
Minnesota Microscopy Society

Local affiliate of the *Microscopy Society of America*
and the *Microbeam Analysis Society*



Newsletter

August 2005

Minnesota Microscopy Society Fall Meeting

Thursday, September 22, 2005

Applications of EBSD to Materials: From Nanomaterials to Welds and Meteorites

Speaker

Joseph R. Michael
Sandia National Laboratories
MAS Tour Speaker

Location

Campus Club, 4th Floor, Coffman Union
University of Minnesota, 300 Washington Ave.,
Minneapolis, MN

Schedule

Registration and	
Social Hour (Cash Bar)	5:00 PM - 6:00 PM
Buffet Dinner	6:00 PM - 7:30 PM
Speaker	7:30 PM - 8:30 PM

Cost of the Meeting

The cost for the meeting and dinner is \$25 for members and \$15 for students.

Reservations

Reservations for the meeting **MUST** be made no later than **Monday, September 19th**. Contact Mike Coscio at mike.coscio@medtronic.com or by phone at (763) 505-4561.

Credit Cards

Starting at this fall meeting, members will be able to pay their membership dues and registration fees using their credit cards.

Abstract

Electron backscatter diffraction (EBSD) has become a very important technique for a complete understanding of crystalline materials. EBSD measurements are now taking advantage of the much improved spatial resolution provided by field emission electron sources in the SEM. This improved resolution allows high spatial resolution measurements of orientation to be achieved. Modern EBSD systems now can produce more than 20 indexed EBSD patterns per second. This increase in speed has greatly reduced the acquisition times required for orientation maps and thus has helped by allowing maps to be obtained from nanomaterials due to the decrease in specimen drift due to the shorter acquisition times needed.

Biography

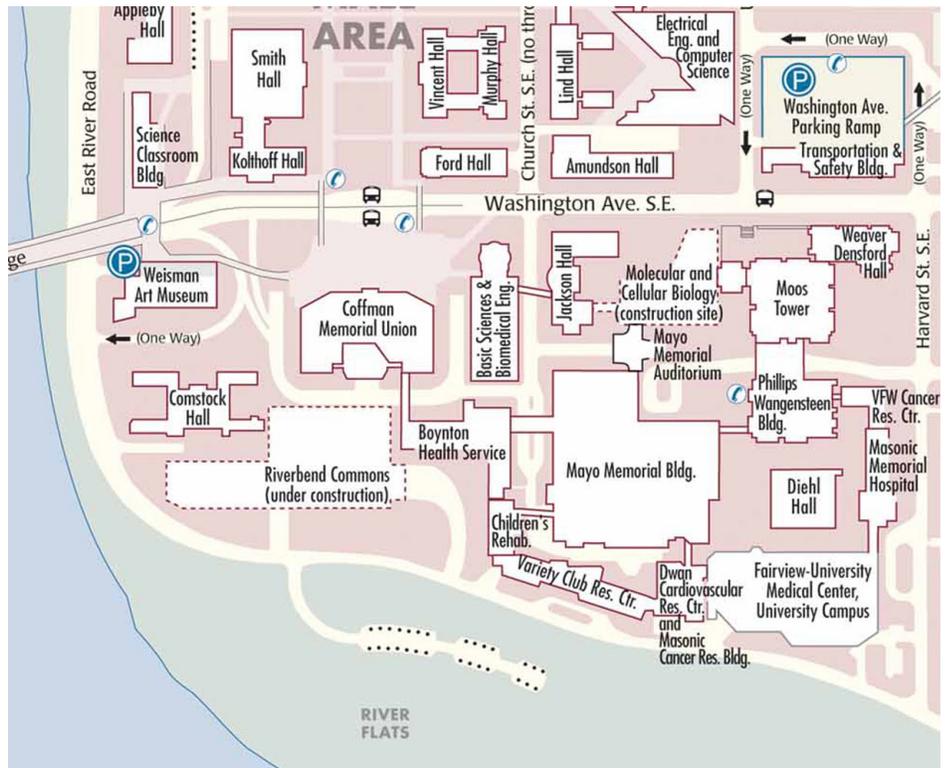
Dr. Michael is a member of the technical staff in the Materials Characterization Department of Sandia National Laboratories in Albuquerque, NM. He is primarily interested in the application of advanced characterization techniques to the study of materials. His recent research interests involve the application of electron backscatter diffraction and focused ion beam techniques to materials science. Earlier, Dr. Michael was a Senior Research Engineer at Bethlehem Steel's Homer Research Laboratory where he was primarily involved in the physical metallurgy of new HSLA steels with improved properties. He has served as the President and Director of the Microbeam Analysis Society.

