

## Spectrum Lecture Series 2017-2018

### Hot Jupiters and Lava Planets: Exploring the Diversity of Exoplanet Environments

Wednesday, November 8, 4:00 PM  
Montgomery College  
Germantown Campus  
**BE151**

Dr. Avi Mandell  
NASA  
Goddard Space Flight Center



After 20 years of discovery, we know of thousands of planetary systems, many with multiple planets and some that strongly resemble our own Solar System. But we are only now beginning to achieve the detailed observations necessary to consider the physical properties of exoplanets beyond the basics of mass and radius. In this talk I will provide a status update on the population of known exoplanets, and describe the methods we are using to begin to probe the atmospheres and surfaces of planets around nearby stars. These observations are only able to provide a first look at planetary properties, but we can begin to examine how models based on our knowledge of Solar System bodies map on to these observations. Just as important, we can look at predictions for what future observations and telescope capabilities will be most helpful in constraining the formation and evolution of planetary systems, searching for habitable worlds and eventually life among the stars.

**Biography:** Dr. Mandell is a scientist in the Planetary Systems Laboratory (693); his research focuses on the characterization of extrasolar planets and the formation and evolution of planetary systems, with the specific goal of understanding factors that determine whether a planetary system can form habitable planets and what the characteristics of these planets will be. He works on analyzing observations of transiting and directly imaged exoplanets and circumstellar disks, as well as modeling spectra of planetary atmospheres and the dynamical evolution of planetesimals during the formation of terrestrial planets. He is the Director of the GSFC Sellers Exoplanet Environments Collaboration, and is the Project Scientist for the Coronagraph Integral Field Spectrograph for the WFIRST space telescope.

As always, Spectrum Lectures are appropriate for a general audience and admission is free. No tickets are required. For questions or to request accommodations for physical disability, please contact Rick Pires at [Richard.Pires@montgomerycollege.edu](mailto:Richard.Pires@montgomerycollege.edu) or 240-567-7798. More information about Spectrum Lectures can be found at: <http://cms.montgomerycollege.edu/edu/departments.aspx?id=10883>