

February 2000

## Milwaukee Section www.milwaukeesae.org

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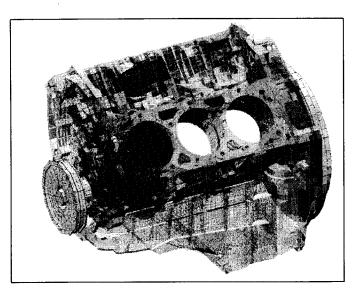
### FEBRUARY DINNER MEETING

Thursday, February 17, 2000

**TOPIC:** DADS/Engine, is an application-focused tool set to enable the dynamic simulation of complete engine performance.

# Speakers: Louis Hawkes and Dana Lewis of LMS International

DADS/Engine is capable of simulating the non-linearities caused by flexible parts that simultaneously undergo high frequency excitation, large displacements and intermittent contact. Simulation results including positions, velocities, accelerations, and loads may be plotted in tables and graphs. Component deformation may also be visualized with DADS/Engine's powerful 3D animation tools.



A few of the modules of DADS/Engine which will be discussed are:

The DADS Hydrodynamic Fluid Film Bearing element is used to apply forces and torques between two bodies connected by a fluid film bearing.

The **Helical Spring** spring element module which conveniently combines numerical efficiency and accurate modeling of coil clash and mass effects at high engine speeds.

Continued on page 2

#### **MEETING AGENDA**

Meeting:

Bluemound Gardens Banquet Center

(Formerly Christy's Restaurant)

11703 West Bluemound Road, Wauwatosa

(Southwest corner of Bluemound Road & Homewood Avenue - 117th Street) Enter from the lower parking lot off of Homewood Avenue.

Social:

5:00 pm

Dinner:

6:00 pm

Presentation: 7:00 pm

MENU: Choice of - Stuffed pork chop, Chicken Cordon Bleu or Chicken breast / Orange Roughy combination

plate

All entrees include tossed salad, vegetable, potato, rolls, beverage, and a brownie dessert. Meal will include bread, coffee, tea or milk

#### **Dinner Costs:**

Members & Spouses: \$17.00 Guests: \$18.00 Students: \$8.00

#### **Registration Info:**

Please register for the dinner by contacting Kim Kellen at 414-616-1374 no later than 10:00 AM on Tuesday, February 15th. No shows with reservations will be billed. Attendance during presentation only is welcome at no charge. Fifty year members are entitled to one free meal per year.

(Continued from page one)

The **Cam Generator** element which will automatically create a Cam profile based on the kinematic motion of the valve and follower.

The DADS Flexible Crankshaft Utilities which were created to enable an easier and faster way to combine MSC/NASTRAN with DADS to perform several functions necessary for effective analysis of crankshaft stress and vibration.

DADS/Engine enables engine designers to build functional virtual prototypes using familiar engine terminology.

This interactive tool simplifies the process of analyzing the complex dynamic interaction of engine components due to high accelerations, oil-bearing dynamics, cam and spring contact, and combustion forces.

To achieve challenging design goals, engineers are turning to LMS International for software and services that optimize designs based on dynamic behavior such as motion, structural integrity, noise, vibration, acoustic, and fatigue lifetime. The LMS solutions are process-centric within the digital engineering environment and deliver enterprise-wide productivity throughout the development process.

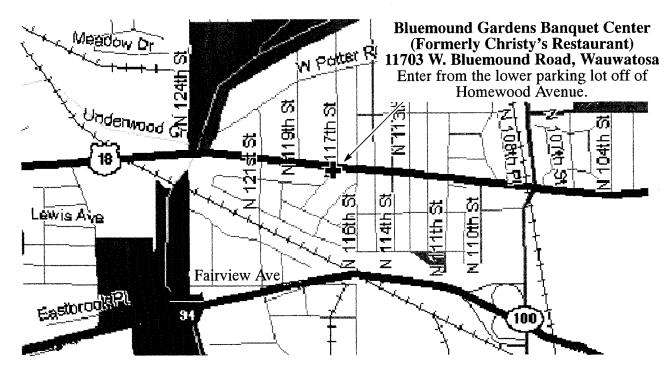
### Speakers Biography:

Louis Hawkes received a B.S. Degree in Mechanical Engineering from Oregon State University in 1997. Louis was immediately employed by Boeing Commerical Airplane in the arena of Mechanical Simulations. While with Boeing, Louis was involved in creating specifications for analysis software methods and how those methods would be deployed within Boeing. Louis was also part of an engineering team conducting analysis on a new design for a Boeing aircraft.

Louis joined LMS CADSI in March 1999 and immediatly began contributing his experience and expertise in the fields or structural analysis and Mechanical Simulation.

Dana Lewis received a B.S. Degree in Mechanical Engineering followed by a M.S.M.E. degree specializing in Noise & Vibration from Michigan Technological University in 1997. Dana was immediately employed by Johnson Controls, Inc. in Plymouth, Michigan in the Noise & Vibration Testing Laboratory. Dana was involved in all Vibration controlled testing including Buzz, Squeak & Rattle, Modal Analysis and Durability.

Dana joined LMS in October 1999 and began contributing her experience and expertise in the NVH arena as a sales engineer.



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### From Your Chairman:

The Governing Board would like to wish you all a very Happy New Year and we hope that the holiday season provided some opportunity to rest and spend time with your families. The Board met last week and plans are moving ahead for this summer's Midwest Mini-Baja with 85 teams registered. As mentioned in past newsletters, volunteers are still needed for judging, timing, scoring and flagging. Please E-mail at baja2000@excite.com if you are interested and able to help. Rodica Baranescu, the 2000 SAE National President, is expected to attend the Baja Banquet.

The Governing Board is in dire need of additional board members to help or support the areas of Math & Science, Company Representation, Membership, Program Planning, Student activities and Mini Baja to ensure the continued stability of the Section. Membership and participation needs of the Board have become critical and may affect the long term stability of the Section. A Board membership taskforce is planning to meet on February 7th to begin the process of determining how best to fill these critical needs. Additional information will appear in furure newsletters.

Jerry Fellows 1999-2000 Chairman Milwaukee Section SAE























# **Empowering** Engineering Innovation

## **Meeting Sponsorship**

We would like to thank the following organizations for their continued support of the Milwaukee Section:

Waukesha Engine, Harley-Davidson

For more information on becoming a sponsor, please contact: Jerry Fellows 414-225-8265