



# WOOSTER

## Physics

### Colloquium Series

**11a.m. Tuesday, October 17th**  
**Taylor 111**

## Optical Nonlinearity of Ultrastrongly Coupled Organic Cavity Polarities

Dr. Mike Crescimanno,  
Youngstown State University

Why does your voice sound so good when you sing in the shower? And what does that have to do with the optical states of an atom inside an optical cavity? While the former may be debatable, the resulting states of the latter are called polaritons, and display unusual optical properties. We'll detail results of experiments performed by our collaborators at CWRU using organic dyes at 'ultrastrong' coupling and then describe the quantum optics theory behind understanding the observed non-linear effects.

