

**Guest speakers: Prof. A. Isella and Prof. A. Banzatti**

**Title:** How planetary systems form: the revolution from high-resolution astronomical observations.

**Abstract:** Until a few decades ago, all our knowledge of how planets formed relied on observations of the Solar System and the analysis of meteorites. Then, starting in the late 90s, a new generation of telescopes delivered unprecedented imaging and spectroscopic capabilities allowing astronomers to discover planets around other stars and directly study their formation. Since then, astronomical observations have revolutionized planet formation theories and have reshaped our view of the Solar System in the context of thousands of exoplanets discovered around other stars. In our talks, we will present the current status of the field as driven by observations with the best telescopes on Earth and in space, and our leading contributions with high resolution imaging and spectroscopy.



**Dr. Andrea Banzatti** is an assistant professor at the Department of Physics at Texas State University in San Marcos TX since 2019. He graduated in Physics at the “Universita' Statale di Milano” with a Master’s thesis on planet formation performed at the European Southern Observatory headquarters near Munich in Germany. In 2009, he moved to the ETH in Zurich, Switzerland for a PhD in Astrophysics, where he started working on infrared spectroscopy of planet-forming regions with the NASA Spitzer Space Telescope. He moved to the Space Telescope Science Institute in Baltimore MD in 2013 for a postdoctoral position, and then to Tucson AZ in 2016 for a second postdoc at the University of Arizona. He is an expert in high-resolution spectroscopy at optical and infrared wavelengths and has worked with the leading observatories on Earth (in Chile and Hawaii) and in space, including the new James Webb Space Telescope. Banzatti’s research has been funded by NASA and the NSF.



**Dr. Andrea Isella** is the William V. Vietti Associate Professor at the Department of Physics and Astronomy at Rice University. He graduated in Astronomy at the “Universita' degli Studi di Padova” and obtained a Ph.D. in Physics, Astrophysics and Applied Physics from the "Universita' Statale di Milano" with a thesis on planet formation performed at the "Osservatorio Astrofisico di Arcetri" in Firenze. Andrea moved to the California Institute of Technology in 2007 as a NASA Michelson postdoctoral fellow and stayed there as research faculty until 2014. In that period, he joined the commissioning effort of the Combined Array for Research in Millimeter-wave Astronomy (CARMA), performing one of the first high angular resolution

survey of planet-forming disks. Andrea joined the Rice faculty in 2014 and, in 2016, was awarded the Young Investigator Award for Research in Environmental Sciences, Astrophysics, and Chemistry from the Italian Scientists & Scholars in North America Foundation (ISSNAF). Andrea's research focuses on understanding the formation of planets and the interaction between planets and their host stars. He is author of about 70 scientific articles that have received more than 11,000 citations.