



# NESM News

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## Join Us! 23rd Annual Woods Hole Symposium—May 5th-6th

Spring is finally here, which means that it's almost time for NESM's esteemed Woods Hole meeting! This year we will be meeting the first week of May: **Friday, May 5th and Saturday, May 6th**. NESM is again pleased to welcome its co-host, the Connecticut Microscopy Society (CMS), whose support and participation is greatly appreciated. NESM and CMS will present the highly anticipated **workshop on Thursday, May 4th: Confocal Microscopy Workshop** run by Geoffrey Williams, from Brown University in Providence, R.I., and Peter Lu, from MIT in Cambridge, M.A. as well as an afternoon symposium on the **Ethics of Digital Imaging and Storage** run by a panel of experts (please see details inside). The Woods Hole meeting continues to be a favorite among society members, corporate sponsors, students and guests alike. This meeting is an exciting forum, which is devoted to microscopy and its associated techniques, welcoming scientists from both the materials science and biological arenas.

Students, especially, are encouraged to participate. The weekend affords both a scientific and social meeting ground that allows for one-on-one communication with professionals in a wide variety of scientific and engineering endeavors, as well as a Poster Session where research interests of both students and professionals can be presented and shared. Prizes are offered in various categories, so please consider submitting your work.

### Highlights of the meeting include:

- Scientific Presentations
- Cocktails & Banquet
- Commercial Exhibits
- Guest Speakers
- Scientific Poster Awards
- Door Prizes
- Photo-As-Art Contest

**Bonuses: Saturday, May 6th, 1:00pm**—Dan Gibson will lead his infamous salt marsh tour. If lucky, we will see horseshoe crabs spawning! For the more seafaring, a harbor cruise by OceanQuest is available at 1:30.

### \*\*\*REGISTRATION\*\*\*

Advance registration is a must! Rooms are reserved on a first-come/first-serve basis: **Dinner reservations must be made by April 20th**. Payment must accompany all registrations. Please use the registration form inside this newsletter.

### ■ Accommodations

#### Swope Center at MBL

\$49.00/person/day, double occupancy  
\$86.50/day, single occupancy

*Rates include Saturday breakfast ONLY*

To reserve a room at Swope, please use the registration form provided in this newsletter.

If you wish to stay at other area motels, (see partial listing below), please call the establishment to reserve your room and pay directly. Make mention that you will be attending the NESM Symposium at MBL.

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Other area motels/inns:

■ **Nautilus Motel, Woods Hole**  
**508-548-1525**

■ **Sleepy Hollow Motor Inn, Woods Hole**  
**508-548-1986**

■ **Inn on the Square by Ramada**  
**508-457-0606**

■ **Woods Hole Passage (B&B)**  
**508-540-2500**

■ **Sands of Time Motor Inn**  
**508-548-6300**

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### ■ Student Discount

Full-time graduate and undergraduate students, accompanied by faculty advisor, will be able to pre-register for the meeting, enjoy dinner, and receive Friday night accommodations (**double occupancy only**) at Swope Center for \$50.00 (for members of NESM) and \$55.00 (which includes a one-year membership).

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# Twenty-Third Annual Spring Symposium

Marine Biological Laboratories ▪ Woods Hole, Massachusetts ▪ May 5-6th, 2006



## Friday, May 5th

12:00 pm

**Registration:** Swope Center

1:00 pm

**Welcome:** Lillie Auditorium—Dan Gibson, NESM President

### *Session I - Physical and Biological Sciences, Moderator: Steve Stokowski*

2:45 pm

Afternoon Break  
*Coffee served in Lillie 103*

### *Session II - Afternoon Symposium: The Ethics of Digital Imaging and Storage*

*Chairman: John Mackenzie of the Microbeam Analysis Society*

Panelists Include: Victoria Gibson, Staff Editor of the Biological Bulletin (MBL)

Dr. James Mancuso of Advanced Microscopy Techniques Corporation

The panelists will each give a brief talk and then we will all have an opportunity to ask the experts our burning where, what, why and how questions regarding digital imaging.

