

The Focal Point

Newsletter for the Indiana Microscopy Society
December 2008

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Indiana Microscopy Society Officers

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Student Representative	Pam Young Murielo	payoung@iupui.edu

Cover

The cover image was taken by Robert L. Karlinsey and Clif Duhn from the IU School of Dentistry . The secondary electron image is of uncoated niobium oxide cone structures taken in a JEOL 5310 scanning electron microscope at 20kv. Magnification is 500X.

Message from the President

I want to share with the membership of the INMS goals for the society for the next two years.

The goals will provide direction to the officers and membership so that we can make positive contributions to the community of scientists who use microscopy in their research.



1. Increase Membership: Provide incentives to make membership in INMS desirable for scientists. This will require the participation of the Executive Council and the membership to let us know what needs to be done to attract members and to recruit scientists in member's sphere of contacts.

2. Embrace all microscopy technologies reflected in INMS conference presentations: This is a restatement of the purpose of the society. The officers and Executive Committee will continue to strive to provide the best balance in technologies we can in our fall and spring meetings, providing sufficient diversity in microscopy technologies to interest all members.

3. Establish a student scholarship program to enable students to present microscopy work at conferences: This will enable students who have a developing interest in microscopy to be recognized and further their research.

4. Maintain and improve communications with microscopy community in Indiana: Communication with scientists who use or develop microscopy will help increase membership and awareness of the society.

5. Establish an Indiana Microscopy Society Award to recognize microscopists in Indiana who develop new microscopy technology or use microscopy to make important scientific discoveries: Recognition of outstanding innovative work in microscopy will increase awareness of the society, further microscopy in Indiana and encourage individuals to make innovative uses of microscopy in their work.

6. The Executive Council will meet quarterly: The Executive Council should meet at least quarterly to promote communication and ensure we have sufficient time to plan the two major events for the year. Additional communication may be required to implement and administer the scholarship program and the award program.

7. Publish newsletter 3 times per year- Fall, Winter, Spring

8. Update the INMS web site

Goals 7 and 8 are both proposed to foster better communication for the membership and provide information that will be beneficial in the members work in the field of microscopy.

These goals cannot be accomplished by the officers or even the Executive Council alone, input and assistance from the membership will be vital to meet these goals and grow the Indiana Microscopy Society.

Mike Esterman, President
Indiana Microscopy Society

Microscopy and Microanalysis 2008



Microscopy and Microanalysis 2009 was held in Albuquerque, New Mexico, August 3rd through the 7th. The meeting reception was held at the beautiful Rio Grande Zoo on Sunday evening. Attendees enjoyed a New Mexican cuisine buffet while listening to the Mariachi band and catching up with old friends.

INMS members in attendance were Caroline Miller, Pam Young Muriello, Kim Jackson, Sharon Bledsoe, Janice Pennington and Judy Edgecomb. Pam and Kim, graduate students in the IU School of Medicine, gave presentations at the meeting, see page 8. Pam also served as a student volunteer during the meeting. You can read about Pam's experience on page 7.

Caroline Miller is the liaison between our Local Affiliate Society (INMS) and the Microscopy Society of America. She keeps INMS informed of what MSA is doing and what it has to offer us as an LAS. Carole's report is on page 6. This year Carole is also serving as Biological Director of the Microscopy Society of America.

IN 2009, INMS will offer two student scholarships to help with the cost of attending the national meeting. M&M 2009 will be held in Richmond, Virginia, July 26-30, see page 9 for more information.



M&M 2008 Images



MSA Liaison Report from M & M 2008, Albuquerque, NM

As first year Biological Director I had two days of meetings before M & M began. MSA is now under new association management with the transition period including the M & M meeting going very smoothly. Financially MSA is in very good shape and after budget approval the website will be updated over the next year. Phoenix, AZ was picked for the 2012 meeting site with Indianapolis being a strong contender for 2013.

Council also had to accept applications for editor of Microscopy Today, since Ron Anderson is stepping down. Council approved Charles Lyman to take over that spot. Charles stepped down as Editor in Chief for Microscopy and Microanalysis with Bob Price taking over that position.

