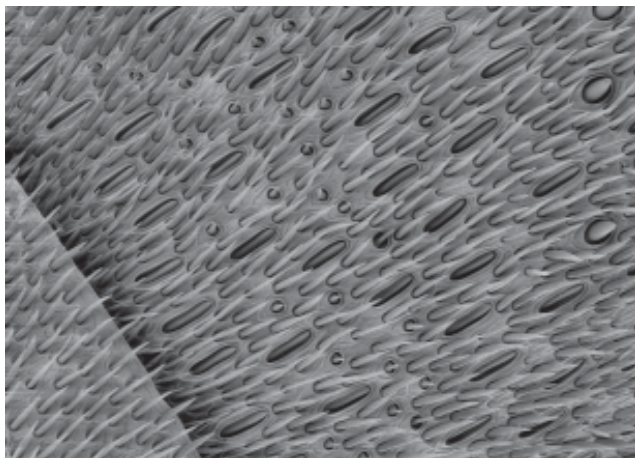


The Beam

Issue 21-2
Winter 2005



The EM lab at Georgia shows off their mullets and muscle.



Wasp antenna - Taken by John Shields, Univ. of Georgia

“If we cannot bring on fresh, young members to be active participants of our society, then when the “old guard” are no longer available, SEMS will be at risk for extinction.”
- Editor’s letter, page 13

Each year the EM class at UGA produces poems, songs, Haiku, rap, etc.. as extra credit on an exam. Some of the more, ah, interesting results are below.

A Cell Bio student wanted to see a cell,
She knew that only an EM would tell,
So she worked and worked to fix the cell,
But all she got was a lousy smell.

-Natalie Lewis

Scanning electron micro
Is my favorite.
Damn you ultrathin sections!

-Bruce Snyder

Electron microscopy, I hardly knew ye,
My future with you, I cannot foresee,
But I do so fervently hope,
That it is full of glee!

-Drashti Dave

An X-ray can Bragg
About the crystal it met,
On its way to rendezvous
With the detector.

-Katherine Mills

To scatter or not to scatter, that’s an e-question,
But if to scatter, then to loose or not loose energy,
Will still remain in question.

-Yainitza Rodriguez

Before I met EM,
I see the whole world in a superficial vision.
I feel sad that I can’t tell the details of everything.
Everything begins to change since EM appears,
The whole world is clearer and more beautiful.
I’m so happy to see a new world.

-Jianli Zhou

IN THIS ISSUE

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Newsletter of the
Southeastern Microscopy Society
A local affiliate of
**The Microscopy Society of
America, The Microbeam
Analysis Society and the
Association of Southeastern
Biologists.**

The BEAM is published three times
a year for members and friends of
the Southeastern Microscopy
Society.
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[Http://www.semimicroscopy.org](http://www.semimicroscopy.org)

Historical Perspective Edited by Jay Jerome

This is another in a recurring feature of the Beam dealing with our history, membership, and the Society's contributions to science. I hope every SEMS member (young and old) will consider contributing to this feature. I see this as a space to share our history, get to know each other better, and record the personal side of science. The submission does not have to be long, just interesting. Send submissions to me at jay.jerome@vanderbilt.edu. As in the current article, pictures are definitely appreciated.

SEMS Memories- by Bob Price

When Jay first asked me to provide a short write-up concerning my recollections of SE(E)MS I reluctantly agreed, procrastinated for as long as I could, and finally acquiesced to his threats. Being asked to reminisce definitely makes someone facing the proverbial middle age crisis feel even older, but I guess having the honor of being a grandfather (Figure 1) and having primarily gray hair qualifies me as one of the senior citizens of SEMS and qualified to recollect the good old days and to think about memories yet to be made.

Since my arrival in South Carolina from the snowy northland in January of 1990 a highlight of each spring has been the opportunity to attend SEMS meetings. Through these annual meetings I have been able to develop friendships and collaborations that would otherwise have been impossible. I believe one of the major advantages of a regional society meeting such as SEMS has been, is and will be the opportunity to attend a meeting that is smaller and more intimate than larger national and international meetings where numerous scientific sessions and events occur simultaneously. This provides an opportunity to develop friendships and collaborations that would otherwise be impossible. I still remember Charles Mims, following a typical SEMS meeting a few years ago, making a statement about where else could we attend a meeting and see the diversity and quality of science that is presented at SEMS. While it is always interesting to hear the talks from our long time members and to see how their research stories advance each year, for me a highlight of each meeting is certainly the Ruska competition where we see the future of microscopy. A real treat was hosting the 2003 SEMS meeting in Columbia where we had twelve Ruska competitors in a single session. I wish all of our meetings had this type of intense student competition!

