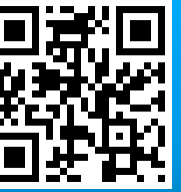


# Department of Aerospace and Mechanical Engineering

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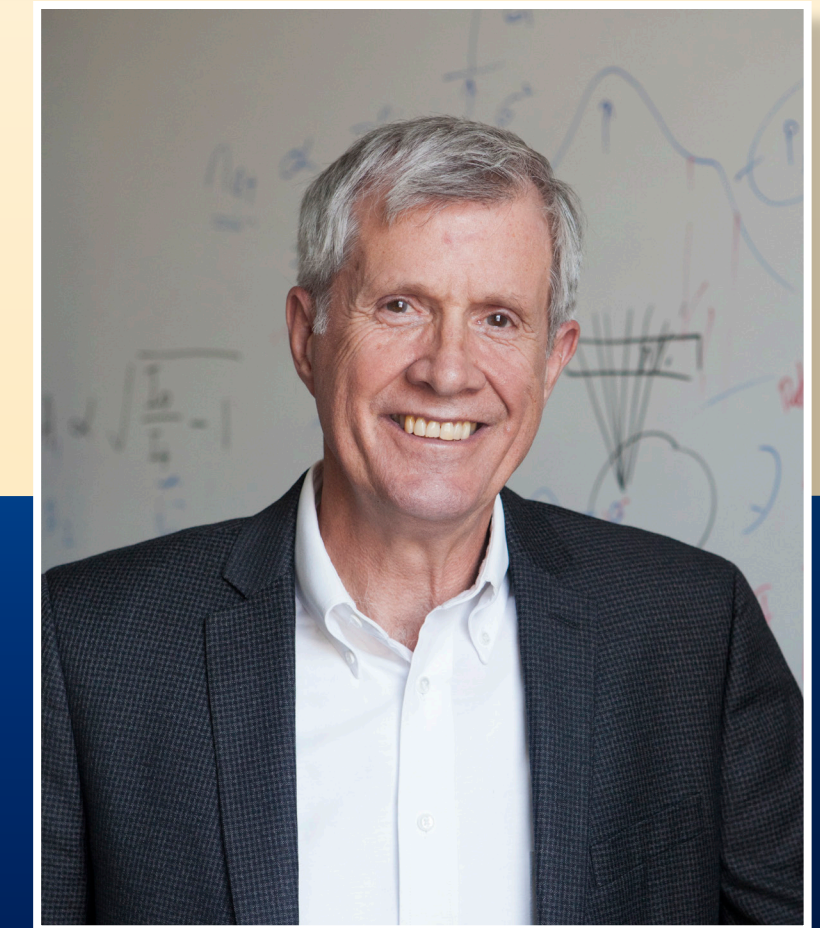
## New Methods for Diagnostics of Plasmas, Flames and Air Flows: Filtered Rayleigh Scattering, Radar REMPI, and FLEET

**Tuesday,  
December 10, 2013,  
3:30P.M.**

**Lower Level  
Auditorium,  
Geddes Hall**

Refreshments served at  
3:00 p.m. in the  
Geddes Hall  
Coffee House

This talk will focus on the development of new diagnostics that do not require seeding and that can capture true time accurate information about spatially complex, time evolving phenomena. Filtered Rayleigh Scattering yields instantaneous images of temperature fields and is used to follow the development of laser produced plasmas and microwave interactions with flames. Radar REMPI provides a method for high sensitivity detection of trace species for standoff air monitoring as well for the measurement of radical concentrations in flames. Femtosecond Laser Electronic Excitation Tagging (FLEET) produces patterns in air or other nitrogen containing flows that are followed in time for the measurement of velocity profiles, vorticity and other transport phenomena.



**Prof. Richard Miles**  
Department of Mechanical  
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*If you are interested in meeting individually with Prof. Miles, please contact Linda at 631-5431.*