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Materials Research & Manufacturing Section

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Materials Research & Manufacturing Section

Betsy Aldridge, Chair

Members of the Materials Research and Manufacturing Section of the Chemistry Division share information concerning all phases of materials procurement, production, applications, and handling by means of educational activities, cooperative programs, publications, and Section-sponsored events at annual conferences.



Below are some signs that planning is progressing for the 2008 annual SLA conference in Seattle. Following is a report from Nora Stoecker, MRM Chair-Elect, on the Materials Resources Roundtable.

R&D development, engineering applications, competitive intelligence, market research – the need for information about materials and their properties touches almost all of our clients and customer organizations.

Database providers, publishers, associations, websites – there are so many potential sources of information, and so many tools and applications that could help get the right information, in the most usable form, to those clients and customers.

Wouldn't it help to have respected representatives of the materials information provider community describe for us ways in which their resources have really been used to add value to scientific, engineering, and business applications?

At the 2008 SLA conference in Seattle, the Chemistry Division's popular vendor roundtable will be hosted by its Materials Research & Manufacturing Section. We expect to have five vendors at this 90-minute session – and are planning to have a "case-studies" feature to the session.

As I write, ASM International and STN-Fiz Karlsruhe have already agreed to attend. I expect to hear very soon from CSA, and have just contacted several others. It should be a really great session! Hope to see you there.

Wednesday June 18th, 12:15-1:45pm: Vendor Roundtable
(with focus on materials science resources)

Moderators: TBA

Location: Seattle; SLA Conference

Description: Materials science topics are relevant for many of our clients and customers.

Join us in discussing information resources

and tools with a select group of materials science vendors and publishers.
Sponsor: TBA"

I'm working with the Transportation (TRAN) and the Food, Agriculture, and Nutrition Division (FAN) towards a program on Alternate Fuels, as sort of a follow-up to the Hybrid Vehicles program at last year's conference. Lined up for presentations so far are Dr. Richard Nelson, Director/Dept. Head, Engineering Extension, Kansas State University and biodiesel expert, as well as a librarian from the National Agricultural Library.

Please do let either myself or Nora know if you'd like to assist with either of these programs or any that our Chemistry Division is sponsoring, or any other Division/Section activities. We'll get you plugged in!

I've really enjoyed this year and hope you've gained from the Section's contributions to our Division and Association.

Many thanks to all of our MRM volunteers and members who make this a growing and valuable group. And to our Chemistry Division officers who are a true delight! Their commitment and efforts to fully incorporate the Section have been greatly appreciated. I know Nora and Cathy DiPalma will continue to lead the Section in providing programs that are beneficial to our materials / manufacturing information needs and fulfill the other needs and desires reflected in the official MRM Strategic Plan. ❖

See you in Seattle!
Betsy Aldridge
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The chair this year is Prof. Karl Kuzman, Forming Laboratory & Faculty of Mechanical Engineering, University of Ljubljana, Slovenia.❖

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Two Degrees of Separation: an Award-Winning Text and a Metal-cutting/Machining Master

A new 5th edition of Manufacturing Processes for Engineering Materials, 2008, by Serope Kalpakjian and Steven R. Schmid is now in stock (though dated 2008, it was published 7/17/07) – see <http://vig.prenhall.com/catalog/academic/product/0,1144,0132272717,00.html> for details (it wasn't yet listed on Amazon as of the writing of this content).

This book has won the M. E. Merchant Manufacturing Textbook Award. To learn more about this Society of Manufacturing Engineers (SME) award, named for a metal cutting, machining, and early proponent of using computers in manufacturing, go to <http://www.sme.org/cgi-bin/smeefhtml.pl?/foundation/grants/fspmer.htm&&SEF&>.

Merchant's book, **An Interpretive Review of 20th Century US Machining and Grinding Research** can be purchased from the TechSolve

website at www.techsolve.org (see news about it at <http://dies.industrysearch.com/cgi-bin/portal2/main.plx?file=2633.txt>)

SME featured this "master" in their "Masters of Manufacturing" series - see <http://www.sme.org/cgi-bin/find-articles.pl?&ME04ART39&ME&20040701&PUBME-206.107.66.132&SME&#article> - *Manufacturing Engineering* July 2004 Vol. 133, No. 1, "Masters of Manufacturing: M. Eugene Merchant". Jim Destefani, Senior Editor of *Manufacturing Engineering*, writes, "In these articles, we honor a distinguished figure in manufacturing technology, and by doing so, we hope to remind readers that a career of great achievement in manufacturing is still possible."



