



Mechanical and Aeronautical Engineering Department
University of California Davis
Davis, California 95616-5294
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2003-2004 Monthly Seminar Series on Space Research

16 October, 20 November, 15 January, 19 February, 15 April, 20 May
3rd Thursday 4:00-5:00 pm

Microsatellites – How They Can Revolutionize Space

JEFF JANICIK

*SpaceDEV
Poway, CA*

Date: **19 February 2004_Thursday** Time: **4:10-5:00 pm**

Location: **1065 Kemper**

Refreshments will be provided at 4:00 p.m.

ABSTRACT

Today's satellites tend to be large, expensive, power-hungry, slow to assemble, test and integrate, are generally unique to each payload, and often take as much as 90 days to "commission" on-orbit. An industry goal is to develop high performance modular microsatellites and a corresponding microsatellite operating systems that can be quickly assembled, tested, and commissioned, and that is not a custom designed for each mission or payload. A modular system can use current and future subsystem components and software, while naturally maintaining state-of-the-art performance. This can dramatically reduce the size, mass and power requirements of subsystems and may result in on-demand launch and responsive, quick on-orbit commissioning.

This seminar will focus on the design methods required to make a microsatellite. One of the primary methods to be presented is a system-wide implementation of TCP/IP communications on a microsatellite thus making "anytime, anywhere" real-time data access and operations a reality. In addition, a brief overview of the University Nanosat program sponsored by the Air Force will be presented.

ABOUT THE SPEAKER

Jeff Janicik is the Director of Engineering at SpaceDev, CA. He has been SpaceDev's lead for the NASA CHIPSat satellite project from the start, including full management of a multi-organization team, project costs and schedule, technical performance, systems trades and implementation, and risk management. At present he is the technical and managerial lead for the MDA Distributed Satellite Experiment. Prior to his current position he had ten years experience as a project manager, engineer, and instructor for the United States Air Force. While at the Air Force Space and Missiles Systems Center (SMC/TE), he served as Test Manager, Military Spaceplane Technology Division as well as the Chief, Space Test Strategic Planning, designing low cost, streamlined approaches for the X-37 and the X-40A programs. He directed the first-ever autonomous approach and landing of an unmanned space vehicle. While he was at the Sacramento Air Logistics Center he was an A-10 Flight Test Engineer, where he directed 120 A-10 aircraft test missions. He received his M.S. degree in Mechanical Engineering from the University of California, Davis and a BS in Aerospace Engineering from the University of Notre Dame.

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.

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