5:30 pm

**Cocktails and Dinner: Swope Center**

7:30 pm

After Dinner Talk, Meigs Room, Swope Center

## Saturday, May 6th

8:00 am

Breakfast: Swope Center

9:00 am

Welcome: Lillie Auditorium—Christopher Santeufemio, NESM President-elect

### *Session III - Biological and Physical Sciences, Moderator: Christopher Santeufemio*

12:00 pm

**Presentation of Poster and Photos-As-Art Awards and Door Prizes**—Dan Gibson  
Poster Area, Swope Center

**PLEASE NOTE:** Lunch at the Swope Center is optional this year.

1:15 pm

Dan Gibson will lead a salt marsh tour. Maybe we will see horseshoe crabs mating!

1:30pm

OceanQuest Discovery Harbor Cruise—a 2 hour tour around beautiful Woods Hole.

## ☀☀☀☀ Directions to Woods Hole ☀☀☀☀

## Meetings, Conferences, & Courses 2006

### From Boston (81 miles)

Take the SE Expressway (Rte 3) to the Sagamore Bridge Rotary (53 mi). Do not go over the Sagamore Bridge. Take the first rotary exit towards the Bourne Bridge along the Bourne Scenic Hwy (Rte 6W). At the Bourne Rotary, follow the signs for, and go over, the Bourne Bridge. At the base of the bridge, go around the rotary to the Rte 28 exit and continue on Rte 28. After 14 miles, Rte 28 becomes a 2-way road. Continue straight through the intersection after 1 mile. After 1/2 mi., the road forks at a stop sign. Turn right towards Woods Hole. Continue for 4 mi. (through one intersection) to Woods Hole.

### From New York (252 miles)

Take Rte 95 (US1) North through CT to Providence, RI. In Providence, exit to Rte 195. Follow 195 through New Bedford to its end, and exit right onto Rte 25 towards Cape Cod. Follow Rte 25 to the Bourne Bridge and continue over the Bourne Bridge. At the base of the bridge, go around the rotary to the Rte 28 exit and continue on Rte 28. (Pick up same directions as before from Boston).

### Bus to Woods Hole:

The easiest mode of transportation to Woods Hole is via Bonanza Bus from the Boston Greyhound Terminal. The bus drops you a few minutes walk from the MBL as shown in the lower center of the map. For more information, visit their web page at: <http://www.bonanzabus.com>.

### SPECIAL PARKING PERMIT REQUIRED

If you drive to the meeting, please be sure to register at the Swope Center as soon as possible to receive a *special parking permit*. The permit should then be placed on the dashboard of your car. The MBL enforces the Parking-by-Permit-Only policy in its lots on a year round basis. Once you have the permit, **you are to park in the Bar Neck Road Lot #E only during business hours**. If you are staying overnight, you can move your car to one of the lots behind the Swope Center, entering from Millfield St. **THERE IS A HIGH PROBABILITY THAT YOUR CAR WILL BE TOWED WITHOUT THE PERMIT.**

### Judging Criteria For Posters

The Point Scale ranges from 1-5 for each Judging Category. If the presenter does not wish to be included in the competition, indicate "d".

**Microscope Adjustment:** Do the photomicrographs or images illustrate that the microscope was properly adjusted? Is the specimen in focus? For SEM images, did the sample charge up? Was the proper accelerating voltage used? For light microscopes, is there a uniform field of illumination? For AFM, DIC, Confocal, or other techniques, are the images free of distortions or artifacts?

**Quality of Images:** Is the subject properly in the field of view? Are the images relatively free of lines or dust specks? Was the film or digital image correctly printed? Is there a scale?

**Clarity of Graphics:** Are the graphics well-drawn? Are the axes of any graphs labeled? Is color or black & white used effectively? Do the graphics stand alone, or must one refer to the text?

**Clarity of Text:** Does the text tell the story clearly and concisely? Is any necessary jargon clearly explained? Are complete sentences used?

**Layout of Poster:** Is the poster easy to follow? Are arrows or numbers used to guide the reader from one part of the poster to the other? Is the title and subject of the poster obvious?

**Interaction with Judges:** Is the presenter enthusiastic and personable? Is the presenter professionally attired and groomed? Does the presenter answer simple questions in a clear, concise and knowledgeable manner? (Suggestions: What microscopes did you use for this work? When and how were they calibrated?)

