

PHYSICS COLLOQUIA 2020



One of the most exciting developments in astronomy is the discovery of thousands of planets around stars other than our Sun. But how do these exo-planets form, and why are they so different from those in our own solar system? Which ingredients are available to build them? Thanks to powerful new telescopes, astronomers are starting to address these age-old questions scientifically. Stars and planets are born in the cold and tenuous clouds between the stars in the Milky Way, and the new Atacama Large Millimeter/submillimeter Array (ALMA) now allows us to zoom in on planetary construction zones in nearby disks and determine the physical and chemical structure associated with planet formation. This talk will provide examples of recent work on observations and models of protoplanetary disks in various stages of evolution. Young disks reveal a rich chemistry with abundant water and complex organic molecules. Surveys of large numbers of disks in low- and high-mass star-forming regions provide insight into typical masses and sizes, revealing surprisingly weak gas emission. Special attention will be given to transitional disks, which are a subset of disks with evidence for sharp-rimmed cavities (gaps or holes). They are the best candidate sources for harboring just-formed giant planets.

Ewine Van Dishoek | Universiteit Leiden, Paesi Bassi
**ZOOMING IN ON PLANET-FORMING DISKS
AROUND YOUNG STARS WITH ALMA**

09 06



UNIVERSITÀ DEGLI STUDI DI MILANO
DOTTORATO DI RICERCA IN FISICA
ASTROFISICA E FISICA APPLICATA

Gli incontri si terranno alle **ore 14:30**
nell'**aula A** del **DIPARTIMENTO DI FISICA**
via Celoria 16 | 20133 MILANO
Tel. +39 02 50317740
<http://phd.fisica.unimi.it> | phd@fisica.unimi.it