

**The Peoria Chapter of ASM International  
January 10, 2005 at the  
Mark Twain Hotel - Packard Plaza**

**The Peoria Chapter of ASM International  
and American Foundry Society**

*Present*

**PROCESSING EFFECTS ON IRON MACHINABILITY**  
Dr. Charles E. Bates, University of Alabama at Birmingham  
**COMMITTEE CHAIRMAN'S NIGHT**

**Social Hour - 4:30pm • Dinner - 5:30pm  
Technical Talk - 6:00pm**

Prepaid Reservations Required by January 5, 2005!! Reservations are **\$15.00**.  
Call Kate Chen at (309) 675-7529 Chen\_Kate@Cat.com.  
Please make all checks payable to "Peoria Chapter of ASM".

**About Our Speaker...**



*Dr. Charles E. Bates* is a research professor at the University of Alabama at Birmingham in the Materials Science and Engineering Department. He has a B.S. in Metallurgical Engineering from the University of Alabama(1963), an M.S. in Metallurgy(1965), and a Ph.D. in Metallurgy (1967) from Case Institute of Technology, Cleveland, Ohio.

Dr. Bates worked as a co-op student at James B. Clow & Sons in Birmingham, AL and as a quality control technician for Ford Motor Company's Engine and Foundry Division in Sheffield, AL as he completed his undergraduate degree. He was a graduate research assistant while attending Case Institute of Technology from 1963-1967. He started as a research metallurgist and became Head of the Metals Research Section at Southern Research Institute. He supervised research in ferrous and nonferrous casting production, industrial hygiene in foundry operations, and correlations between material properties and their macro and microstructures.

In 1993, Dr. Bates joined the faculty of the University of Alabama in Birmingham as a research professor. Along with teaching classes and guiding graduate students, Dr. Bates supervises research in lost foam casting production, machinability of iron and steel, steel casting production, and a variety of technical assistance projects.

◆ ◆ CHANGE IN ASM ADDRESS? CALL KATY MACGREGOR (309) 675-3155 ◆ ◆  
◆ ◆ CHANGE IN AFS ADDRESS? CALL JOE CROCKER (309) 578-1775 ◆ ◆

**ASM EXECUTIVE  
MEETING SCHEDULE**

*The following ASM Executive Meetings  
are planned at Packard Plaza:*

November 1, 2004 ..... 3:00pm – 4:30pm  
February 7, 2005 ..... 3:00pm – 4:30pm  
May 2, 2005 ..... 2:30pm – 4:30pm



**An Evening with Tim Conway &  
Harvey Korman, Rescheduled**

**Date: 1/10/2004  
Time: 6 p.m.**

**Facility: Peoria Civic Center Theater**

Contact Steve Cross at 303-578-3017  
or Cross\_Steven\_M@Cat.com for information  
on the happy hour at Jim's Steakhouse  
prior to the event.

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Materials Park, OH 44073  
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**PEORIA CHAPTER ASM INTERNATIONAL  
2004-2005 OFFICERS**

Chair ..... Ken Burris  
Vice-Chair ..... Mike Johnson  
Treasurer ..... Chad Siebenaler / Mike Pollard  
Secretary ..... Dave Akers

**EXECUTIVE COMMITTEE**

**COMMITTEE CHAIRS**

**2004 - 2005**  
Tom Clements, Scott Kozinski,  
Ron Streib, Sheryl Tipton,  
Tim Van Den Avond

**2005 - 2006**  
Bud Harvey, Ric Woldow,  
Steve Clancy, Tom Majewski

**2006 - 2007**  
Sam Banerji, Fritz Gensing,  
Wally Hines, Matt Kiser,  
Byron Paddock

Finance ..... Matt Kiser  
Program ..... Ron Morgan  
Membership ..... Eugene Pascual  
Publicity-Flyers ..... Katy MacGregor  
Web Page ..... Jeff Jensen  
Arrangements ..... Haidong Zhang  
Reception ..... Kate Chen  
Student Outreach ..... Allison Arndt  
Education ..... Scott Brown  
Long Range Planning ..... Mike Johnson  
MEI ..... Aaron Barklage / Andy Franks  
Sustaining Members ..... Mike Motyl  
Social ..... Steven Cross  
Yearbook ..... Nick Cook  
Nominating ..... Ric Woldow  
Historian ..... Wally Hines

**Processing Effects on Iron Machinability**

Occasionally machine shops complain about the machinability of gray and ductile iron when, metallurgically, there are no differences in microstructure, hardness or properties. The complaint is that particular batches cause more rapid tool wear, and tool life is less than normal.

Research has been conducted to determine the effects of normal and abnormal processing and compositional variations on tool wear rates when machining gray and ductile iron. The procedures developed allow precise tool wear measurements to be made and interpreted in terms of microstructures and compositions. Accurate data allows the most efficient ways for improving machinability (without sacrificing properties) to be determined.

**Heat Treatment of Steels MEI Course**

The MEI co-chairs are currently taking enrollments for the Heat Treatment of Steels course, which will be taught by Mike Johnson, Ric Woldow, Gary Keil, and Randy Conklen or Advanced Materials Technology. This course will begin in January, and will last for 9 weeks. The cost per student is \$375.00. Please contact Andrew Franks (309-675-3155), or Aaron Barklage (309-675-2162).

**ENGINEER'S DAY AT  
LAKEVIEW MUSEUM**

*The Peoria Chapter of ASM has once again been asked to participate in the Engineer's Week event at Lakeview Museum on February 20, 2005, from 1:00 pm to 4:00 pm. Engineer's Day is an annual event geared for middle-school aged children to expose them to basic concepts in different engineering fields through interactive activities. Volunteers are needed to help generate ideas for displays and demonstrations, as well as to set up and participate on the day of the event. If interested, please contact Allison Arndt (309/578-2089 or arndt\_allison\_a@cat.com).*