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**May 5-6, 2006**  
**NESM/CMS 23rd Annual Woods Hole Meeting**  
Woods Hole, MA  
Contact: Elke Pravda  
(617)919-2436  
[elke\\_pravda@childrens.harvard.edu](mailto:elke_pravda@childrens.harvard.edu)

**May 7-11, 2006**  
NSTI Nanotech 2006  
Hynes Convention Center  
Boston, MA  
Contact: Event Coord.  
[wenning@nsti.org](mailto:wenning@nsti.org)  
<http://www.nsti.org/Nanotech2006>

**June 4, 2006**  
**Lehigh Microscopy School begins annual short courses**  
Lehigh University  
Bethlehem, PA  
Contact: Sharon Coe  
[slc6@lehigh.edu](mailto:slc6@lehigh.edu)  
[www.lehigh.edu/microscopy](http://www.lehigh.edu/microscopy)

**July 30-August 3, 2006**  
**2006 Microscopy & Microanalysis**  
Festival Hall at Navy Pier  
Chicago, IL  
Contact: Phillip Ridley  
[pridley@bostrom.com](mailto:pridley@bostrom.com)

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# Advance Registration Form

Registration after April 20th will **not** include dinner

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

**Elke Pravda**  
**Karp Family Research Laboratories, #11215.1**  
**Children's Hospital Boston**  
**300 Longwood Ave.**  
**Boston, MA 02115**

If you have questions, please call Elke at (617) 919-2436.

First Name \_\_\_\_\_ Last Name \_\_\_\_\_ Dr. Ms. Mr.

Company \_\_\_\_\_ Title \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

Name of Guest \_\_\_\_\_

Name of Faculty Advisor (*for student discount only*) \_\_\_\_\_

(*A list of attendees will be published*)

## **Advance Registration including Dinner on 5/5/06**

- |   |          |                          |                                     |   |
|---|----------|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> NESM Member                | \$50.00  | <b>Dinner</b> (choose 1) | <input type="checkbox"/> Fish       | <b>Please note:</b> Dinner reservations <b>cannot</b> be accepted after April 20th. |
| <input type="checkbox"/> Non-member                 | \$65.00* |                          | <input type="checkbox"/> Chicken    |   |
| <input type="checkbox"/> Student/retired member     | \$50.00  |                          | <input type="checkbox"/> Vegetarian |   |
| <input type="checkbox"/> Student/retired non-member | \$55.00* |                          |                                     |   |
| <input type="checkbox"/> Guest Registration         | \$50.00  |                          |                                     |   |

## **Accommodations**

**Swope Center at MBL** (1st come, 1st served)

- Double Occupancy \$49.00/person\*\*  
 Single Occupancy \$86.50/person\*\*  
 Student Housing *included with Registration (double occupancy only)*

Please reserve (#) room(s) for the following nights: Thurs Fri Sat Handicapped-access

(*For additional housing options, see Accommodations on front page of this newsletter*)

\*Non-member and Student Non-member Registration includes 1-year NESM membership.

\*\*The fee for rooms at Swope includes Saturday breakfast **only**.

**Registration Deadline**

**April 20, 2006**

Note: All 2005 members of NESM were invoiced for 2006 dues in March. NESM dues must be paid prior to reserving. Please check here  if you are including your dues with this reservation.

**REGISTRATIONS WILL BE PROCESSED ONLY AFTER PAYMENT IS RECEIVED.**

## **Mark Your Calendars!**

### **Future Dates for Woods Hole Symposium**

**2007 5/3-5/5**

**2008 5/1-5/3**

**2009 4/30-5/2**

**\*Note: These dates include a reservation for Thursday also in case we run more workshops**

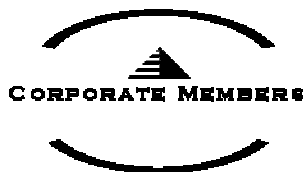
## Microscopy Society of America

230 East Ohio Street, Suite 400 ■ Chicago, IL 60611-3265 ■ 800-538-3672

FAX: 312-644-8557 ■ E-mail: BusinessOffice@microscopy.org

*Please see MSA website ([www.msa.microscopy.com](http://www.msa.microscopy.com)) for further information on the society and for submitting application on-line.*

