



NESM News

Published by the New England Society for Microscopy November 2002

GORDON COLLEGE: The newest academic host of NESM's 36th Annual Fall Symposium!

NESM is pleased to welcome Gordon College as the newest academic institution to host its 36th Annual Fall Symposium.

Gordon College was founded in 1889 as a missionary training institute. Originally located in Boston, the school is named for its founder, the Rev. Dr. A.J. Gordon, a prominent Boston clergyman of the late 1800s. In 1955, Gordon moved to its Wenham, Mass. campus, selling its old facilities to the Massachusetts Institute of Technology. In 1970, the divinity school separated from the college and merged with the Conwell School of Theology in Philadelphia. In 1985, Gordon merged with Barrington College (formerly in Barrington, Rhode Island), with the combined school retaining the name of Gordon College. At the merger, Barrington's distinguished history of Christian service and faithfulness became a part of Gordon's history. Gordon has worked to integrate Barrington's tradition and history into its own. Today Gordon College stands as one of the top Christian liberal arts colleges in the country and the only nondenominational Christian college in New England.

The Symposium begins at 12:00 Noon with Registration followed by a welcoming statement by NESM's President, Lynne Garone. Continuing its support of student members, NESM is again devoting one session to 15-minute presentations by students from four local colleges/universities. Session I will commence at 1:00pm, followed by a coffee break at 2:00pm. Session II, Biological Science, will begin at 2:15pm with two exciting talks about new developments in confocal microscopy. Another coffee break follows and Session III, Materials Sciences begins at 3:45pm with a talk on FIB by the MAS Tour Speaker, Lucille Giannuzzi, followed by a talk on microwire semiconductor junctions.

The Annual Business Meeting will convene at 5:00pm. One of the main agenda items will be the election of new officers for the year 2003. Your attendance and vote at this business meeting is encouraged. **Please lend your support for the Society and consider running for an office.** Ballots are included in the newsletter. Please return them in the sealed envelope marked "BALLOT" along with your registration form and registration fee.

Dinner will commence at 6:00pm followed by an after-dinner talk "Fiber Analysis and Art" by Debora Mayer of the Mayer Conservation Studio (Portsmouth, NH). The meeting will adjourn at 8:00pm with a message from our incoming President, Tony Garratt-Reed.

We look forward to seeing you on December 6th and encourage you to support our Society!

Advance registration, with dinner, is required for this meeting. Fill in the Advance Registration form in this newsletter and return it, along with your payment, by **November 29th**. Dinner reservations will be processed only after payment is received. Please include your ballot!

36th Annual Fall Symposium and Business Meeting

Gordon College 255 Grapevine Road Wenham, MA 01984 978.927.2300
(<http://www.gordon.edu>)

Friday, December 6, 2002
12 Noon to 8:00 pm

12:00 pm **Registration**—Presidential Dining Room (Lane Student Center)
12:50 pm **Welcome** : Lynne Garone, NESM President

Session I: Student Session

1:00 pm “Optical Tweezers Study of the Effect of Photodynamic Therapy on Adhesive Properties of Cancer Cells” - Lisa Goel (Tufts University/Wellman Labs of Photomedicine)
1:15 pm “Spectral Self-Interference Fluorescence Microscopy” - Lev Moiseev (Boston University)
1:30 pm “Wide-Field Microscopy for Telepathology” -Aasia Saleemuddin (M.I.T./Wellman Labs of Photomedicine)
1:45 pm “Vascular Architecture in Adipose Tissue” - Rosa Diaz (Harvard University/HSPH)
2:00 pm **Coffee Break**

Session II: Biological Session

2:15 pm “Confocal Reflectance Imaging of Skin and Oral Cancers In Vivo”
Milind Rajadhyaksha (Northeastern University)
2:50 pm “In Vivo Imaging of Molecular Markers using Realtime Confocal and Two Photon Fluorescence Microscopy”
Charles Lin (Massachusetts General Hospital/Wellman Labs of Photomedicine)
3:30 pm **Coffee Break**

