

# OCTOBER PROGRAM

## “Flight Activities at the 1904 St. Louis World’s Fair: Introducing America to Aeronautics ”

*(Sponsored by the Missouri Society of Professional Engineers St. Louis Chapter)*

**Guest Speaker: Dr. Frederick W. Roos**

**Date:** Thursday, October 20, 2011  
**Location:** Whittaker Auditorium  
 Washington University, One Brookings Drive  
 St. Louis, MO 63130  
**Time:** Registration, pizza & soda at 5:30 pm  
 Program to follow at 6 pm  
**Cost:** \$10 per person; Please RSVP by  
 Monday, October 17, 2011 to Kathy French;  
 Phone: (636)534-3229 or  
 Email: kfrench@lspower.com



In planning the Louisiana Purchase Exposition (commonly known as the 1904 St. Louis World’s Fair) in St. Louis, “the Exposition management felt that the time was ripe to make a signal effort in the direction of stimulating development in aerial navigation and particularly to definitely demonstrate for the information of the world, what progress had been made in this direction.” To accommodate the aerial events, a fenced Aeronautic Concourse of roughly 14 acres was established on the Exhibition grounds (technically, on land leased from the then-newly relocated Washington University). During the course of the aeronautic events, numerous flights were made by various airships, including Baldwin’s “California Arrow”; a Santos-Dumont airship couldn’t fly owing to a ripped gas envelope. Glider demonstration flights were made by William Avery, one of Chanute’s protégés. The aeronautical activities were nevertheless the highlight of the Fair – the first time in history that a mass flying contest had been organized and conducted!

Dr. Fred Roos graduated with a BSE in Science Engineering, an MSE in Aeronautical and Astronautical Engineering, and a Ph.D in Aerospace Engineering from the University of Michigan. Dr. Roos is well-known locally as an aviation historian, having appeared in several KETC (Channel 9) television programs on local/regional aviation history subjects. For many years, Fred’s been very active in aviation history work, with several publications to his credit. He was one of the founding Directors of what is now the Greater St. Louis Air & Space Museum (at St. Louis Downtown Airport), and continues to serve on the national History Committee of the American Institute of Aeronautics and Astronautics.

Dr. Roos retired in 2010 from Boeing’s *Phantom Works*, where he was working on aerodynamic applications of active flow control techniques after years of experimental research in fluid dynamics ranging from vortex-dominated, high-angle-of-attack flows to transonic airfoil buffeting phenomena and turbulent shear-layer structure and control. He has authored more than fifty technical papers on these and other flow physics subjects. Dr. Roos teaches fluid mechanics as a Professor of Mechanical Engineering and Materials Science at Washington University in St. Louis.