Abstract:

The ubiquitous disks around young stars are the natural place for formation of planets. I will talk about on-going studies of these disks using mid-infrared (4.5 to 30 micron) spectroscopy using two very different, complementary spectrographs. The Infrared Spectrograph (IRS) on the Spitzer Space Telescope, which is nearing the end of its cryogenic lifetime, provides very sensitive, low resolution data well-suited to surveys and solid features (dust and ice). TEXES, the Texas Echelon-cross-echelle Spectrograph provides very high resolution and is best used to follow-up selected sources identified with Spitzer. As I helped build TEXES, I will spend some time on the unique aspects of its design, including a 36'' monolithic, a diamond-machined aluminium grating. If time permits, I will also discuss future facilities and how they may increase our knowledge of the origin of planets around stars.