrophysics

I study resolved stellar populations in MW & nearby galaxies and use empirically derived constraints to build up stellar populations in distant galaxies



Research topics

Resolved stellar populations in MW & nearby galaxies

N-body simulations, observations (Gaia, VLT) focusing either on tidal tails, dark remnants or stellar initial mass function

Chemical evolution and stellar population with variable initial mass function & synergies with observations

Formation of first galaxies, constraining stellar populations in dwarf galaxies

If interested, email me

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All projects with at least one more collaborator (build connections), detailed plan based on further discussion & profile of the student

