

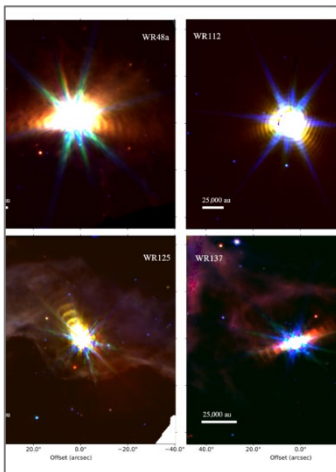


**College of Natural Sciences  
& Mathematics**

UNIVERSITY OF DENVER

## **Physics & Astronomy Colloquium**

**May 28, 4:00pm, Olin 105**



### **Dr. Noel Richardson**

Assistant Professor of Physics & Astronomy, Embry-Riddle  
Aeronautical University (Prescott, AZ Campus)

## **From massive binaries to hot dust**

Massive stars are almost always found in binary or higher order systems. The result of this high multiplicity is that standard, single-star evolutionary models are not able to accurately predict the populations that exist in the massive star zoo. As a result, they also offer insights into physics in rather extreme environments. In order to understand how these stars ionize their environments, enrich the interstellar medium with gas and dust, or to piece together the diversity of supernovae, we need to understand binary star evolution in the upper H-R diagram. In this talk, I will describe observational campaigns on a variety of massive (and exotic!) Galactic binaries that will start to constrain the evolutionary pathways these stars can take compared to the standard single-star models. The results of these studies also now show us how much these binaries shape their environments with large scale dust storms that last for hundreds of years.

*Dr. Richardson will be visiting us Wednesday 5/28 through Friday 5/30. Please contact Jennifer Hoffman ([jennifer.hoffman@du.edu](mailto:jennifer.hoffman@du.edu)) if you would like to meet with him.*