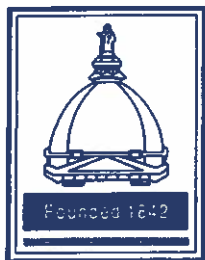


AEROSPACE & MECHANICAL ENGINEERING



2012 COLLOQUIUM 2013 SEMINARS ARE OPEN TO THE PUBLIC

UNIVERSITY OF NOTRE DAME, NOTRE DAME, INDIANA 46556

SPEAKER: Prof. Mark J. Kushner

Director, Michigan Institute for Plasma Science & Engineering (MIPSE)
Electrical Engineering and Computer Science Department
University of Michigan
Ann Arbor, Michigan

**TOPIC: LOW TEMPERATURE PLASMAS AND SURFACES:
MICROELECTRONICS, STERILIZATION, ENDOSCOPY
AND PRINTER ENGINES**

DATE: Tuesday, December 04, 2012

TIME: 3:30 p.m.

PLACE: Lower Level Auditorium, Geddes Hall

RECEPTION: 3:00 – 3:30 p.m. – Coffee House, Geddes Hall

ABSTRACT

Low temperature Plasmas are used to modify a tremendously wide range of materials. Plasmas are used to functionalize commodity polymers, to fabricate microelectronics devices, to charge surfaces in printer engines and now to treat human tissue. The success of these technologies ultimately relies on the ability to finely control plasma properties in order to deliver the desired fluxes of radicals and ions to surfaces, which then synergistically modify those surfaces. Achieving this control ultimately requires one to control the energy and velocity distributions of charged and neutral particles in order to properly stimulate surface chemical processes. There has been an evolution of techniques to control these distributions using a variety of plasma excitation schemes. These techniques are now being challenged to provide the control required to fabricate nanoscale structures for microelectronics at one extreme and for biological applications of plasmas and plasma medicine, typically performed at atmospheric pressure, at the other extreme. In this talk, techniques to control plasma sources will be discussed with examples drawn from nanoscale fabrication and plasma treatment of human tissue.

NOTE: *If you are interested in meeting individually with
Prof. Kushner, please contact Linda at 631-5431*