Spring Symposium @ Marine Biological Laboratory, Woods Hole, MA

Register Now

Meeting Description:

Join NESM for our Spring Symposium on May 3-4, 2012 at the Marine Biological Laboratory, Woods Hole, MA. The meeting is composed of Thursday afternoon workshops and Friday seminars. Registration closes 12:00 PM, April 20.

Meeting Costs (including a buffet lunch and an afternoon coffee break):
$15 Workshops
$115 Exhibiting Vendors (includes 6'x3' table and drape and regular member registration)
$60 Regular Members
$85 Regular Non-members (includes 2012-year membership)
$30 Student Members
$40 Student Non-members (includes 2012-year membership)
$50 Retiree Members
$60 Retiree Non-members (includes 2012-year membership)

Bring a Colleague:
NESM members who bring two new members to join during 2012, will receive free membership for 2013!!!

Meeting Schedule:

May 3, 2012

1:00 PM **Welcome (Lillie 103):** Louie Kerr, *NESM Biological Sciences Director*

1:10 PM **Workshops Part I:** Advanced SEM Part I, Laser Microdissection and Optical Tweezers, and Intro to Confocal and 2P

2:30 PM **Afternoon Break (Lillie 103):** Coffee and refreshments

3:00 PM **Workshops Part II:** Advanced SEM Part II, Live Cell Imaging, and Spectral Imaging

5:00 PM **Closing Remarks (Lillie 103):** Louie Kerr, *NESM Biological Sciences Director*

May 4, 2012

9:00 AM **Registration (Swope Center):** Coffee and Refreshments

10:00 AM **Welcome (Meigs Room):** Fettah Kosar, *NESM President*

10:10 AM **"Confocal and super-resolution imaging of muscle"**, Elizabeth Brainerd, Ph.D., Brown University

10:50 AM **"Microscopy and authenticity in the art museum: How microscopes shed light on the origins of cultural artifacts"**, Richard Newman, Museum of Fine Arts, Boston

11:30 AM **Vendor/Poster Session**

12:30 PM **Lunch (Swope Center)**

1:15 PM **Keynote: "TEM: The key tool for nanotechology"**, Barry Carter, D.Phil., Sc.D., University of Connecticut

2:15 PM **Afternoon Break:** Coffee and Refreshments

3:00 PM **"Ion microprobe analyses at WHOI: Using micron-scale measurements to understand global scale processes"**, Brian Monteleone, Ph.D., WHOI

3:40 PM **"The juvenile ALS2 gene product Alsin encodes a protein that regulates IGF-1 receptor endocytosis and cell signaling"**, Justin Topp, Ph.D., Gordon College

4:20 PM **"Making improved neural activity indicators: Genetics and calcium imaging methods"**, Trevor Wardill, Ph.D., Marine Biological Laboratory, Woods Hole

5:00 PM **Closing Remarks:** NESM Board

Workshop Abstracts:

Advanced SEM Workshop Part I & II – John Yorston, Carl Zeiss Microscopy & Richard McLaughlin, Oxford Instruments

In this workshop, we will demonstrate the capabilities of a field emission variable pressure SEM outfitted with EDS and EBSD detectors. We will image coated and uncoated samples to compare and contrast high vacuum and variable pressure modes on a Zeiss Supra 40VP SEM within the Central Microscopy Facility at MBL. We will also introduce STEM imaging of ultra thin sections. Then we will demonstrate the use of analytical techniques, specifically EDS and EBSD; again we can compare high vacuum and variable pressure modes as well as working distance and beam profiles.

Laser Microdissection and Optical Tweezers & Live Cell Imaging Workshop – Blair Rossetti, MBL & Jim McIlvain, Carl Zeiss Microscopy

Laser capture microscopy includes the ability to catapult a subset of a thin sample off of the slide and into a sample vial as well as the capability to ablate specific components of a sample and to provide force measurements of small samples. The spinning disc confocal microscope has the capability to rapidly collect images of a sample using the confocal technique. This instrument is configured with an incubation system for temperature sensitive time-lapse imaging. This workshop will spend time on the two instruments, a Zeiss PALM CombiSystem and the Zeiss Cell Observer SD.

Introduction to Confocal and 2P & Spectral Imaging Workshop – Trevor Wardill, MBL & Blair Rossetti, MBL

Related but different from standard confocal microscopy, two-photon microscopy utilizes an infrared laser to excite visible wavelength labels. The advantages and differences of two-photon imaging will be demonstrated. Most confocal and widefield fluorescent microscope systems utilize glass filters to separate excitation light and emission signal. This approach limits the number and wavelength proximity of signals. Spectral imaging opens new possibilities through instrument and computational approaches. The Zeiss LSM 710 NLO system will be used for the two-photon imaging and the Zeiss LSM 780 will be used for the spectral confocal work.

Location:

Marine Biological Laboratory, Woods Hole, MA
7 MBL Street, Woods Hole, MA 02543

Parking:

Free parking facilities are located on site. Please register first in the Swope Center to receive your parking pass. Campus Map

Register Now

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