

Minnesota Microscopy Society

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



Newsletter

November 2008

Minnesota Microscopy Society - Sigma Zeta Joint November Meeting

Date:

Tuesday, November 11, 2008

Location:

Bethel University
Eastlund Room, Community Life Center
3900 Bethel Drive, St. Paul, MN 55112

Directions:

See newsletter Pages 3-4, or go to...

http://www.bethel.edu/special-events/campus_map.htm

Schedule:

4:30 – 5:30 PM Social hour with nibbles.
5:30 – 6:30 PM Dinner – Roast turkey
breast buffet plus dessert.
6:30 – 6:45 PM “About” Sigma Zeta & MMS.
6:45 – 7:45 PM Speaker.

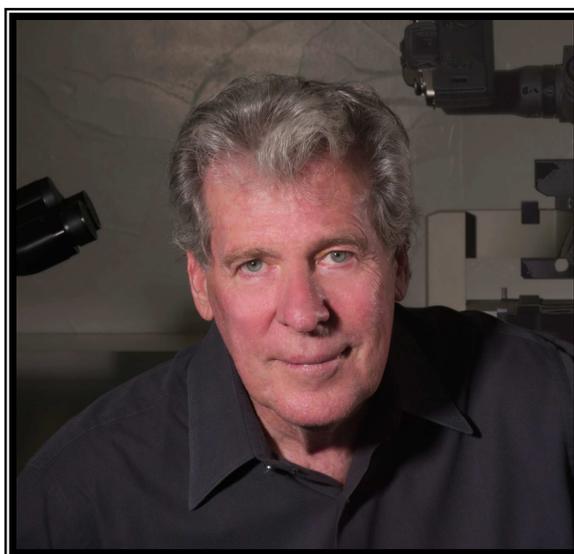
Registration:

The cost of the meeting will be \$25 for MMS members; non-member cost is \$35, or \$25 when joining MMS as part of meeting attendance. The registration **deadline is Thursday, Nov. 6th, 5PM**. Register by contacting Bede Willenbring via email (preferred) at reservations@mnmicroscopy.org, or phone at 651-236-5470. Please include with your reservation your name, company and contact information.

In addition...

Autographed copies of Dr. Greenberg's book “A Grain of Sand - Nature's Secret Wonder” will be available for \$20 at the meeting.

Speaker



“The Amazing Microphotography of Dr. Gary Greenberg”

Biography

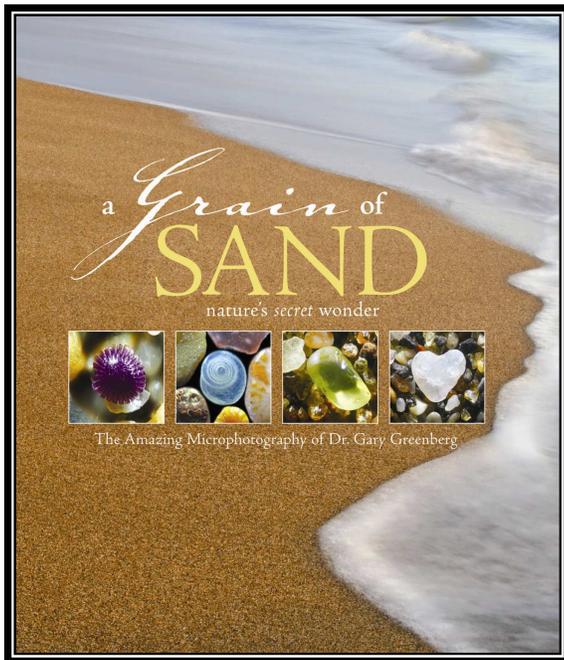
Gary Greenberg is one of a growing number of artists who creatively combines art with science. As a photographer and filmmaker, he united his artistic skills with a love for science. Coupling his cameras to microscopes he began to explore the microscopic fabric of nature.

At the age of 33, he moved from Los Angeles to London, to earn a Ph.D. in biomedical research from University College.