Having served as President, Program Chair a couple of times, and Local Arrangements Chair of couple of other times, I have certainly had the opportunity to develop memories beyond those associated with the science at the meetings. While some of the memories are hazy others remain vivid. Certainly a hazy one is still wondering how I gave an 8AM talk at a meeting hosted by JoAn Hudson at Clemson after being out with some unnamed accomplices until 3AM the night before. I was obviously much younger then. However, I do remember a lack of dessert following the meeting banquet that night. Something we made sure JoAn did not forget when she hosted a subsequent meeting.

Another vivid memory, although at times I wish it were a bit more hazy, is of several of our members (including the resident SEMS Historian) dancing to the "YMCA" as played by DJ (and my tech) Butch Davidson poolside at the Holiday Inn following the banquet at a meeting I hosted in Columbia. With all the years of education represented by the line of dancers, it still amazes me that YMCA was so difficult to spell with coordinated hand movements. Other memorable events during this meeting were the fish fry held at my house and seeing people, including representatives from competing companies, scientists, students and significant others from so many walks of life enjoying each other's company. Events like this are only possible at meetings such as SEMS.

Well, I guess I need to wrap this up before I get tears in my eyes. To paraphrase a quote from the Kevin Spacey movie "Beyond the Sea" about Bobby Darin's life: Memories are like a moonbeam, you can do with them what you want. Fortunately, all of my memories of SEMS, even the hazy ones, come from a bright, full moon and are cherished.



Bob and granddaughter Riley on the beach in Panama City, Florida summer of 2005.

SEMS MICROGRAPH COMPETITION

Sponsored by *The Beam*

\$50 Prize FOR THE BEST LIGHT MICROGRAPH
&
\$50 Prize FOR THE BEST ELECTRON MICROGRAPH

RULES FOR ENTRY

- 1) You must be registered for the entire SEMS/ABS meeting.
- 2) Bring your micrographs with you to the meeting. You may submit a maximum of two entries (no individual may win more than one prize).
- 3) Your entries must be posted by 10 a.m., Thursday, March 30, 2006.
- 4) Overall dimension is limited to 11"x14" (less is better).
- 5) A separate sheet of text should include the title and a brief description of your micrograph(s).
- 6) Please print your name and contact information on the **back** of each micrograph.

Entries must be scientifically significant and will be judged on the basis of aesthetics and technical skill.

WINNERS WILL BE ANNOUNCED AT THE BANQUET.

Winning micrographs will be published in *THE BEAM*.

If you need more info please contact

Beth Richardson

706.542.1790 or beth@plantbio.uga.edu

SEE YOU IN GATLINBURG!

SEMS/ASB 2006
March 29-April 1, 2006.
CALLFORPAPERS

The 2006 Annual Meeting of the Southeastern Microscopy Society to be held with the Association of Southeastern Biologists at The **Gatlinburg Convention Center** at Gatlinburg Tennessee.

Deadline for receipt of abstracts (Including Ruska Award Participants) is **January 17, 2006** to **John Shields and Charles Humphrey**

(see addresses below).

Questions or problems with preparation of abstracts - please contact the Proceedings Editor (**John Shields**: phone: 706-542-4080 or e-mail: jshields@cb.uga.edu).

Preferred methods of submission:

A) **Disc with submission**

B) **E-mail /attachment:** Formats accepted - MSWord, Wordperfect. NO PDF files.

Complete the attached form indicating the type of presentation (Platform or Poster) Powerpoint presentations only. NO 2x2 slides will be accomodated.

Posters must fit on 4' tall x 4'wide poster space. That's right - 4 foot by 4 foot.

