Este seminário será um exame teórico das questões em
https://revistagalileu.globo.com/Ciencia/Espaco/noticia/2020/06/cientistas-observam-colisao-inedita-entre-buraco-negro-e-astro-misterioso.html

Seminario, 31 agosto, 2021, 16.00

https://us02web.zoom.us/j/85322583987

Jaki-Noronha Hostler, University of Illinois Urbana-Champaign

Title: What can we learn from heavy neutron stars?

Abstract:
“The observation of gravitational waves from a blackhole-mystery object binary opens the possibility for heavy neutron stars of 2.5 solar masses (potentially seen in GW190814). If this mystery object is a neutron star of 2.5 solar masses, it poses direct challenges to models of the equation of state. Interestingly, introducing non-trivial structure in the speed of sound sourced by changes in the degrees of freedom (possibly quarks) of ultra-dense matter can resolve this conflict, which may have large ramifications in nuclear and astrophysics. However, for a clear smoking gun signature of the mystery object being a neutron star, one requires a measure of tidal deformability that is non-zero. Because the predicted values are very small, a tenfold increase in sensitivity may be needed to test this possibility with gravitational waves, which is feasible with third generation detectors.”