Session III: Materials Science Session

3:45 pm “Site Specific Characterization Using Focused Ion Beams”
Lucille A. Giannuzzi (University of Central Florida and MAS Tour Speaker)
4:20 pm “Nanowire Superlattices and Core-Shell Heterostructures as Building Blocks for Nanotechnology” - Mark S. Gudixsen (Harvard University)
5:00 pm **NESM Annual Business Meeting**
Election
Reading of Minutes of 2001 Annual Business Meeting
Report of President
Report of Treasurer
Introduction of New Officers
6:00 pm **Dinner**
7:00 pm **After-Dinner Speaker**
“Fiber Analysis and Art”
Debora Mayer - Mayer Conservation Studio
Portsmouth, New Hampshire
8:00 pm **Adjournment** - Anthony J. Garratt-Reed, Incoming NESM President

Advance Registration Form

Registration after November 29th will **not** include dinner.

**Registration Deadline
November 29, 2002**

To register, please fill out this form below and send it with your check, payable to NESM, to:

Paul Bain
HMS-Countway 212
10 Shattuck Street
Boston, MA 02115
617-432-3236

If you have questions, please email Paul at: pbain@hms.harvard.edu

First Name _____ Last Name _____ Dr. Ms. Mr.

Company _____ Title _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____ E-mail _____

Advance Registration

- | | |
|---|----------|
| <input type="checkbox"/> NESM Member | \$20.00 |
| <input type="checkbox"/> Non-member | \$35.00* |
| <input type="checkbox"/> Student/retired member | \$5.00 |
| <input type="checkbox"/> Student/retired non-member | \$10.00* |
| <input type="checkbox"/> Dinner** | \$ 5.00 |
| | |
| <input type="checkbox"/> Guest Registration | \$10.00 |
| Guest Name _____ | |
| <input type="checkbox"/> Guest Dinner** | \$15.00 |

*All non-member registrations includes current-year-only NESM membership

**Dinner not included in registration

Total Enclosed _____

MENU

Chicken Marsala
Caesar Salad
Whole Green Beans
Rice Pilaf
Pecan pie with whipped cream
Coffee & Tea

Note: Anyone desiring a vegetarian entree, please contact Paul Bain (pbain@hms.harvard.edu) by November 29th. There is a limited number of these meals available.

REGISTER TODAY!

◆ Meeting Date

December 6, 2002
12 Noon—8:00 pm

◆ Meeting Location

Gordon College

◆ Highlights

2 Scientific Presentations
Student Presentations
Dinner/After dinner talk

◆ Meeting Deadline

November 29, 2002



Corporate Members

Thank you for your support. Your sustained commitment to NESM allows us to continue to promote excellence in microscopy here in New England.

AMT

Barry Scientific

CF Associates

Denton Vacuum

Eastman Kodak

EDAX, Inc.

Electro-Image, Inc.

EMS/Diatome

Energy Beam Sciences

Ernest F. Fullam, Inc.

FEI Philips Electron Optics

Gatan, Inc.

Hacker Instru. & Industries

Hitachi Scientific Instruments

JEOL-USA, Inc.

Kimball Physics, Inc.

Ladd Research Industries, Inc.

MEDTEC

Micro Star Technologies, Inc.

NanoTech Consulting

Noran Instruments, Inc.

Oxford Instruments America

Scanning/FAMS, Inc.

SSSC

SensIR Technologies

SPI Supplies Division

Technotrade International

The 42nd Annual Northeast Algal Symposium

Friday April 25 -Sunday April 27, 2003

At Skidmore College, Saratoga Springs, New York

Registration Deadline: March 10, 2003 — Abstract Deadline March 10, 2003

The Northeast Algal Society will convene its annual meeting at Skidmore College in historic Saratoga Springs, New York. The meeting will be held on the weekend of April 25-27, 2003 and will include a wide range of oral and poster presentations pertaining to many facets of phycology. Highlights include:

• Mini-symposium and workshops on Sunday, April 27: "Modern microscopic imaging and phycology". This session will include talks by Michael Gretz (Michigan Technological University), Stephen Droop (Royal Academy-Edinburgh) and Mark Farmer (University of Georgia) on how modern light and electron microscopy and image capture/analysis are changing phycology. After the presentations, several hands-on workshops will be run through Skidmore's Microscopy Imaging Center including basic confocal laser scanning microscopy, microscopy image data banks for taxonomic studies and simple and inexpensive methods of cryofixation for TEM analysis. Attendees are encouraged to bring samples.