Abstract Submissions to BOTH:

Charles Humphrey
1600 Clifton Rd
CDC DVRD MS G32
Atlanta, GA 20222

Phone: 404-639-3306
e-mail: CDH1@cdc.gov

AND

John P. Shields
EM Lab
151 Barrow Hall
University of Georgia
Athens, GA 30602

Phone:706-542-4080
e-mail: jshields@cb.uga.edu

INSTRUCTIONS for Preparation of Abstracts:

1. **Single space** for all text. **12 point** Times Roman or Times New Roman font only. This will insure uniformity of space and format for the Proceedings.
2. **BOLD** all letters in the title. *Italicize* or **underline** scientific names. Please do not list degrees of the authors.
4. **Start** the text of the abstract on a new line without indentation. Do not exceed 250 words.

For more information about the meeting, please go to SEMS webpage (www.semimicroscopy.org)

ASB 2006 Gatlinburg, TN

Meeting rooms

We will be the first group to use the newly renovated Mills Auditorium which is part of the Gatlinburg Convention center. Scott and I did a hard hat tour 3 weeks ago, things are progressing nicely

Housing

1. The **Glenstone Lodge** has been chosen as the official hotel for the meeting. The Rate is \$75.00 single or double. If the Glenstone fills up, then overflow will go first to their other property across the street (**The Gazebo Inn**) then to The **Holiday Inn** Holidome—which is next door to the Glenstone Lodge.

2. The **Microtel** – (\$59.00 single, 69.00 double) Rooms very small and less expensive and we would like to designate this property strictly for student housing. (Directly across from the convention center).

We have 446 rooms reserved in the Glenstone (216), Gazebo Inn (60), Microtel (85) . . . plus an additional 50 rooms for overflow at the Holiday Inn.

Social Events

Wednesday night mixer: In the exhibit hall with background music by a local bluegrass group the “Woodpickers”. Heavy Hors d’oeuvres and cash bar

Thursday night social : Beer and Bandana Bash at Mills Auditorium. Food will be picnic style with Hamburgers and hot dogs; beer will be furnished by Smoky Mt. Brewery (microbrew)

Friday night banquet : Tennessee Ballroom: Chicken en Croute (Boneless breast of chicken stuffed with mushrooms, backed and served with a mushroom demi-glace; chef’s choice of vegetables, spinach-orange salad, assorted desserts, and chocolate fountain with strawberries, pineapple, pound cake and sugar cookies.

Field trips:

Dr. Ed Clebsch and Dr. Ken McFarland will organize the field trips. This is an excellent time of the year to see things in the “park” that you never notice before.

Preliminary report from the Local Arrangements Committee for Field Trips at the SABS 2006 Meetings in Gatlinburg TN - March 29 - April 1.

- 1) ATBI - an overview of the operation of this program and the benefits it gives to the park and the public.
- 2) Environmental Challenges in preserving the biological integrity of the Park - a look at air quality issues, invasive species and proposed road construction.
- 3) Plant Communities of the Smokies - a first hand - view of several biological communities unique to the Southern Appalachians. Travel from Sugarlands to Clingman’s Dome.
- 4) Birding in the Smokies - a first hand view of the great diversity of birds in the Smokies. Travel from Sugarlands to Clingman’s Dome.
- 5) Salamanders of the Smokies - a first hand view of the great diversity of salamanders in the Smokies.
- 6) Black Bears in the Smokies - an opportunity to view bear habitat, learn about their habits and issues of human interactions with them.

Preliminary Program
ASB/SEMS 2006
Wednesday, March 29 -Friday, April 1

Preliminary Program

WEDNESDAY, MARCH 29th

8:00 am-4:00 pm	Exhibitor Set up-(Tennessee Ballroom-GCC)
11:00 am-??pm	Registration—(??)
????????????	Exhibitor Workshops (Tennessee Ballroom C and D)??
12:00 pm-2:00 pm	SEMS Executive Council meeting and luncheon (Highlander room-GSL)
1:00 pm-6:00 pm	ASB Executive Council Meeting (Azalea Room- GSL)
2:00 pm-6:00 pm	SABS Council Meeting (Dogwood 1-GSL)
2:00 pm-6:00 pm	SSP council Meeting (Gatlinburg A&B-GCC)
6:00 pm-7:30 pm	SSP lecture (Gatlinburg A&B-GCC)
4:00 pm-6:00 pm	Exhibit Area Opened (Tennessee Ballroom-GCC)
6:00 pm-7:30 pm	ASB Plenary Session (Mills Auditorium-GCC) (Dr. Peter White-N Carolina Botanical Garden)
7:30 pm-9:00 pm	ASB Welcome Reception (Tennessee Ballroom-GCC)

