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Host: Thomas Webster
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"Simulations of Biomolecular Assembly Processes at Interfaces"

Thursday, April 17
220 Shillman Hall
11:45 a.m. – 1:00 p.m.

Refreshments will be served

ABSTRACT Although biomolecular folding, binding and assembly are usually conceived of as occurring in a bulk aqueous solution, there are numerous instances of such processes occurring near interfaces within cells. Examples of these interfaces include very large macromolecules, membranes bounding intracellular compartments and the cell membrane itself. Interfacial behavior of biomolecules is also important in several technological applications such as DNA-based nanomaterials, biosensors, and microarrays. In this talk, I will discuss several ongoing research problems in my group that illustrate rich behavior exhibited by biomolecules (protein, DNA) at interfaces.

BIOGRAPHY Dr. Mittal is the P.C. Rossin Assistant Professor of Chemical Engineering at Lehigh University. He holds a PhD in Chemical Engineering from The University of Texas at Austin, a M.Tech in Chemical Engineering from the Indian Institute of Technology, and a B.Tech in Chemical Engineering from Beant College of Engineering & Technology. Research interests include simulation and theory of: protein stability and dynamics, huydrophobic transport, and molecular thermodynamics. In 2013, Dr. Mittal received the Allan P. Colburn Award from the American Institute of Chemical Engineers (AICHE), and in 2014, he was was named an Alfred P. Sloan Research Fellow in Chemistry.