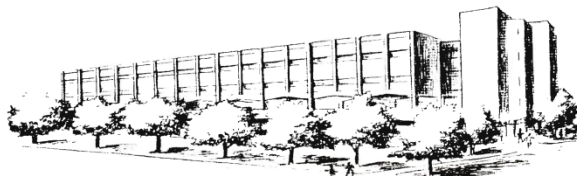


UNIVERSITY OF CONNECTICUT



INSTITUTE OF MATERIALS SCIENCE

POLYMER PROGRAM SEMINAR

**“Structure at the surface and in the bulk in biomaterials:
Studies of protein adsorption and hydration”**

**Prof. N. Sanjeeva Murthy
Rutgers University**

**Friday, March 28, 2014
1:30 PM, IMS Room 20**

Surface structure plays an important role in many areas of materials science including adhesion, corrosion and biological activity. The structure of the material as a whole determines the macroscopic properties such as strength and degradation. Results obtained using X-ray scattering for investigating the surface and the bulk structure in biomaterials will be presented. Formation of thin polymer films on aqueous surfaces, and the adsorption of proteins onto polymer surfaces in the aqueous media were investigated using X-ray reflectivity and grazing incidence X-ray diffraction. The goal is to use protein adsorption as a proxy to study cell response. The study of the bulk structure will be illustrated using X-ray and neutron scattering results from the investigation of effect of hydration on polymer properties. Hydration leads to phase separation in many polymers used as biomaterials. Consequences of phase separation, such as an unusual increase in the modulus in some copolymers, and the influences drug delivery when copolymers are used as matrices will be discussed.

**For further information, please contact YH Chudy at yhchudy@ims.uconn.edu*