THURSDAY, MARCH 30TH

7:00 am-8:30 am	Past-President Breakfast (Dogwood 1-GSL)
8:00 am-8:00 pm	Registration
8:00 am-9:00 am	Poster Set-up (Tennessee Ballroom-GCC)
8:00 am-4:30 pm	PowerPoint/slide previewing (Greenbrier Room-GCC)
8:30 am-12:00 pm	Morning Paper Sessions
8:00 am-4:30 pm	Exhibit Area Opened
12:00 pm-1:30 pm	Lunch
12:15 pm-1:30 pm	SWS Luncheon (Dogwood 1-GSL)
12:00 pm-5:00 pm	Tri-Beta Field trip
1:30pm-4:45 pm	Afternoon Paper Sessions
6:00pm-10:00pm	Thursday Night Social : Beer and Bandana Bash – (Mills Auditorium-GCC)

FRIDAY, MARCH 31ST

7:00 am-8:30 am	SABS/BSA Breakfast/ Business meeting (Azalea-GSL)
7:00 am-8:30 am	SEMS Breakfast/Business meeting (Dogwood A-GSL)
8:00 am-8:00 pm	Registration
8:00 am-4:30 pm	PowerPoint/slide previewing
8:00 am-1:30 pm	Exhibit Area Opened
8:30 am- 11:00 am	Morning Paper Sessions
8:30 am- 12:00 am	Tri-Beta Activities
11:15 am-12:00 pm	ASB Business Meeting (Ballroom C-GCC)
12:00 pm- 1:30 pm	Lunch
12:15 pm- 1:30 pm	ESA Luncheon (Azalea-GSL)
12:15 pm-1:30 pm	SSP Luncheon (Dogwood 1-GSL)
1:30 pm-4:45 pm	Afternoon Sessions
1:30 pm-4:45 pm	Tri-Beta activities
5:30 pm-10:00 pm	Friday night Banquet (Tennessee Ballroom)

SATURDAY, APRIL 1ST

7:00 am-8:00 am	ASB Executive Committee Breakfast (Azalea-GSL)
8:00 am-11:00 am	ASB Executive Committee Meeting
8:00 am-12:00 am	Half day Field trips

Application for Travel Support to joint ASB/SEMS meeting for Technologists

Each year the SEMS Executive Council considers applications for travel awards to support meeting attendance by Technologists. Awards are made on a competitive basis from limited funds designated by the society for this purpose. **Submitting this application does not guarantee that an award will be made.**

A. Please Print or Type:

Name: _____

Job Title: _____

Company or Institution: _____

Mailing address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

SEMS member for _____ Years

Name of immediate supervisor: _____

Supervisor's Phone: _____

Supervisor e-mail: _____

Signature of Supervisor _____
(indicating support for your attendance)

B. Dollar amount of local funds available for you to attend ASB/SEMS 2006:

Minimum amount requested from SEMS to attend Meeting: (fill all that apply)

Hotel

Registration (available only to those presenting) _____

Automobile travel (calculate \$0.30/mile) _____

Air Travel (awards for air fare _____

will receive second priority, _____

may not be sufficient to cover entire fare, _____

and are subject to final confirmation of cost) _____

Total: _____

It is assumed that if this minimum cannot be met, you will be unable to attend the meetings. More funds than your requested minimum may be allocated after consultation with you, the Executive Council, and other applicants.

*Please use a separate sheet to briefly comment on how participation at the meeting would benefit you and enhance your present position.

Applications must be received by **January 17, 2006**. Mail to:

Judy King, 2451 Fillingim St. 334-471-7779
Univ. South Alabama jking@usouthal.edu
Mobile, AL 36849

RUSKA AWARD STUDENT COMPETITION

SEMS announces the 2006 Ruska Award Student Competition

The Ruska Award was named in honor of Ernst Ruska an inventor of the electron microscope, and his brother Helmut, who collaborated in the development of this powerful research instrument. The award recognizes excellence in the biological and physical sciences by student researchers using microscopy as the primary research tool. To qualify for this award students must 1) submit a written research summary – follow directions listed below 2) submit an abstract – follow directions in “Call for Papers” 3) and present their work in the form of a PowerPoint presentation at the SEMS meeting. The presentation should be twelve minutes in length followed by a three minute question and answer period. The Ruska Award Committee will evaluate the scientific merit of the abstract, the quality of the writing and micrographs and the oral presentation.