At the LAS breakfast meeting a new LAS Director was elected, David Tomlin, Senior Scientist and Program Manager with UES, Inc. at Wright-Patterson AFB. David has been a very active volunteer in setting up and helping with the Mega Booth each year at the M & M meetings. At the MSA Educational Committee Meeting, the Traveling Poster Exhibit was reinstated, in addition to the automatic entries, the Diatome award winners and the MSA student poster winners; a new category has been added for technologists. These posters will be judged by the Tech Forum. All the winning posters will be electronically downloadable to any LAS. The Mega Booth's location at this year's meeting (way back in the corner) was far from ideal and not easy for members to find or visit. This booth does attract attendees to the exhibit hall floor, so even vendors felt a change was in order. After discussion with Exhibition Management for 2009 the booth will be brought back up to its rightful place at the front of the hall.

I also became a member of MAS (Microbeam Analysis Society) and attended their LAS and business meeting. I believe it would be in our best interest to become an affiliate of this society also. It gives us many more choices for free speakers and could bring in more members from the Materials or Physical science side of microscopy. To be an affiliate we need to be an LAS for at least one year and have 3-5 of our members also be members of MAS.

Lots of changes have taken place and will continue to take place with MSA, but I think these changes are going in the right direction. Since increasing membership is important for any society I have taken a very active role as a director in promoting more biological sessions to be offered in the future. Hopefully doing this and offering more for technologists will help get even more interested and involved with microscopy and MSA.

Caroline Miller, MSA Biological Director, INMS Program Chair and MSA Liaison

New Meeting Management

Association Management, The Drohan Management Group:

Managing Director-Peter Doherty

Meeting Management- Nicole Guy, Hachero Hill

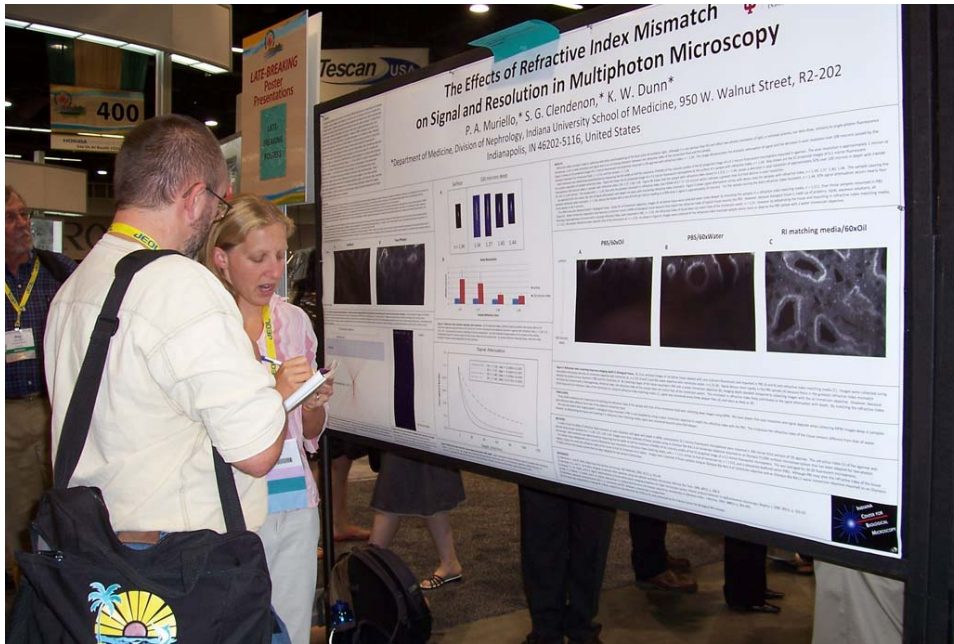
Exhibition Management- Noreen Burke, Corcoran Expositions, Inc.

