



American Institute of Aeronautics & Astronautics
St. Louis Section

AIAA Technical Specialist Meeting

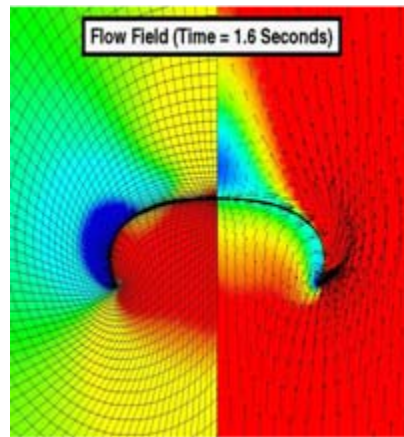
Thursday, 12 November 2009

Boeing Headquarters (Building 100) Cafeteria

Latest Developments in the Field of Parachute Research

Presented by:

Dr. Jean Potvin
 Department of Physics
 St. Louis University



Parachutes are the simplest and cheapest devices used for the deceleration of payloads, people, and vehicles since their first recorded use in 1797. Comprised of cloth and suspension lines, their construction is far simpler than that of aircraft. As a result, parachute construction and design is a fairly mature art.

Dr. Potvin will discuss some of the latest developments in parachute research, which have been less about finding new canopy designs and more about using computer simulations for system design as well as for parachute Guidance, Navigation, & Control. Being soft, slow and bluff make parachutes much more difficult to control than aircraft, as they are more susceptible to the prevailing winds and far less responsive to control input. Softness, slowness, and bluntness also make them quite difficult to study from the point of view of aerodynamics and structure response simulation. Dr. Potvin will discuss how such complexity is currently being explored and simulated, and what type of applications have benefitted from these studies.

As a physics professor at Saint Louis University, Jean Potvin has been involved in parachute research since 1994. His main interest is the study of the aero-physics of the inflation process. He has also been involved in several wind tunnel studies and flight tests of sub-scale and full-scale parachutes. He obtained a Ph.D. in Physics in 1985 at the University of Colorado in Boulder, CO. He is a parachutist with over 2500 jumps to his credit and is also a FAA-rated Senior Parachute Rigger. As a hobby he restores old ejection seats and military parachutes for display at air shows.

Dr. Potvin is an AIAA Associate Fellow as well as a member of the AIAA Aerodynamic Decelerator Systems Technical Committee. Since 2002 he has been the director of the H.G. Heinrich Parachute Systems Short Course, a biennial week-long professional development course on parachute systems design and applications. He has authored over 35 papers on the physics of parachutes for AIAA publications and the *Journal of Aircraft*. He is also a co-founder of the Parks College Parachute Research Group (www.pcprg.com).

Schedule

Social/Snacks 4:30 – 5:00
 Presentation 5:00 – 6:00

Menu

Soda and Light Snacks

Cost

\$2 per person - Pay at the Door

Reservation Deadline Monday, 9 November

Ticket Sales and Reservation Contacts:

Brad Sexton 314-232-7826 bradley.w.sexton@boeing.com

Frank Youkhana 314-234-4811 frank.w.youkhana@boeing.com

Dan Johnson 314-232-3094 daniel.j.johnson3@boeing.com



Interested in joining AIAA? Contact
 Brandon Wegge (314) 232-2933 for free
 ticket information