• Our distinguished speaker this year will be Professor Ralph Quatrano of Washington University. Professor Quatrano has had a distinguished career in the cell, developmental and molecular biology of brown algae. His talk is entitled: "Fucus embryo development: a model to study basic mechanisms of cellular polarity".

• Awards for graduate student oral and poster presentations and award for best undergraduate presentation.

• Rooms at the Saratoga Sheraton, priced at a reduced rate, will be available for attendees.

• For more information, please contact : Dr. David Domozych, Department of Biology, Skidmore College, Saratoga Springs, NY 12866 518-580-5075. or visit our website at:

http://www.skidmore.edu/academics/biology/plant_bio/MICROSCOPY/NEAS.html

MSA Application for Membership

Mail directly to MSA!

Microscopy Society of America

435 North Michigan Avenue, Suite 1717 ■ Chicago, IL 60611-4067 ■ 800-538-3672

FAX: 312-644-8577 ■ E-mail: Business Office@MSA.Microscopy.Com

Name (print) _____ Dr. Ms. Mr.

Mailing address _____

Phone (days) _____ Fax _____ E-mail _____

Institutional Affiliation: _____ Major Interest: Physical Sciences Biological Sciences

Signature of nominating MSA member: _____

Signature of Advisor (for student applicants): _____

Signature of Applicant: _____ Date: _____

Enclose a check (US funds drawn on a US bank) for one year's dues, payable to MSA, or complete the credit card information below. Also enclose a brief statement of your qualifications, experience, and/or student status.

Regular Member: \$40 Student Member: \$10 Sustaining Member: \$350

Expires:

Visa/Master Card Number (include all numbers) _____ Month/Year _____

For applicants outside of North America, please add \$18 to each membership to cover the cost of mailing.

REPORT OF THE NOMINATING COMMITTEE

The Nominating Committee for 2003 is pleased to present to the membership the following Slate of Nominees for your consideration at the Annual Meeting and Election of Officers to be held at Gordon College on December 6, 2002.

FOR PRESIDENT-ELECT (Term: 1 year)
(see notation below)

FOR BIOLOGICAL DIRECTOR (Term: 3 years)
Ken Orndorff: A NESM member since 1996, Ken stepped in to fill the vacated 2002 Biological Director position. Ken is currently Supervisor of Imaging at the Herbert C. Englert Cell Analysis Laboratory at Dartmouth Medical School. He has worked at Dartmouth College for nearly 23 years involved in light microscopy, video-microscopy, digital image analysis, Laser Scanning Cytometry, and confocal microscopy. The Englert Facility provides core imaging support for the Norris Cotton Cancer Center, Dartmouth Medical School, and Dartmouth College users. Training others to use microscope technology has been a major part of Ken's career at Dartmouth.

FOR MATERIALS SCIENCE DIRECTOR (Term: 3 years)
Steve Stokowski: Consulting Geologist/Petrographer with 27 years experience. President of Stone Products Consultants, Ashland, Massachusetts. SPC provides concise, timely, and accurate petrographic analyses of concrete, mortar, tile, stone, and similar construction materials. Steve was previously with Vulcan Materials in Birmingham, Alabama as Research Scientist and Manager of R & D Lab; Genstar Stone Products Company in Baltimore, Maryland as Research Engineer; Martin Marietta Laboratories in Baltimore, Maryland; and the U.S. Geological Survey in Reston, Virginia. He has a MS in Geology from the South Dakota School of Mines and Technology; registered or certified in Georgia, Tennessee, Indiana, Virginia, Alaska, and Maine.

FOR MATERIALS SCIENCE DIRECTOR (Term: 1 years)
Jim Mancuso: (no biosketch available by press time)

FOR BIOLOGICAL DIRECTOR (Term: 2 years)
(see notation below)

By press time, confirmed nominees for the positions of President-elect, Biological Director and Materials Sciences Director had not been identified. If anyone is interested in serving the board in any one of these positions, please contact: Rick Rogers at HSPH at telephone number 617-432-3472 or by email: rogers@bioimage.harvard.edu.

