



Mechanical and Aeronautical Engineering Department
University of California Davis
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<http://mae.ucdavis.edu/research/spaceEd/>

2007-2008 Monthly Seminar Series on Space Research

18 October, 15 November, 17 January, 21 February, 17 April, 15 May
3rd Thursday 4:00-5:00 pm

CONTROLLABLE SOLID PROPULSION FOR LAUNCH VEHICLE AND SPACECRAFT APPLICATION

(A Presentation based on a paper authored by John Napior and Victoria Garmy of Aerojet)

**Presenter: Sam Schlueter
Aerojet, Sacramento, CA**

Date: 15 November 2007 Thursday Time: 4:10-5:00 pm Location: 1062 Bainer
Refreshments will be provided at 4:00 p.m.

ABSTRACT

Hosted by: Professor Nesrin Sarigul-Klijn

Aerojet, a leading rocket and space propulsion company in the United States, has been developing controllable solid propellant propulsion systems for a wide variety of applications including systems in production. Controllable solid propulsion systems provide variable thrust capability with high turn-down ratios by changing the nozzle throat area and the motor's operating pressure during operation. Aerojet has developed numerous controllable systems with single and multiple variable thrust nozzles for axial propulsion rocket motors and attitude control systems, respectively.

Recently, Aerojet began work on controllable thrust systems for crew launch vehicles and spacecraft applications in support of NASA's Space Exploration program. This presentation provides an overview of Aerojet's controllable thrust capabilities and how they are being applied to abort systems on launch vehicles and landing rockets for spacecraft.

ABOUT THE SPEAKER

Sam Schlueter received a Bachelor's Degree in Aeronautical and Astronautical Engineering from the Ohio State University in 1984. He started working for Aerojet Sacramento in 1985 in the scientific programming group, and joined the ballistics group in early 1986. He spent 8 years working on the Space Shuttle Advanced Solid Rocket Motor main grain and igniter, and was involved in the development of burning rate motors and methodologies for that program. Other programs he worked in that time were Peacekeeper, Small ICBM, and Polaris in addition to many smaller tactical systems. After the ASRM program shut down in 1993 he moved to Breed Technologies in Lakeland, Florida where he designed and qualified several state of the art automotive airbag inflators, for which he received 7 patents. He returned to Aerojet in 1997 where he re-designed the Titan II and IV 1st and 2nd stage turbine start cartridges, boosters, and initiators. He then moved onto the Atlas V SRM team in 1998 where he developed the igniter and took it and the main grain into production. He is now the ballistics lead at Aerojet Sacramento and oversees work on all their solid propellant systems.

For more information about

***SpaceED (Space Engineering Research and Graduate Program) or the seminars please contact
Professor Nesrin Sarigul-Klijn at (530)-752-0682 or nsarigulklijn@ucdavis.edu***

Members of the campus community and visitors from the region are welcome to attend the seminar series.

Sign-in is required at the event. SpaceED seminar will replace MAE297 seminar on 3rd Thursdays.