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The Materials Research & Manufacturing Section of the Chemistry Division Welcomes its New Members

Margaret Lafferty
Chemistry Librarian
University of Minnesota
Science & Engineering Library
108 Walter Library
117 Pleasant St SE
Minneapolis, MN 55455
Email: mlaffert@umn.edu

Bushra Nazli
Resource Center Coordinator
Development Initiative Inc
Resource Center
Block A Basement
Parliament Lodges
Islamabad, 44000

Remember the International!

SLA has an initiative focusing on international members, so it's appropriate to highlight just a few international associations/resources in our materials-manufacturing world. Please share additional finds via our MRM listserv.

Meet the **Asian-Australasian Association for Composite Materials (AACM)** which "aims to encourage the interchange of knowledge in all aspects of composite materials amongst both the scientific and engineering communities." It provides a biannual conference – the last one was in 2006

<http://www.me.ust.hk/~accm5/>

Have you heard of dasimef? The head of this public web-based project is Prof. G. HIRT, at the **Institute of Metal Forming (IBF)**, University of Technology Aachen (RWTH), Germany. The goal of this group is "To collect addresses of laboratories which measure or, more generally, determine physical data, that can be used for modelling metal forming processes. Besides the contact addresses we want to provide the determination methodology and the testing requirements to interested customers...."

This database is being made available on the web at no cost (requires registration) – <http://www.ibf.rwth-aachen.de/dasimef/start.php> .

The Fraunhofer Institute for Mechanics of Materials (Germany)

http://www.iwm.fraunhofer.de/englisch/e_index.html

"... develops solutions to increase the safety, availability, and lifespan of components and systems ranging from microelectronic devices to power plant components. The Institute develops concepts to make optimum use of new materials as well as cost-effective and environmentally compatible shaping and precision-machining processes...."

They provide their annual report on the website and their parent organization provides a database to search reports and a magazine at

<http://www.fraunhofer.de/fhg/EN/publications/index.jsp>.

Intelligent Processing and Manufacturing of Materials (Canada)

<http://www.ipmm.mining.ubc.ca/index.php> describes itself as an "informal international community of people interested in intelligent software and hardware applications and solutions to problems in the creation and manufacture of

minerals, metals, materials and products." They just had their bi-annual conference in June and programs can be viewed at <http://www.ipmm.mining.ubc.ca/Confprogram.php> .

International Cold Forging Group (Germany)

<http://www.lft.uni-erlangen.de/SEITEN/ICFG/index.html>. Their objective is "to promulgate the economic advancement of cold forging - by encouraging and co-ordinating national and international co-operation, - by stimulating research, - by disseminating knowledge of relevant processes and sciences...."

Their web site provides a collection of documents, data sheets, papers. For example, the latest document is **Tool Life & Tool Quality in Cold Forging - Part 3: Application of PM-steel and tungsten carbide material for cold forging tools - a comparison between Europe and Japan** (ISBN 3-87525-242-X and ISBN 978-3-87525-242-2) and latest paper is by Meidert, M. "Improvement of Service Life of Cold Forging Tools by FEM Simulation", 14-17, 2006.

International Academy for Production Engineering (HQ in Paris)

http://www.cirp.net/index.php?option=com_frontpage&Itemid=1

The Academy's aims are: "promoting scientific research, related to manufacturing processes, production equipment and automation, manufacturing systems and product design and manufacturing; promoting cooperative research among the members of the Academy and creating opportunities for informal contacts among CIRP members at large; promoting the industrial application of the fundamental research work and simultaneously receiving feed back from industry, related to industrial needs and their evolution...."

They archive their newsletter on the website. Upcoming 2008 conferences include the following:

15th CIRP Life Cycle Engineering Conference - Monday, March 17, 2008

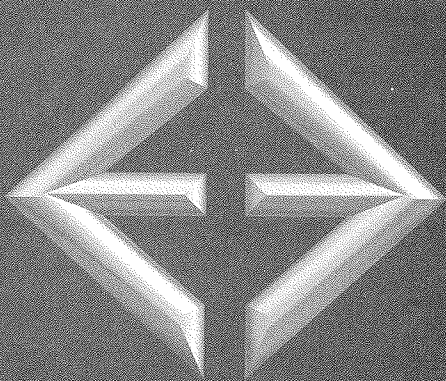
18th CIRP Design Conference Monday - April 07, 2008

41st CIRP Conference On Manufacturing Systems - Monday, May 26, 2008

11th CIRP Conference On Modelling Of Machining Operations - Tuesday, September 16, 2008

2nd CIRP Conference On Assembly Systems - ISAS 2008 - Sunday, September 21,

Global Outlook, Strategic Vision



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