Dr. Greenberg was an Assistant Professor at the University of Southern California during the 1980's, until he co-founded Edge Scientific Instrument

(continued on Page 2)

“The Amazing Microphotography of Dr. Gary Greenberg”



Book

A Grain of Sand - Nature's Secret Wonder
The Amazing Microphotography of Dr. Gary Greenberg

Every grain of sand is a jewel waiting to be discovered. That's what Dr. Gary Greenberg found when he first turned his microscope on beach sand. Gemlike minerals, colorful coral fragments, and delicate microscopic shells revealed that sand comprises much more than little brown rocks. Amazing microphotography showcases spectacular colors, shapes, and patterns. Join Dr. Greenberg as he explores the science and beauty of the sand grain. With this captivating volume, you will never look at a beach the same way again.

Author and photographer Dr. Gary Greenberg is a visual artist who creatively combines art with science. He has a Ph.D. in biomedical research from University College London and holds 17 patents for high-definition 3-D light microscopes. Dr. Greenberg lives in Haiku, Hawaii.

Foreword writer Stacy Keach is an actor renowned for his narration of scientific documentaries, particularly the NOVA series for the Public Broadcasting Service.

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Biography (continued from Page 1)

Corporation in the 1990's, which developed microscopes for University and Industry scientists. He is a prolific inventor with 17 patents for high-definition three-dimensional light microscopes (www.edge-3D.com).

Since 2001 Dr. Greenberg has been using his special microscopes to create dramatic landscapes of worlds beyond our everyday perception - worlds where reality is seen as abstract form and color, motion and texture.

Greenberg focuses his microscope on ubiquitous objects like grains of sand, flowers and food – things we see and hold on a daily basis. These everyday objects take on a new reality when magnified hundreds of times, revealing fresh and unexpected aspects of nature. Food is luscious looking, and visually intriguing. It is surprising how exquisite and unique each individual sand grain is when observed in all its wonderful detail. As we walk along a beach, we are treading on millions of years of biological and geological history. The microscopic workings of the world around us are ripe with beautiful images waiting to be seen. Greenberg believes that art is a window through which we can experience and appreciate the miracles of nature (www.sandgrains.com).

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*Dr. Greenberg's transportation fees paid
in part by a generous contribution from*