NESM would like to thank the Nominating Committee for all their hard work. They have come up with a slate of several qualified nominees so far.

NESM tried something *new* at this past Spring Woods Hole Symposium. Prior to the start of the meeting, a professional development short course entitled "**Practical Digital Imaging for Microscopy**" was held on May 9, 2002. Professor John MacKenzie of North Carolina State presented various strategies needed to produce digital data suitable for publication. 38 participants enjoyed Dr. MacKenzie's spirited 7 hours presentation and everyone found the information useful and easy to implement in their microscopy units. In fact, since the course, I have updated some printer settings based on his suggestion with fantastic results.

It was so successful, that NESM is considering holding such one-day workshops, again, in the future!

Rick Rogers
Past-President, NESM

Meetings, Conferences, & Courses 2002-2003

December 6, 2002
NESM Fall Symposium
Gordon College
Wenham, MA
Contact: PauBain
pbain@hms.harvard.edu

November 18/21, 2002
Eastern Analytical Symposium
Somerset, NJ
easinfo@aol.com
www.eas.org/news.html

December 2/6, 2002
Materials Res. Society Fall Meeting
Boston, MA
info@mrs.org

December 11/15, 2002
Electron Cryomicroscopy Single Particle Image Processing & Visual Workshop
Houston, TX
feinberg@bcm.tmc.edu

December 14/12, 2002
American Society for Cell Biology 42nd Annual Mtg.
San Francisco, CA
ascbinfo@ascb.org
www.ascb.org

January 25/31, 2003
BiOS 2003 Multiphoton Microscopy in Biomedical Sciences III (BO 24)
San Jose, CA
spie@spie.org

Directions to GORDON COLLEGE

Gordon College is easy to get to from the west, south or north. We are located just off exit 17 on Massachusetts State Route 128. Look on a map and we are located just about in the middle between Gloucester, Mass. and Salem, Mass.

From points West:

(New York State, Pennsylvania, Connecticut, Western Massachusetts)

Take an east-bound highway (i.e. Mass Turnpike, Route 90) to Route 95 North. Stay on Route 95 until it separates from Route 128. Take Route 128 North toward Gloucester, passing through Peabody, Danvers and Beverly. Get off at Exit 17. Turn left at top of ramp, going one-quarter-mile to Gordon College, on Grapevine Road. *At the AJ Gordon Chapel, take a right and park in the lot directly in front of it. There will be a sign **Event Parking-NESM**. Proceed to the Lane Student Center-Presidential Dining Room for the meeting. (*See enclosed map of campus for building/parking locations*)

*(**Note:** If you miss this turn-off, you will come to the main entrance of the college, turn around at this point).

From points North:

(Maine, Vermont, New Hampshire, Manchester Airport)

Take Route 95 South to Route 128 North. Remain on Route 128 North, passing through Peabody, Danvers and Beverly. Get off at Exit 17. Turn left at top of ramp, going one-quarter-mile to Gordon College. (follow directions above)

From points South:

(Boston, Logan Airport, Rhode Island, TF Green Airport)

As you leave Boston/Logan Airport, look for signs for 93 North. Take 93 North to Route 95 North, and then follow the directions below.

Stay on Route 95 until it separates from Route 128. Take Route 128 North toward Gloucester, passing through Peabody, Danvers and Beverly. Get off at Exit 17. Turn left at top of ramp, going one-quarter-mile to Gordon College. (follow directions above)

Please note:

Routes 95 and 128 have similar exit numbers. Begin to pay attention to exit numbers once you get onto Route 128 North after it separates from Route 95.

Please See Gordon College Website for map of campus: www.gordon.edu

NESM Application for Membership

New Members:

- Regular Member \$15.00
- Student Member \$5.00
- Retired Member \$5.00
- Corporate Member* \$100.00

Please make your check payable to NESM and send along with this application to:

NESM
c/o Paul Bain
HMS-Countway 212
10 Shattuck Street
Boston, MA 02115

Current Members:

- Change of Address Only

*Each Corporate Membership entitles two representatives to receive our newsletter. Please duplicate mailing information form as needed.

Mailing Information:

Date _____ Dr. Ms. Mr.