Location Maps

Coffman Union, University of Minnesota

(September Meeting Site)

Parking closest to Coffman Union can be found immediately behind the building (shown on the map as “under construction”); parking is also available in the Washington Avenue Ramp and the Weisman Art Museum Ramp.

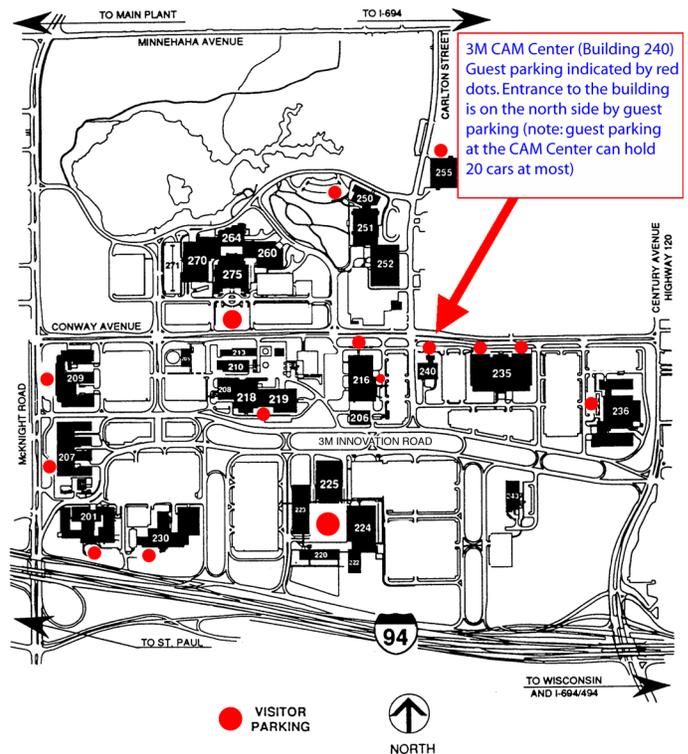


3M's Coated Abrasives Methods Center

(November Meeting Site)

Directions

From I-94 take the McKnight Rd. or Century Ave. exits. Proceed north to Conway Ave. The 3M CAM Center is located midway between McKnight Rd. and Century Ave. on the SE corner of the intersection of Conway Ave. and Carlton Street. Other landmarks on this intersection include a gas station converted to an auto repair shop (NW corner) and a Qwest Communications Center (NE corner).



Minnesota Microscopy Society November Meeting

Thursday, November 3, 2005

Tour of 3M's Coated Abrasives Methods Center

Location

3M Center; Building 240
Corner of Conway Avenue & Carlton Street
Maplewood, MN

Schedule

Introduction Presentation	4:00 PM - 4:30 PM
Tour	4:30 PM - 5:30 PM
Dinner	5:30 PM - 7:00 PM

Cost of the Meeting

The cost for the meeting and dinner is \$10 for members. The meal will be pizza and soft drinks.

Reservations

Reservations for the meeting **MUST** be made no later than **Monday, October 31st**. Contact Dwight Erickson at dderickson3@mmm.com or by phone at (651) 736-2830.