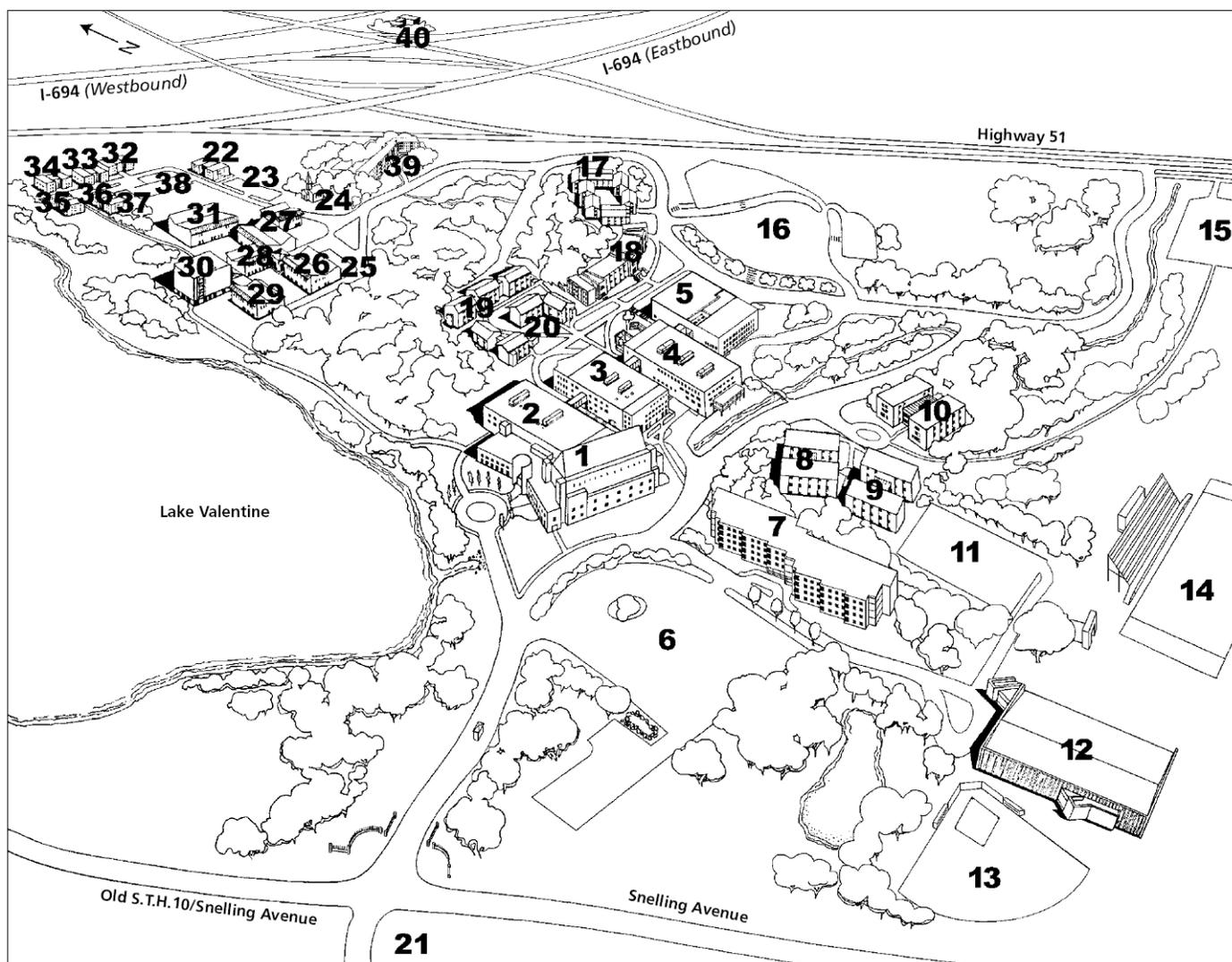


Medtronic

Campus Map

Bethel University
3900 Bethel Drive
St. Paul, Minnesota 55112-6999

BETHEL
UNIVERSITY



Welcome to Bethel

Bethel University is located on a 231-acre lakeside campus of wooded, rolling hills in Arden Hills, Minnesota, a suburb of St. Paul. The campus has easy access to freeways and to the Minneapolis and St. Paul metropolitan area.

South End of Campus

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> 1 Community Life Center
Benson Great Hall 2 Academic Center (AC) 3 Clauson Center (CC) 4 Hagstrom Student Services Center (HC) 5 Robertson Physical Education Center (RC) 6 West Parking Lot 7 Heritage Hall 8 Edgren Residence 9 Bodien Residence 10 Getsch Residence | <ul style="list-style-type: none"> 11 Heritage Hall Parking Lot 12 Sports and Recreation Center (SRC) 13 Hargis Park 14 Bremer Field/Royal Stadium 15 SoHo Parking Lot 16 East Parking Lots 17 Arden Village East Residences 18 Nelson Residence 19 Arden Village West Residences 20 Townhouse H Offices:
Health Services, Counseling Center 21 Ona Orth Athletic Complex |
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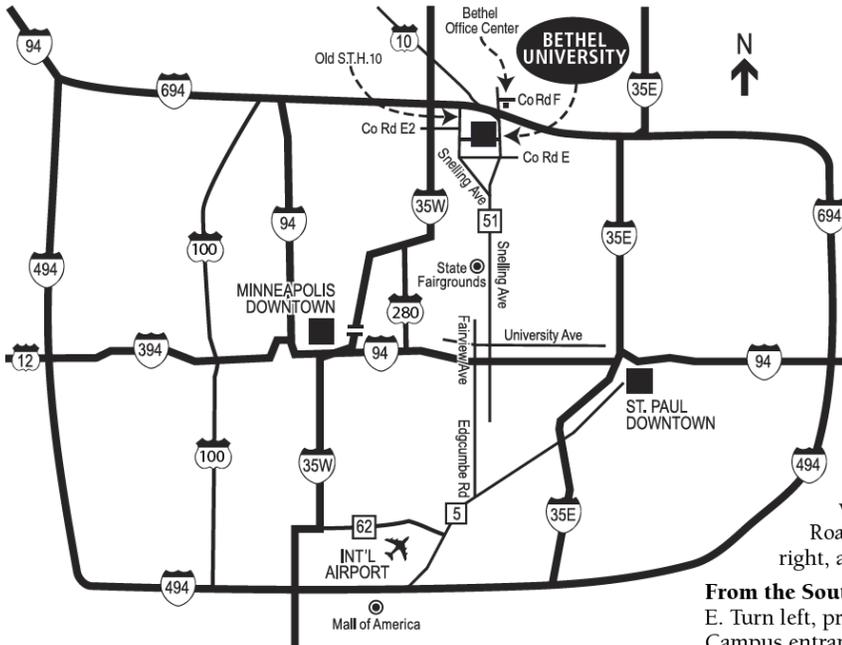
North End of Campus