**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 Inc.  
Boekeler Instruments Corp.  
Denton Vacuum Inc.  
E.A. Fischione Instr, Inc.  
Eastman Kodak  
EDAX Inc.  
Electro-Image, Inc.  
Emispec Systems, Inc.  
EMS/Diatome  
Energy Beam Sciences  
Ernest F. Fullam Inc.  
EXTEC Corp.  
FEI Philips Electron Optics  
GATAN Inc.  
Geller MicroAnalytical Lab  
Hitachi Scientific Instruments  
HKL Technology  
International Instrument Sales  
JEOL-USA Inc.  
Kimball Physics, Inc.  
LADD Research Ind., Inc.  
LEICA Microsystems, Inc.  
MEDTEC  
Micro Star Technologies, Inc  
Nanotech Consulting  
Optechs, Inc.  
Oxford Instruments America  
Princeton Gamma-Tech, Inc.  
Quality Images  
Quantomix  
Rontec USA, Inc.  
SCANNING/FAMS, Inc.  
SSSC  
SEMTEch Solutions  
SensIR Technologies  
Technotrade International  
Thermo Electron

# 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 Elke Pravda  
 Karp Laboratories, #11215.1  
 Children's Hospital Boston  
 300 Longwood Ave.  
 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 2006

*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.** Send to Elke Pravda, Karp Family Research Laboratories #11215.1, Children's Hospital Boston, 300 Longwood Ave., Boston, MA 02115.

## NESM Officers 2005

<b>President</b> 2006	Daniel G. Gibson WPI (508) 831-5543 dgibson@WPI.EDU	<b>Materials Science Directors</b> 2006	David C. Bell-DEAS, Harvard University (617) 496-6794; dcb@deas.harvard.edu
<b>President-elect</b> 2007	Christopher Santeufemio Millipore Corp. (781) 533-2812 Chris_Santeufemio@millipore.com	2007	Donna Guarrera-JEOL (USA), Inc. (978) 536-2224; guarrera@jeol.com
<b>Past President</b> 2006	Steve Stokowski Stone Prod. Cons. (508) 881-6364 spcpetro@aol.com	<b>Biological Sciences Directors</b> 2006	Renee Dickie-HSPH (617) 432-0123; rdickie@hsph.harvard.edu
<b>Treasurer</b> 2006	Richard Schalek DEAS, Harvard Univ. (617) 496-9682 rschalek@deas.harvard.edu	2007	William Fowle-Northeastern University (617) 373-3075; w.fowle@neu.edu
<b>Clerk</b> 2006	Tony Garratt-Reed MIT (617) 253-4622 tonygr@MIT.EDU	2008	Karen Dalecki Boisvert-Harvard University (508) 624-8013; karen_boisvert@hms.harvard.edu *****
<b>Corresponding Secretary</b> 2006	Elke Pravda Children's Hosp. Bost. (617) 919-2436 elke.pravda@childrens.harvard.edu	<b>Mailing Address:</b>	NESM, P.O. Box 425794, Cambridge, MA 02142

PLEASE POST

**CALL FOR POSTERS AND**  
**PHOTOMICROGRAPHS**

**23rd Annual Spring Symposium**

**Woods Hole, MA**

**Saturday, May 6th at 12:00 Noon**

*Win for Best Poster, Best Student Poster, Or Best Photo-as-Art*

One of the Symposium's most exciting events is the poster session. In an informal setting, members and students alike have an opportunity to present preliminary results or exhibit data that has been presented nationally to a friendly yet informed audience.

The **Photo-As-Art** session is intended for *the* photomicrograph that you feel has that special aesthetic quality.

- ▶ **Posters** should be submitted with a title and abstract (200 words or less)
- ▶ **Photomicrographs** will be displayed along with the posters and should be submitted with a title or caption and a short technical explanation.
- ▶ **Absolute Deadline** for receipt of Posters and Photos-As-Art is **April 21, 2006**.