Being a Student Volunteer at M&M 2008 by Pam Young Muriello

This summer I attended the Microscopy & Microanalysis 2008 Meeting in Albuquerque, New Mexico. There I presented a poster, and I volunteered as a Student Bursary. It was a wonderful experience. This was the second time I've worked at this meeting, the first being in Chicago in 2006. The people are amazing and such a pleasure to work with. It is a great opportunity for me, a student, to meet other microscopy students, microscope technicians, people working in the microscope industry, and even some of the brilliant researchers who are advancing their fields through microscopy, and even microscopy itself. At the meeting I spent time working sessions which included helping with technical difficulties and keeping track of attendance. This was great because I was paid to sit in sessions that I was planning on attending anyway, and I was introduced to new types of research in the sessions that I hadn't planned on attending. Additionally, I spent time working in the MSA Mega Booth, Nestor's Internet Cafe, and the volunteer booth, chatting with microscopists from all over the world. I recall talking with some of the other volunteers, and we agreed that what is so great about working these meetings is how it really brings people together who probably wouldn't normally meet, and how you build friendships with other microscopists that probably wouldn't have happened unless your research really strongly overlapped.



Student Presentations M&M 2008



The Effects of Refractive Index Mismatch on Signal and Resolution in Multiphoton Microscopy; PA Muriello and KW Dunn; Department of Medicine, Division of Nephrology, Indiana University School of Medicine. Pam Young Muriello, presenter.



Imaging Cardiac Sympathetic Neurons: A Correlative Study Using Fluorescence and TEM; K Jackson, C Miller, V Gattone, M Rubart; Indiana University School of Medicine. Kim Jackson, presenter.

Indiana Microscopy Society

Graduate Student Scholarship for Biological and Material Science

The Indiana Microscopy Society is pleased to sponsor two scholarships for graduate students who present a poster or platform presentation at Microscopy and Microanalysis 2009. One biological and one material science award of \$500 each will be given. Microscopy and Microanalysis is sponsored by the Microscopy Society of America and will be held in Richmond, Virginia on July 26-30, 2009.

The student **must** be a member of the Indiana Microscopy Society and **one** of the following: Microscopy Society of America, the Microbeam Analysis Society or the International Metallographic Society. The call for papers is now open and will close at 5:00 PM on February 15, 2009.

Perspective student applicants for the INMS Student Scholarship should:

1. Submit an abstract to Microcopy and Microanalysis 2009 at (www.microscopy.org), by deadline of February 15, 2009.
2. Apply for the Indiana Microscopy Graduate Student Scholarship at (www.indianamicroscopy.org) by deadline of February 27, 2009.

Full details will be posted to
the Indiana Microscopy Society web page soon!

Indiana Microscopy Society

Spring Meeting 2008

Simon Hall, Bloomington Indiana



Despite an early morning earthquake the spring INMS meeting had a record turnout of faculty, staff and students. Program chair Tuli Mukhopadhyay, with the help of Caroline Miller, put together an interesting meeting with great speakers (page 12) and informative workshops.

The workshops/technical discussion groups were held mid-day. The topics included: Biological Electron Microscopy, Tomography, General Fluorescents Microscopy, Real-Time Imaging, Confocal and 2-Photon Microscopy, EELS, EDS and STEM.



Clockwise from upper left: Tuli Mukhopadhyay and Caroline Miller; INMS registration; Lunch; Poster session.

Vendors



Invited Speakers



Stella Aniagyei, IU, Chemistry, speaking for Bogdan Dragnea, "On viruses, nanoparticles and optics with them." Center, **Weiming Yu**, right, **BJ Zhang**, IU, Chemistry, "Chiral helicity in C3-symmetric switch."



Weiming Yu with **Lyuda Bronstein**, IU, Chemistry, "Magnetic Nanoparticles with Functional Exterior as Building Blocks of Novel Materials."