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> 22 Chalberg Residence 23 Student and Visitor Parking 24 Scandia Church 25 Seminary Faculty Parking 26 Seminary Classroom Hall 27 Lundquist Library 28 Seminary Faculty Hall 29 Seminary Campus Center 30 Seminary Chapel 31 Recreation Hall 32 Turnwall Residence | <ul style="list-style-type: none"> 33 Danielson Residence 34 Wessman Residence 35 Widen Residence 36 Wingblade Residence 37 Child Development Center (CDC) 38 Resident Parking 39 Lissner Hall 40 Bethel Office Center
1306 West County Road F |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

"Maps and directions to Bethel University" on other side.

Maps to Bethel University

Twin Cities Area Map



To Reach Bethel

From the North: Take I-35W south to the County Road E2 exit. Go east to Old S.T.H. 10 (Snelling Ave.), turn right, and take the first left into campus. Or take I-694 east to the Snelling Ave. (Highway 51) turnoff and proceed to campus entrance on the right, one-quarter mile south. Note that Old U.S. Highway 10 connects with I-694 just west of the Snelling Ave. (Highway 51) turnoff.

From the West: During daytime hours, take I-694 east to the Snelling Ave. (Highway 51) turnoff and proceed to campus entrance on the right, one-quarter mile south. During evening hours, take I-694 east; turn south onto I-35W. Take I-35W to the County Road E2 exit. Go east to Old S.T.H. 10 (Snelling Ave.), turn right, and take first left into campus.

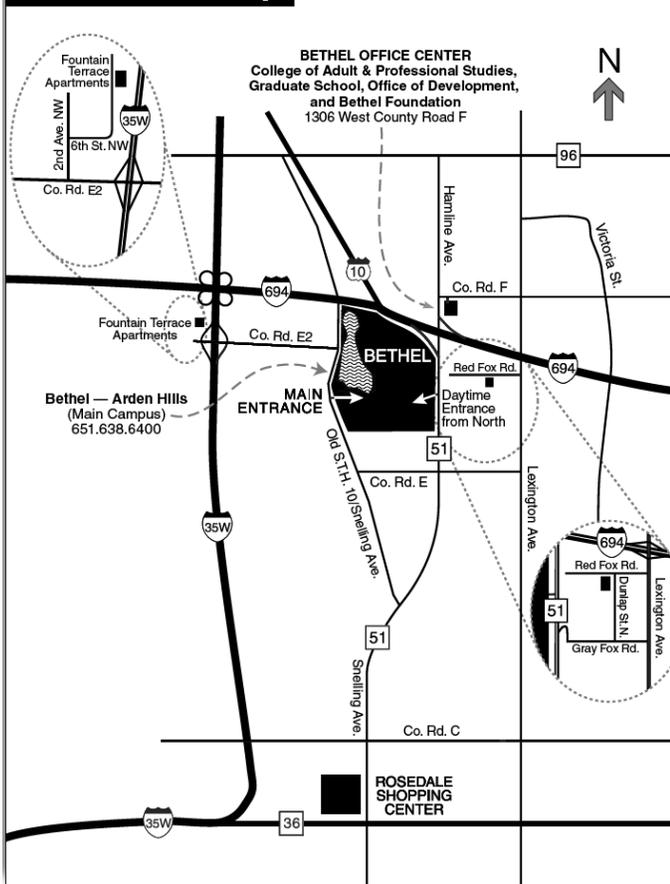
From the East: During daytime hours, take I-694 west to Snelling Ave. (Highway 51) exit, then make immediate left at the turn-around to go south onto Snelling Ave./Highway 51. Campus entrance is one-half mile on the right. During evening hours, take I-694 west; turn south onto I-35W. Take I-35W to the County Road E2 exit. Go east to Old S.T.H. 10 (Snelling Ave.), turn right, and take first left into campus.