Name _____

Mailing Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Email _____

Company/University _____
(if not part of mailing address)

Major Interest: Biological Sciences Physical Sciences
Microscope Type: SEM TEM Light
 Confocal STEM Other

NESM Membership News 2002

The New England Society for Microscopy (NESM), a local affiliate of the Microscopy Society of America (MSA), is a professional organization dedicated to the promotion and advancement of the science and practice of all microscopical imaging, analysis, and diffraction techniques.

Each year, NESM holds four local meetings which feature speakers from both biological and physical science backgrounds. Social hours and buffet dinners are enjoyed at each meeting.

New Members: NESM has a calendar-year membership; new members may join at anytime. To join, please check one of the member categories, and return the above application along with your check payable to NESM.

Membership Renewal: An invoice for annual membership dues will be sent with the first newsletter each year. Dues are payable at meeting registration, or by check no later than May 31st.

Please make check payable to NESM and send c/o Paul Bain, Countway 212, 10 Shattuck St., Boston, MA 02115

NESM Officers 2002

President 2002	Lynne Garone E Ink Corp. (617) 499-6000 Lgarone@eink.com
President-Elect 2002	Anthony J. Garratt-Reed MIT (617) 253-4622 tonygr@MIT.EDU
Past President 2002	Rick Rogers HSPH (617) 432-3472 rogers@bioimage.harvard.edu
Treasurer 2002	Paul Bain HMS-Countway 212 (617) 432-3236 pbain@hms.harvard.edu
Recording Secretary 2002	Mary McCann McCann Imaging (617) 484-7865 mccanns@tiac.net
Corresponding Secretary 2002	Peggy Sherwood MGH-Wellman Labs of Photomedicine (617) 724-4839; MESnesm@rcn.com

Materials Science Directors 2002	Hei-Ruey Harry Jen-M/ACOM Division (978) 442-4804; jenh@tycoelectronics.com
2003	Trisha Rice-FEI (978) 538-6921; trice@feico.com
2004	N. Carl Miller-Raytheon Co. (781) 860-3334; Norman_C_Miller@raytheon.com
Biological Sciences Directors 2002	Ken Orndorff-Dartmouth (603) 650-7661; keno@dartmouth.edu
2003	Ezequiel Rivera-UML (508)934-2868;ezequiel_rivera@uml.edu
2004	Thomas Pitta-Micro Video Instruments, Inc. (508) 580-0080; thomasp@mvi-inc.com

**Mailing Address: NESM, P.O. Box 425232
Cambridge, MA 02142**

NESM Website: <http://prism.mit.edu:8083>

NESM's 19th Annual Spring Symposium –May 2002

Poster Winners:

Best Overall Poster (Zeiss Camera) - Jamila Shawon and Christopher Drew (Changmo Sung)-“Polycarbonate Nano-fibers by Electrospinning and Processing of Electrospun Fibers into TiO₂ NanoTube”

Best Biological (\$50-donated by Nikon) - Michele Jaeger and Robert Fitton “Investigation of the Morphology of Opaque and Translucent Strains of *Vibrio parahaemolyticus*”

Best Materials (\$50-donated by FEI) - Lan Pham and Joey Mead (Changmo Sung) “Morphology and Mechanical Properties of SIBS and SMA Blends”

Runner-Up Biological (\$25-donated by FEI) - Amanda Walton and Jessical Watters “A Light and Electron Microscope Study of the Tissues and Cells of the Mouse Intestinal Duodenal Wall”

Runner-Up Materials (\$25-donated by FEI) - X. Li, C. Santeufemio, T. Tetreault, L.P. Allen, R. MacCrimmon and W. Goodhue (Changmo Sung) “Surface Modification of Gallium Antimonide by Gas Cluster Ion Beam Processes”

Photos As Art:

\$50 Prize (donated by Nikon) - Peg McLaughlin “Blue Plate Special/Mom and Baby Turtle”

All other Poster Participants received Tote Bags.

NESM would like to thank Zeiss, Nikon, FEI for their monetary/gift contributions for the awards.

Project MICRO News :

If you have a youngster in middle school, and would be interested in bringing Project MICRO to their school, this is the time of year to bring our outreach program to their teachers' attention. NESM has three Project MICRO kits ready to provide all of the materials, including microscopes, necessary for "Microscopic Explorations" festival for middle schoolers. Jan Schwarz at the University of Vermont, has kept one kit very busy, with one presentation a month at Vermont middle schools. Microscopists at Harvard School of Public Health have used the second Project Micro kit for a number of outreach activities.

