
Minnesota Microscopy Society

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



Newsletter

February 2003

Minnesota Microscopy Society - February Meeting

Thursday, February 20, 2003

"The Basics of FIB and Its Use in Sample Preparation"

by Dr. Lucille Giannuzzi

Subject: The basics of focused ion beam (FIB) instrumentation and ion beam/solid interactions will be introduced. FIB techniques for site-specific specimen preparation will be described. Examples of FIB prepared specimens from both the physical sciences and the biological sciences will be given. Transmission electron microscopy methods using FIB prepared specimens will be shown.

Location:

Lido's Italian Market Café and Bar
2801 North Snelling Avenue
Roseville, MN 55113
651-636-9721

Schedule:

Registration and Social	5:30 PM - 6:00 PM
Dinner	6:00 PM - 7:00 PM
Business Meeting	7:00 PM - 7:15 PM
Talk	7:15 PM - 8:00 PM

Cost of the Meeting (pay at door):

\$20.00 for Society members, \$15.00 for students.

Biography: Lucille Giannuzzi received a B.E. and an M.S. from SUNY Stony Brook and a Ph.D. from The Pennsylvania State University. Lucille is currently an Associate Professor at the University of Central Florida in the Mechanical Materials and Aerospace Engineering Department. She is also Director of the UCF Materials Characterization Facility and a local speaker for both the Microscopy Society of America and the Microbeam Analysis Society. Giannuzzi's primary research interest is in understanding the structure/property relationship in materials. In particular, she has used FIB, SEM, TEM and SIMS to understand grain boundary segregation and diffusion, the microstructure of semiconductors, ceramic matrix composites, hydrogen storage materials, and thermal barrier coatings.

Menu: Classic Italian Buffet

- > Lasagna Carnevale
- > Roasted Vegetable Lasagna
- > Garden Salad
- > Italian Bread and Butter
- > Soft Drink
- > Spumoni Ice Cream

Reservations for the meeting **MUST** be made no later than **Wednesday, February 12, 2003**. RSVP to Jacqueline Aguilera at jmaguilera@mmm.com or 651-737-4275. Please indicate if you want only the vegetarian version of the meal (Roasted Vegetable Lasagna).

MMS Project MICRO Event -Volunteers Needed at ScienceFest!

Saturday, February 1, 2003

Volunteer to engage in the thrill and excitement of scientific discovery with families and community groups through Project MICRO demonstrations at ScienceFest! Over 800 visitors are expected to attend this annual event at the U of MN & Bell Museum. ScienceFest is associated with the JASON Project, an annual distance learning program named after the famous oceanic submersible (www.jasonproject.org). This year's theme is JASON XIV: From Shore to Sea, which explores the Channel Islands off the coast of California. We are encouraged to connect our microscope demos to marine and island ecosystems. Therefore, our demos will include "Salts," "Sand Samples," "Fabrics" (keeping cool in CA vs. keeping warm in MN), and "Watery Worlds" (freshwater pond critters vs. ocean critters).

Please bring pictures and other objects related to the ocean to decorate our reserved museum room and/or view with our microscopes. One demo table will be for shells and other related objects, like shark teeth.

Volunteer for a few hours and then go explore the rest of the ScienceFest activities. Live satellite broadcast of JASON XIV at 12:00 noon and 1:30 PM.

Schedule

When you arrive at the Bell Museum, please report to the front desk to receive your official name tag and directions to the Project MICRO station/reserved room.

Demo Setup	8:30 AM - 10:00 AM
ScienceFest!	10:00 AM - 3:00 PM
Demo Pack-up	3:00 PM - 4:00 PM

FREE LUNCH!!!

Lunch provided free to ScienceFest presenters (that's us) by the Bell Museum. Lunch starts at 12:00 noon = pizza and pop. Snacks and beverages will also be available throughout the day.

Reservations

Reservations for this event MUST be made no later than Wednesday, January 29, 2003. Contact Ann T. Palmer at palme003@umn.edu or by phone at (612) 626-3708 to make your reservation or request more information. Ann needs to notify the Bell Museum of the number of Project MICRO volunteers coming, so they can order enough food and make other preparations.

Location

Bell Museum of Natural History
University of Minnesota - Minneapolis Campus
10 Church Street SE, Minneapolis, MN 55455
(612) 624-7083; www.bellmuseum.org

Directions

The Bell Museum is located on the University of Minnesota's Minneapolis Campus at the intersection of University Avenue and 17th Avenue (Church Street) SE.

>From I-35W: Take the 4th Street/University Avenue exit. Go East on University Avenue until you get to 17th Avenue. At 17th Avenue, the Bell Museum will be on your immediate right.

>From I-94: Take the University of Minnesota/Huron Boulevard exit. Proceed on Huron Boulevard to 4th Street. Go West on 4th Street until you get to 17th Avenue. At 17th Avenue, the Bell Museum will be one block to your left.

FREE PARKING!!!

