

Joint Seminar between the Department of Mathematics and the Soft Matter Seminar Series of the WCOE, Monday October 22 at 2:00 PM in CHEMISTRY 113.

Speaker: K.R. Rajagopal, Department of Mechanical Engineering, Texas A&M

On the mechanics and mathematics of bodies described by implicit constitutive equations

K. R. Rajagopal
Department of Mechanical Engineering
Texas A&M University
College Station, TX-77843

After discussing the need for implicit constitutive relations to describe the response of both non-linear fluids and solids, I will discuss applications wherein they can be gainfully exploited. It will be shown that such implicit relations can explain phenomena that have hitherto defied adequate explanation. Moreover, such implicit constitutive relations possess characteristics which are desirable both from the point of view of qualitative and numerical analysis.