



The American Society of Mechanical Engineers

Central Oklahoma Section Newsletter

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The Section is located at: Oklahoma Engineering Center, 201 Northeast 27th Street, Oklahoma City, OK 73105

The Central Oklahoma Section Newsletter is nominally published nine times per year to convey monthly meeting dates, meeting topics, section activities, and/or other ASME information to its membership.



*** November/December Meeting Announcement ***

Joint meeting with the Oklahoma AIAA Section

“AVN-340: The Engineering Branch

Speaker: Mr. Mike Colson, FAA Aviation Systems Standards, Flight Inspection Maintenance Division, Engineering Branch

Thursday, Dec. 5

Oklahoma Engineering Center, 201 NE 27th St., OKC

The FAA, Aviation Systems Standards, Flight Inspection Office is tasked with ensuring that commercial airport's landing systems are operational and within specified tolerances. The FAA owns and operates a fleet of flight inspection aircraft to accomplish this task. The engineering branch is responsible for developing repairs and modifications to the inspection fleet. These modifications consist of avionics upgrades necessary to monitor, record, and calibrate airport landing systems. The flight inspection fleet is exposed to unique flight profiles, cyclic hoop stresses, wing loadings, and avionics cooling system problems. Some of the unique projects completed for other government agencies will also be discussed. **Make plans to attend this meeting, with AIAA, on December 5!**

Schedule and Contact Information

Time: 6:00-6:30PM: Registration & Social. 6:30-7:15PM: Catered Meal.
7:15-7:30PM: Section Business & Introductions. 7:30PM: Program with Mr. Mike Colson.

Cost: \$10 for Sr. Members and Guests, \$5 for Student Members (students please bring your ASME membership card).

PLEASE PLACE RESERVATIONS BY 12:00PM (noon) TUESDAY, December 3.

E-Mail Reservations: Frank Parker parkerfj@asme.org
OKC/Norman/Edmond/Metro Area: OU-AME Office (405) 325-6772
Stillwater/Enid/Ponca City/Perry: OSU-MAE Office (405) 744-5900
Lawton/Duncan/Chickasha: Curtis Vickery (580) 251-3573
Students: Place reservations at your respective university's ME/MET department office.

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Additional Nov./Dec. Meeting Information

Our speaker, **Mr. Mike Colson, P.E.**, has been a member of the FAA Flight Inspection Maintenance Engineering Branch since 1997. Mr. Colson's recent projects include structural integrity studies to quantify potential growth and generation of cracks in aircraft structures. One of his recent accomplishments was the establishment of a program to develop a Flight Loads Database applicable to all FAA flight inspection aircraft; including Lear 60s, Challenger 601-3Rs, and Beech 300s. Mike has also been involved in structural analyses and design related to aircraft air conditioning systems, instrumentation consoles for avionics equipment, and structural installation of SATCOM antennas with associated amplifiers.

Prior to his service with the FAA, Mike Colson served as an Aerospace Engineer at Tinker Air Force Base's Air Logistics Center, primarily involved in Airframe Structural Engineering, from 1989 to 1997. Other responsibilities at that time included modification and/or redesigned of E-3 (Boeing 707-320C) hydraulic, lubrication, cooling, and cabin pressurization systems. Mike has written and implemented numerous maintenance procedures to ensure aircraft structural integrity.

Mr. Colson earned both a B.S. (1986) and M.S. (1990) degree at Oklahoma State University, and resides in Bethany, OK.

→ **ATTENDEES ARE ELIGIBLE TO RECEIVE 1(one) PDH or 1/10th-CEU!** ←



Central Oklahoma Section Award Recipients

Dr. Ranga Komanduri, Oklahoma State University Mechanical and Aerospace Engineering Faculty member, was recently awarded ASME's prestigious **William T. Ennor Manufacturing Technology Award**. This award recognizes individuals or teams for developing or contributing significantly to an innovative manufacturing technology, the implementation of which has resulted in substantial economic and/or societal benefits. The award will be presented to Dr. Komanduri at the ASME Congress, November 17-22 in New Orleans.

Dr. Komanduri, holding the A. H. Nelson, Jr. Endowed Chair in Engineering at OSU, has an extensive resume in manufacturing related areas. Komanduri's teaching and research interests include: materials processing and manufacturing, tribology, diamond coatings and nano-coatings on cutting tools, mechanics of machining and grinding, ultra-precision machining, high-speed machining, machine tool sensors, molecular dynamics simulation of nanometric cutting, and thermal aspects of manufacturing processes. In addition, Komanduri has over 150 technical publications, and has served as Editor of 20 technical journals. An upcoming activity is an **NSF Workshop on *Unsolved Problems and Research Needs in Thermal Aspects of Material Removal Processes*** (June 10-12, 2003). **Congratulations Dr. Komanduri!**



Dr. Warren E. Snyder, Professor Emeritus of Mechanical Engineering, Milwaukee School of Engineering, was recently awarded ASME's prestigious **Internal Combustion Engine Award**. This award recognizes eminent achievement or distinguished contribution over a substantial period of time, which may result from research, innovation, or education in advancing the art of engineering in the field of internal combustion engines. This award was presented to Dr. Snyder at the Internal Combustion Engine Fall Technical Conference, September 2002.