The Bell Museum also provides free parking for ScienceFest Presenters in the Nolte (underground) Parking Garage, starting at 8:00 AM. Nolte Parking Garage is located next door to the Bell Museum on 17th Avenue (Church Street). Drive down the steep entrance and enter the underground garage door. From the garage, walk through the tunnel labeled "BELL MUSEUM" (north side).

Corrosion, You've Got to Love it

Joint Meeting of the Local Societies:

Minnesota Microscopy Society, ASM, AVS, & Semi-MN

Thursday, March 20, 2003

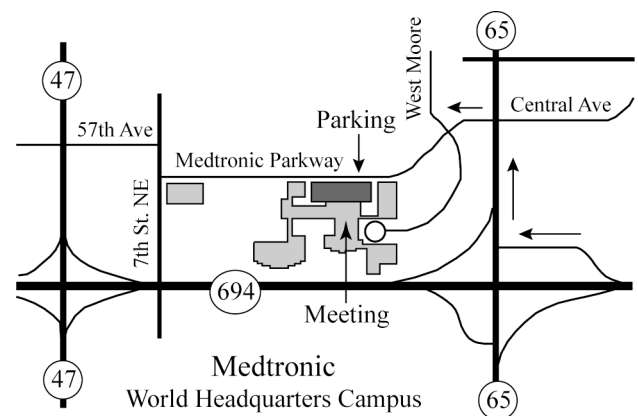
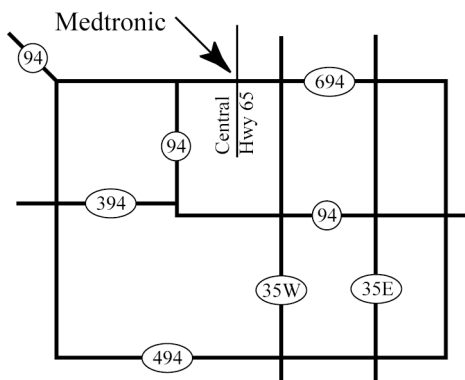
Come to the largest joint meeting in the history of the Minnesota Microscopy Society (MMS). In cooperation with ASM, AVS and Semi-Mn, MMS is putting on a joint meeting focused on corrosion, with speakers from both academe and industry. There will be a social hour with beverages and snacks. Tours of the new Medtronic facilities will be available for those who are interested; if you are interested, please arrive early. The tours will start in groups as you arrive. Don't miss this opportunity to meet and mingle with other local technical societies.

Location: Medtronic Inc.
710 Medtronic Parkway
Fridley, MN 55432

Reservations: Contact Mike Coscio at 763-505-4561 or mike.coscio@medtronic.com. **Deadline for RSVP is Friday, March 14.** Please indicate your affiliation (ASM, AVS, MMS, or Semi-MN) and whether you are interested in the tour.

Cost: \$25.00 for regular members and \$15 for MMS student members. Make check payable to your own society.

Schedule: 4:30 PM - 6:00 PM	Tours and Social
6:00 PM - 7:00 PM	Buffet Dinner
7:15 PM - 7:45 PM	Talk: Prof. Shores
7:45 PM - 8:15 PM	Talk: Dr. Deal



Location maps for Medtronic's world headquarters.
Parking is free in the ramp indicated.

Speaker: Professor David Shores
Affiliation: University of Minnesota, Dept. of Chem. Eng. and Mat. Sci.
Title: *Corrosion, You've Got to Love it*

Professor Shores will be combining some general background and examples of common corrosion with some more detailed studies that are being performed at the University of Minnesota.

Speaker: Dr. Donald Deal,
Affiliation: Seagate Technology Recording Head Operations
Title: *Corrosion and Cleaning in Magnetic Read/Write Head Manufacturing*

Dr. Deal will give an overview of science and issues in manufacturing and cleaning extremely sensitive read/write heads for the hard drive industry. Typical materials involved in the heads will be discussed and the limitations these materials and their designs impose upon the overall manufacturing process, especially those processes (such as cleaning) which usually rely on liquid chemistries.

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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Steve Ziegler	Digital Instruments	512-912-1615

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- 624-7370, mcswi001@umn.edu).

MMS Patron Members

The Minnesota Microscopy Society would like to express a 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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Your MMS Annual Membership dues are payable in September/October!

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.

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Indicate the method by which you would like to receive the Newsletter: mail _____ e-mail/web _____ both _____

E-mail address _____

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

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

Membership level: Basic \$10 _____ Patron ≥ \$25 _____ Corporate Sustaining \$100 _____ Student \$5 _____

Make checks payable to MMS and mail to our treasurer:

Dwight Erickson, MMS Treasurer, 3M Center, Bldg. 251-1A-03, Saint Paul, MN 55144-1000.

Minnesota Microscopy Society
 Peter McSwiggen, MMS Editor
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 St. Anthony, MN, 55418

Forwarding and Address
 Correction Requested

February 20, 2003

**Basics of FIB and Its Use in
 Sample Preparation**

March 20, 2003

Corrosion