Eben Oldmixon's presentation of the Project MICRO last year at the New Learning Prep School in Newton led to two outings for the third Project MICRO kit this June. One teacher at that school recommended Project MICRO to the science department at Beverly Memorial Middle School, and we returned again to New Learning Prep, guided by one inexperienced microscopist.

At Beverly Memorial Middle School, ninety sixth graders participated in Project MICRO in morning and afternoon sessions. Each session took about two and one half hours, and all ten activities of Project MICRO were presented. Ten parents were recruited to guide the activities in each session. -- Twenty parents altogether, and all enjoyed their participation. The school uses a team teaching approach; and while one student group was enjoying Project MICRO, the math teachers had prepared a festival on Probability for the other group.

At New Learning Prep, about forty sixth graders took part in Project Micro for the day. We had groups of four who progressed through nine different stations, spending about 15 minutes at each one. We covered magnifiers, printed materials, fabrics, salts, sands and kitchen powders, and bugs, pond life and brine shrimp. All seemed to have a wonderful time. Every time I looked around, everyone was fully engrossed in their activities, and there were lots of drawings in the students' notebooks. Chris Mattson, the organizing teacher, awarded all students certificates of their participation in NESM's Project MICRO.

If you have questions regarding Project MICRO, email Mary McCann (mccanns@tiac.net) about availability of the kit or the booklet describing Microscopic Explorations activities. We'd like to keep all three kits as busy as the Vermont one!

Mary McCann (Recording Secretary, NESM)

NESM MEMBER'S DESK—Here's what's new!

Sr. Research Engineer Scanning Electron Microscopist - East Hartford, CT

United Technologies Research Center (UTRC) has an immediate opening for an experienced scanning electron microscopist to perform hands-on analysis on a high-resolution scanning electron microscope and an electron micro probe microanalyzer in our Materials Characterization laboratory for application to the diverse products of United Technologies Corporation (UTC).

The successful candidate will perform the analysis, analyze the data, and reach technical conclusions based on the analysis. The candidate will provide support to UTRC research and development activities, UTC business unit manufacturing materials issues, and root-cause failure analysis, interfacing with UTC engineers and scientists.

The applicant must be experienced and knowledgeable in scanning electron microscopy with energy dispersive spectroscopy. Technical background in Materials Science or equivalent is necessary.

The applicant should possess a BS degree in Materials Science or have equivalent work experience with electron microscopy, and have good communication skills and the ability to work well as a team player.

Must be a United States citizen or have a permanent residency visa for the USA.

Interested applicants please send resume to: Employment Opportunities, Code TECH2050-11138, 411 Silver Lane, East Hartford, CT 06108 or email: employment@utrc.utc.com and refer to Job Code TECH2050-11138.

UTC is an equal opportunity employer with competitive salary and benefits package. (Contact name: Al Pucino)

CLINICAL ELECTRON MICROSCOPIST

Hartford Pathology Associates, P.C., providing anatomic and clinical pathology services at Hartford Hospital, Connecticut Children's Medical Center, MidState Medical Center, and Charlotte Hungerford Hospital, is recruiting an experienced and motivated individual to oversee its electron microscopy laboratory at Hartford Hospital in Hartford, Connecticut.

Responsibilities include the preparation of specimens, microscopy photography, and supervision of all laboratory operations. This individual will work closely with various members of our Department of Pathology and Laboratory Medicine that includes 25 MDs/PhDs. Primary areas of activity include renal and transplant pathology, solid tumor identification, and applications related to pediatric diseases.

Suitable candidates should have at least 5 years of experience working in a clinical electron microscopy laboratory, good interpersonal skills, and a desire to participate in our resident/fellow education program in anatomic pathology. Salary and benefits are highly competitive.

Interested applicants should contact:

William T. Pastuszak, M.D.

Chairman, Department of Pathology & Laboratory Medicine

Hartford Hospital

80 Seymour Street

Hartford, CT 06102

(860) 545-2223 or wpastus@harthosp.org