Professor Snyder's industrial career began in 1942 at the General Motors Research Laboratory in Detroit, MI. Dr. Snyder's teaching career began shortly thereafter at the University of Kansas and the University of Minnesota. In 1950 Warren returned to the University of Kansas to head their Mechanical Engineering school. Returning to industry two years later, Snyder working in design and development of gas turbines, Diesel engines, fuel injection, and natural gas engines. He received 10 patents for his work at General Motors, Midwest Research Institute, American Bosch, Cummins Engine, and Waukesha Engine Division (Dresser, Inc.). Professor Snyder returned to the Milwaukee School of Engineering in 1985, retiring in 2000; he now resides in Oklahoma City. **Congratulations Dr. Snyder!**

Advance Preview of January's Distinguished Lecturer Program

We will be starting our 2003 activities with a special program on 23rd of January. **Mr. Ian Arbon** will be giving a lecture on ***Renewable Energy and Sustainability***. What many think of as either a "fringe" issue championed by environmentalists or a cure-all for our energy problems, Sustainability Design is increasingly being addressed in several engineering and architectural fields. Because of the complexities of implementing sustainable systems, engineers will have to become more involved in such issues to bring about practical solutions. In this lecture, Mr. Arbon discusses how professional engineers must be pragmatic and realistic. He also points out that the further implementation of renewable energy systems is fraught with difficulties, and that engineers may be chasing targets that are simply not reasonably achievable, no matter how politically or environmentally desirable they may appear. More information on Ian Arbon and his topic are at <http://www.asme.org/member/dlp.html#arbon>.

Chair's Corner

Dear ASME-Central Oklahoma Section Members:

It was good to see that the gloomy weather during the last week in October didn't deter many people from attending last month's Section Meeting. I'm certain that **Dr. Fagan's** reputation and his topic had a lot to do with the increased attendance. In fact, several non-members (including an FAA instructor involved in ILS calibration) came to our meeting. Besides being very informative, his presentation on the **GPS LAAS Landing System** is demonstrative of the on-going contributions to the advancement of aviation being made by Oklahoma based engineers, scientists; and the Universities, Government Agencies and companies which employ them. **We would like to thank Dr. Fagan for a very informative and enjoyable talk.**

Our aerospace theme will continue for our upcoming meeting scheduled for 5 December. We have arranged for **Mr. Mike Colson** of the **FAA Aviation System Standards Flight Inspection Office** to be our speaker. His presentation will concentrate on the structural analyses, repairs, and modifications implemented for the FAA's monitoring aircraft fleet. I've known Mike since he worked at Tinker about 5-6 years ago, in the AWACS airframe engineering section. Based on his hands-on approach in devising engineering solutions to aircraft system problems and attention to detail, I'm sure he'll have an interesting presentation for us. Anybody interested in airframe structure and the types of instrumentation used in monitoring airport landing systems would be envious of his current position in the FAA. More details on this presentation are provided in this newsletter's first two pages.

Due to the year-end holidays, this meeting will be held on the 5th of December and will be the last until January. **The presentation's technical content qualify it for 1.0 PDH Continuing Education Credit for any attending Professional Engineer.** Please be sure to clearly print your name and indicate your wish to receive this CE credit in the sign-in roster, when you come.

Hope to see you all on Thursday, the 5th of December.

Frank Parker -- Chair

ASME Commemorates Charles Machine Works, Inc. in Perry, Oklahoma



Ed Malzahn (ca. 1950) digs a 4 x 24 inch trench using the DWP trencher for the installation of a water line. ASME will designate the first trencher as an ASME landmark on Dec. 16, at Charles Machine Works, Perry, Oklahoma.



On **Monday, December 16** ASME International will commemorate **Charles Machine Works, Inc.** (Ditch Witch) with its prestigious **Landmark Designation**. The award honors Mr. Ed Malzahn for his pioneering efforts in the digging/trenching industry. The photo at left is an early view of their product. The Ditch Witch company just celebrated their 100-year anniversary in Perry, Oklahoma. The original Charles Machine Works shop is pictured at lower left. This building has been restored and now houses several examples of original Ditch Witch trenchers. ASME is actually commemorating the Ditch Witch DWP Trencher, with the Landmark ceremony held at this venue. This ceremony will mark the first ASME Landmark to be designated in the state of Oklahoma.

Since the History & Heritage Program began in 1971, 219 Landmarks have been designated as historic mechanical engineering landmarks, heritage collections, or heritage sites. Each represents a progressive step in the evolution of mechanical engineering & its significance to society. The Landmarks Program illuminates our technological heritage & encourages the preservation of historical important works. It helps establish persistent reminders of where we have been & where we are going along the divergent paths of discovery.


Unfortunately, seating is very limited so attendance is on an invitation-only basis. ASME members, not receiving an invitation, but wishing to attend this event, must contact Ed Reynolds, History & Heritage Chairman, ASME Central Oklahoma Section at Ph: (405) 721-6753 or E-mail: edwin_c_Reynolds@yahoo.com to make reservations on a first call basis if additional seating becomes available.

100 Years of Innovation **1902 - 2002**



The Malzahn family's rich history in Perry, Oklahoma, now spans a century -- from its early blacksmith days, to the underground construction market of today that has truly helped the Ditch Witch organization become The Underground Authority, Worldwide.

Future ASME-Central Oklahoma Section Events

Date	Location	Program Topic and Speaker
Dec. 5, 2002 (Thursday)	Oklahoma Engineering Center, 201 NE 27 th St., OKC	Joint Meeting with Oklahoma AIAA Section FAA Flight Inspection Maintenance Engineering Division Speaker: Mr. Michael Colson, P.E.
Dec. 16, 2002 (Monday)	 Perry, OK	ASME Landmark Ceremony, Charles Machine Works' Trencher Collection. (Invitation Only Ceremony)
Jan. 23, 2003 (Thursday)	Oklahoma Engineering Center, 201 NE 27 th St., OKC	Joint Meeting with Oklahoma AIAA Section Mr. Ian Arbon, ASME Distinguished Lecturer Topic: "Renewable Energy and Sustainability"

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