From the South: Take Snelling Ave. north and exit at County Road E. Turn left, proceed to Old S.T.H. 10 (Snelling Ave.), and turn right. Campus entrance is on the right. Or take I-35W north to the County Road E2 exit. Go east to Old S.T.H. 10 (Snelling Ave.), turn right, and take first left into campus.

From Downtown St. Paul: Take I-35E north, go west on I-694 (see instructions for From the East).

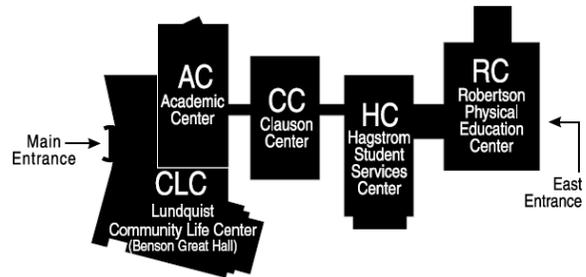
From Downtown Minneapolis: Take 94 east. Exit 280 north to 35W north. Take 35W north to the County Road E2 exit. Go east to Old S.T.H.10 (Snelling Ave.), turn right, and take first left into campus.

Local Area Map

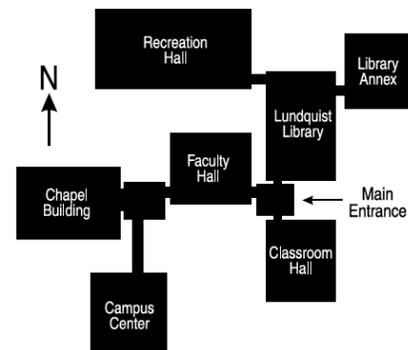


Main Building Layouts

University South End of Campus Buildings



Seminary Buildings (North End of Campus)



Sustaining 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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Laurie Krupa	EDAX	312-238-0260
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Ted Weldon	Leeds Precision Instruments	612-546-8575
Bede Willenbring	BY Design of New Hope, Inc.	763-533-0649

If any Sustaining Members are missing from this list, *please* contact either:

Jason Heffelfinger (763-514-1021, jason.r.heffelfinger@medtronic.com)
or Kathy Hough (651-353-8458, katiu@frontiernet.net).

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 additional 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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Upcoming Events

November 5, 2008

MMS Board Meeting, Roseville Olive Garden

November 11, 2008

Sand microscopist Gary Greenberg, hosted by Bethel College

January 15, 2009

Image Processing Workshop, Imation

February 19, 2009

Characterization Facility Tour, U of M

March 19, 2009

MinnTS, Medtronic

May 8, 2009

MMS Spring Symposium, Science Museum

Minnesota Microscopy Society – Membership Form

All microscopists are urged to support their Society at one of the membership levels offered below. 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 _____

***A legible e-mail address is critical for delivery of your newsletter.
Newsletters are sent via email only.**

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? _____

Student (\$5) _____ Basic (\$10-\$24) _____ Patron (\$25-\$99) _____ Corporate Sustaining (\$100-) _____

Payment: _____ Check _____ Visa _____ Mastercard _____ American Express

Credit Card Number: _____ - _____ - _____ Exp. Date: _____ / _____

Signature (for credit card payment): _____

Make checks payable to MMS and mail to our Treasurer:

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