The Catholic University of America
Department of Physics
Colloquium

Dr. Camilla Pacifici
NASA, GSFC

The Ups and Downs of Galaxies

In the past years, ground-based and space telescopes have given us inestimable information about the Universe we live in. We can now study the physical properties of galaxies from the present day, up to 13 billion years ago. Such quantity and quality of data require more and more advanced tools to best exploit the observations. We have thus built a physically motivated library of galaxy spectral energy distributions by combining predictions from cosmological simulation with state-of-the-art models of the stellar and nebular emission and the effect of dust. Our approach allows us to constrain the star formation histories of galaxies and assess how galaxies form, evolve and, after some ups and downs, eventually quench their star formation and evolve passively. I will present the constraints we derive, from local and high-redshift observations, on the evolutionary timescales of galaxies as a function of stellar mass, and how we can use such constraints to assess what mechanisms (e.g., mergers, gas accretion, feedback) are most effective in the life of galaxies.

Wednesday, February 24th, 2016
4:00pm
106 Hannan Hall
Refreshments will be served at 3:45

Sponsored in part by the Graduate Student Association
For more information, please contact: Patrick Burke (202) 319-5315

If you would like to request disability accommodations, please contact Patrick Burke at (202)-319-5315 to make arrangements.