Since the founding of 3M in 1902, coated abrasives (sandpaper) have been one of the cornerstones of 3M business. Yet even after 103 years, there is much to be learned and improved about sandpaper and its efficient use. The Coated Abrasives Methods (CAM) Center is a facility where methods and equipment are developed to process and finish parts supplied by 3M customers utilizing 3M coated abrasives and accessories. No matter whether you are an avid woodworker or just curious as to how that great finish is achieved on titanium and composite golf clubs, join us for a tour of the 3M CAM Center to see the state-of-the-art and learn what the future holds in grinding and finishing.

February Meeting

Thursday, February 2, 2006

Tour of Boston Scientific's New

MTAC Laboratories

(Materials Testing, Analysis and Characterization)

The Minnesota Microscopy Society has been invited to tour the new MTAC laboratory facilities at Boston Scientific in Maple Grove. The tour will begin at 5:00 PM. Please plan to arrive by 4:45 PM. After the tour those interested will get together for dinner at the Biaggi's restaurant in Maple Grove. More information will be provided in future newsletters.

Future MMS Meetings

MinnTS Meeting

Thursday, March 16, 2006

Location - Medtronic World Headquarters

Speakers - To be announced

MMS Spring Symposium

Friday, April 21, 2006

Location - Science Museum of Minnesota

Symposium Topic - To be announced

(The Spring Symposium will be earlier this year.)

Sustaining Corporate Members

Sustaining members are the backbone of financial support for the Society. These members make it possible for the Society to support Project Micro and to cover many expenses of the regular meetings and the Spring Symposium. We greatly appreciate the continued support of these individuals and corporations. To become a Sustaining Member, complete and return the MMS membership form at the end of the newsletter.

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If any Sustaining Members are missing from this list, *please* contact either: Jason Heffelfinger (763-514-1021, jason.r.heffelfinger@medtronic.com) or Peter McSwiggen (612-781-2282, PMcS@McSwiggenAssoc.com).

MMS Patron Members

The Minnesota Microscopy Society would like to express sincere thanks to our Patron Members. These members provide financial support to the organization above the standard membership fee. This type of added support makes it possible for MMS to maintain its financial well being. To become a Patron Member, complete and return the MMS membership form at the end of the newsletter.

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Minnesota Microscopy Society – Membership Form

All microscopists are urged to support their Society at one of the membership levels offered below. The more dues-paying members we have, the more likely we are to attract sustaining corporate memberships which form the financial backbone of our Society. Often, supervisors will support MMS memberships out of their project budget because they recognize that it is a very inexpensive way to maintain and increase the skills of their microscopists. If you have been a member over the years and recognize the value of MMS to the community of microscopists it serves, consider upgrading your membership this year to the patron or sustaining level. Thank you.

Name _____ Dr _____ Mr _____ Ms _____ Phone (____) _____

Affiliation _____ Position _____

Address _____ ZIP _____

E-mail address _____

Indicate the method by which you would like to receive the Newsletter: mail _____ e-mail/web _____ both _____
 Student (\$5) _____ Basic (\$10-\$24) _____ Patron (\$25-\$99) _____ Corporate Sustaining (\$100-) _____

Make checks payable to MMS and mail to our Treasurer:

Bede Willenbring, MMS Treasurer, 4763 Decatur Ave. North, New Hope, MN 55428-4402

Check here _____ if you do NOT want your name and address to appear in the Society directory.

Are you an MSA member? _____ MAS Member? _____ Other Professional groups? _____

Area of interest: Bioscience _____ Materials Science _____ Light _____ SEM _____ TEM _____ X-ray _____

Per MMS bylaws, article VIII: "For purposes of membership The Society's year shall run from October 1 to September 30.
 Dues shall be payable between October 1 and December 31st of each year."

Minnesota Microscopy Society
 Peter McSwiggen, MMS Editor
 McSwiggen & Associates
 2855 Anthony Lane South, Ste B1
 St. Anthony, MN 55418

Forwarding and Address
 Service Requested

September 22, 2005

MAS Tour Speaker:

***Applications of EBSD
 to Materials***