## BOSTON Boston University College of Arts & Sciences UNIVERSITY Institute for Astrophysical Research

2022–2023 ASTROPHYSICS SEMINAR SERIES

## **Convection and Tidal Disruption in Common Envelopes**

The evolutions of post-main-sequence binaries are diverse and full of open questions. As the primary evolves off the main sequence, strong interactions can occur as the orbits destabilize for stellar, sub-stellar and compact objects within ~10 AU. These companions may plunge into the primary star and enter a common envelope phase, an important but brief channel in stellar evolution, that results in either the emergence of a shortperiod binary, or the destruction of the companion (or the primary's core). In this talk, I will highlight recent work on the

effects of convection in common envelopes and simulations of tidal disruption events in the interiors of giant stars. I will also briefly discuss work I have done to build astronomy pathways for deaf and hard-of-hearing students at the National Technical Institute for the Deaf at RIT.



Monday, April 3rd 3:30 - 4:30 p.m. CAS 502

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