

# Astrophysics Seminar

## Monday, February 23, 2015

## Star Formation Across Space

**Daniela Calzetti**

*University of Massachusetts*

*Department of Astronomy*

**3:15 pm**

Refreshments  
CAS Room 500

**3:30 pm**

Seminar  
CAS Room 502

### Next Week

- *Colin Bischoff*  
*Center for Astrophysics*
- Detection of B-mode Polarization at Degree Angular Scales using BICEP2



### Abstract:

Despite many decades of progress in understanding the evolution of star formation and stellar populations in galaxies, we have still fundamental questions that have remained unanswered. These include:

How do stars cluster in galaxies, and how do these structures evolve in time? Do we actually have a 'clustered' and 'diffuse' mode of star formation? When structures remain bound (star clusters), how do their populations evolve? Is the stellar Initial Mass Function universal?

How are popular star formation rate indicators affected by the recent star formation history of a galaxy? How are these effects impacting our understanding of the scaling laws of star formation with the gas reservoir? The answers to these questions inform our theories for the evolution of galaxies through cosmic times. Many of these questions are being addressed by recent projects that combine UV and high-angular resolution with the Hubble Space Telescope, and which I will describe together with the results they have obtained so far.



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