Ke Hu, IU, Biology, "How to Build a Parasite: The Cytoskeletal Biogenesis of *Toxoplasma gondii*" and **Clay Fuqua**, IU, Biology, "Microscopic examination of tick-borne microbial symbionts"



Simon Atkinson, IU School of Medicine, Nephrology, speaking for Bruce Molitoris, "Visualizing pathology and therapy in acute kidney injury" and **Petr Leiman**, Purdue University, Biology, "Structure, function and evolution of bacteriophage tails."

Image Contest Winners:

1 st Place Biological	Brody DeYoung, IU	\$50
1 st Place Materials	Clif Duhn, IUPUI Dental	\$50

Student Posters Winners:

1 st Place	Pu Wang, Biomedical Imaging, IUPUI	\$50
	“ Biocompatible CdSe/ZnS Quantum Dots for Biomedical Imaging”	
2 nd Place	Michelle Kovarik, IU, Chemistry	\$25
	“ Sample Concentration and Characterization in Integrated Microchannel/Nanopore Devices”	
3 rd Place	Joyce Patrick, IU	\$25
	“ YvjD is a Cell Division Protein in <i>Bacillus subtilis</i> ”	

General Poster Winners:

1 st Place	Cecile Berne, IU, Biology	\$50
	“ <i>Caulobacter crescentus</i> biofilm formation inhibition by extracellular DNA binding to the holdfast”	

Indiana Microscopy Society

Fall Meeting & Social

December 4, 2008

4:30-8:00pm

Clarian Pathology Laboratory Building (CPL)

Auditorium Room #6007

350 West 11th Street

Indianapolis, IN

This will be a regional meeting devoted to microscopy and related techniques. The meeting also provides a tremendous forum for students, technicians and faculty to get together from various disciplines to talk about microscopy.

4:30PM

Informal dinner from Qdoba's

5:00PM

Business Meeting

6:00PM-8:00PM

Guest Speakers

Guest Speakers:

Derron Bishop, Assistant Director, Associate Professor of Medical
Education/Physiology

Ball State University, Muncie, Indiana

"Bridging the resolution gap: correlated light and transmission electron microscopy"

Kathryn Campbell, Assistant Paintings Conservator

Chicago Conservation Center, Chicago, Illinois

"The Science of Art: How Art Conservation Uses Microscopy
To Preserve Cultural Heritage"

No charge for dinner or meeting with paid 2008 INMS membership.

\$10.00 for non or lapsed members which includes membership renewal for 2009.

RSVP to Mike Goheen, (317) 491-6479, mgoheen@iupui.edu

With RSVP you will receive a map with directions to the meeting location and parking.

Check the INMS website for the membership form.

Treasurer's Report

7-30-08 through 11-10-08

Assets as of November 5, 2008:

Checking:	\$529.38	
Savings:	\$6,804.05	
Total:	\$7,333.43	\$7,333.43

Receipts:

Corporate Membership Dues		
Regular Membership Dues		
Interest Savings		
	\$0.00	\$0.00
Total Receipts:		\$7,333.43

Expenses:

Small Business Fee	\$0.00	
Total Expenses:	\$0.00	\$0.00
Total Assets		\$7,333.43

Total Assets by Account

Total Checking	\$529.38
Total Savings	\$6,804.05
Total Assets	\$7,333.43

Dear Fellow Microscopists,

I hope you are all doing well and are looking forward to the Fall meeting in Indianapolis as I am. I think it is apparent from the newsletter that we are a growing and active group. This is a great forum for students, technical staff and faculty to interact as microscopists. This year our INMS spring meeting had the highest turn out of students ever. I would also like to emphasize that this is an excellent venue for technical staff to submit images or present a poster or talk. Thanks to everyone on the Bloomington campus that helped with this meeting!

Next year there will be three published newsletters instead of two. This will allow for reporting the Spring meeting in a timelier manner. Also, if anyone is interested in being newsletter editor, please let me know, it is a great way to get involved with the Indiana Microscopy Society! I look forward to seeing you at the Fall meeting.

Sincerely,
Janice Pennington
INMS Newsletter Editor

Reminder:
The Indiana Microscopy Society
now conducts business using the calendar
year instead of the fiscal year.