

Department of Chemical
Engineering presents



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Probing Interfacial Contact via
MEMS-based Microinstrumentation

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Understanding the mechanisms underlying the interactions that occur when two surfaces are brought together, separated, or rubbed against each other is fundamentally important to many basic and applied problems. In this presentation, I will discuss the impact of these interactions in the burgeoning field of micro- and nanoelectromechanical systems (M/NEMS). I will also present the unique opportunities provided by the MEMS processing techniques to interrogate surfaces on a length scale not easily accessible by other techniques, namely in the mesoscopic length scale. With this view, I will introduce a number of MEMS-based microinstruments that we have developed to study these interactions, and some of the insights we have gained using them about the nature of surface interactions involved in M/NEMS.