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Please **email** the following: your name, affiliation, email address, status (student, etc.) along with your **Poster Title, Presenting Author, and Abstract** to:

**Dan Gibson**  
**[dgibson@wpi.edu](mailto:dgibson@wpi.edu)**

\*\*\* **AWARDS** \*\*\*

**\$100 Best Poster**  
**\$50 Best Student Poster**  
**\$50 Best Photo-As-Art**  
**2nd and 3rd Place**  
**Honorable Mentions**

Note: Please see page 3 of this newsletter for Judging Criteria

## Thursday, May 4th Workshop

### Confocal Microscopy

*Presented by*

**Geoff Williams**

*Brown University*

*Manager, Leduc Bioimaging Center*

**Peter Lu**

*Harvard University*

This highly anticipated confocal workshop will provide a straightforward overview of the applications and concepts involved in confocal microscopy. The confocal microscope, and especially the laser scanning confocal, is about a delicate balance between numerous variables. We will discuss the most critical variables, and go into the detail and fundamentals that will provide the workshop participants knowledge and background to form good confocal microscopy habits. *The discussion will be basic enough for those who have never used a confocal, but the content focus will be useful for even the most experienced.*

After an afternoon of learning concepts and applications of confocal, participants will be able to have hands-on experience with a brand new Leica SP5 AOBS, a Zeiss LSM 510 Meta, and a Zeiss LSM 5 Pascal all evening.

The **biological and material samples used for the hands on demo will be selected based on feedback from attendees**, to best represent the interests of the group. Please indicate when registering what organism and/or samples you are most interested in being used for the hands-on part of the course.

#### *About the presenters:*

**Geoff Williams** is the manager of Brown University's Leduc Bioimaging facility. He was first exposed to fluorescence microscopy as an undergraduate at Connecticut College, which provided a natural leap to working with the confocal microscope at Michigan State University. Geoff brings over 10 years of confocal microscopy instruction to the workshop, as well as a broad base of biological material experience. His experience gained from use and instruction on Zeiss, Olympus and Leica confocal platforms, imaging biological samples from bacteria to spruce trees and everything in between, offers a unique perspective for workshop participants.

**Peter J. Lu** is a Ph.D. student in the Department of Physics at Harvard University, working in the laboratory of Prof. David Weitz. He graduated summa cum laude from Princeton University in physics, and at Harvard assembled a Nipkow-disk-based confocal system for high-speed acquisition. He has written a book chapter on confocal microscopy and its applications in a recent book, "Microscopy for Nanotechnology" (Kluwer, 2005).



# Confocal Microscopy Workshop

## Registration Information

**Date:** Thursday May 4th, 2006—1pm until late (will break for dinner)!

**Location:** Candle House, Marine Biological Laboratory, Woods Hole, Massachusetts (Full directions will be made available)

**Cost:** Registration: \$110.00 (plus \$15 dues for non-members of either society)

**Accommodation (bed and breakfast, if required):** \$86.50 single, \$49.00 double. (Note: dinner is not included for Thursday night)

**Samples:** Biological and material samples will be provided at the workshop. Due to limited time, participants are asked to NOT bring their own specimens. Instead participants are encouraged to suggest specimens to be made available.

**To reserve your place:** Space in the workshop is **limited to 20 participants**, advance reservation is essential. Send your name, along with contact information, to Elke Pravda at Karp Family Research Laboratories #11215.1, Children's Hospital Boston, 300 Longwood Ave., Boston, MA 02115, telephone her at 617-919-2436, or e-mail at [elke.pravda@childrens.harvard.edu](mailto:elke.pravda@childrens.harvard.edu). Indicate what type of samples you are interested in and whether you would like to reserve a room for Thursday night. If requesting double occupancy, indicate the name of the person with whom you will be sharing, or the gender if you wish a roommate to be assigned. If a non-member, please also indicate which of the sponsoring societies you would like to join. **IMPORTANT:** to retain your space, it is necessary for payment in full to be received by Friday April 21st, 2006. (Note: non-members registering both for the Workshop and the following symposium will register at the symposium for the members' rate.)

**Cancellations:** If it is necessary for you to cancel your reservation, a full refund of all money paid will be made provided cancellation is received on or before Friday April 21st. Cancellations received after April 21st, but on or before Wednesday April 26th, will result in refund of half the money paid, unless another person is available to take the vacant place, in which case a full refund will be made. Refunds will not be made for "no shows".