Participants receive free meeting registration and free housing at the meeting hotel (applicants must be willing to share a room with other students) and a free banquet ticket. The first place winner will be awarded the Ruska Award plaque and \$200.00 at the meeting banquet. All participants receive a certificate of participation.

Ruska Award Guidelines

1. Applicants must be, or have been, an undergraduate or graduate student during the academic year of the meeting. The applicant **cannot** be a previous Ruska Award winner.
2. Students must present original research conducted by the student. The research may be co-authored by the student’s advisor.
3. Applicants must submit a Research Summary. The written portion of the research summary should not exceed two-pages. An additional page of micrographs or tables /charts related to the project should be included with a figure legend that describes each micrograph or table.
4. The Research Summary must consist of:
 - Title
 - Author (s) name, and affiliation
 - Introduction
 - Methods and Materials
 - Results/Discussion
 - References

A plate of micrographs or a combination of micrographs and tables must be accompanied by a figure legend that describes each micrograph or table.

The entire Research Summary should not exceed four pages.

5. **Four copies** of the Research Summary must be submitted to the **Ruska Award Chair by Friday, Jan 17, 2006**. Include a signed copy of the Ruska Award Checklist (next page). The student’s advisor must sign the **Ruska Award Checklist**.

Ruska Award Chair:

Michael Miller
Biol. EM Imaging Facility
101 Life Sciences Bldg
Auburn Univ.
Auburn, AL 36849
334-884-1654
millem1@auburn.edu

6. Write an Abstract following the guidelines in the “Call for Papers” article included elsewhere in this issue of *The Beam*.
An **electronic submission** of the Abstract clearly labeled “**Ruska Participant**” must be submitted to the **Program Chair by Tuesday, Jan 17, 2005**.

Program Chair:

John Shields
151 Barrow Hall
Univ. of Georgia
Athens, GA 30602
706-542-4080
jshields@cb.uga.edu

Ruska Award Checklist: Mail this form with your Research Summary

1. Student’s name_____.
2. Your affiliation _____.
3. Your address_____.
4. Research Summary includes:
Title, Authors, Affiliation____.
Introduction____.
Methods & Materials____.
Results____.
Discussion____.
Figures &Legends_____.

Send Four Copies to Ruska Award Chair and One copy to Program Chair.

5. Sponsor verification:
“I verify that the above listed Ruska Award participant is an undergraduate/graduate student during this academic year.”
Signed/Dated_____.

Ruska Award Method of Evaluation

The Ruska Award Committee using the following criteria will evaluate the research summary and oral presentation:

I. Submitted Text

A. Scientific Merit

1. Soundness of research proposal
2. Experimental design and thoroughness of investigation (originality, correlated techniques)
3. Validation of conclusions
4. Application of microscopy and associated methods to answer experimental questions

B. Micrographs

1. Presentation of specimen (fixation, quality of sectioning and staining)
2. Instrumentation
3. Photographic quality (aesthetics, density, contrast)

C. Quality of Writing

1. Organization
2. Clarity
3. Grammatical correctness

II. Oral Presentation

A. Clarity

B. Communication

C. Quality of Presentation

D. Response to audience questions

E. Adherence to presentation time limit (12 minutes for the presentation and 3 minutes for questions)

Letter from the Editor:

This year we will be attempting a new idea for the Southeastern Microscopy Society - a joint meeting with another regional society. But not just a joint meeting. We formally became an affiliated society with the Association of Southeastern Biologists (ASB) to increase our exposure to another like-minded group and to take advantage of their excellent professional meeting company. While SEMS is an affiliate of ASB (as well as MSA and MAS), we are under no obligation to meet jointly with them at all times, allowing for some flexibility. Hopefully our corporate members will find benefit in the association from increased exposure - there will be approximately 500-800 people in attendance!

In other news, I am hoping that this year will be the last for me as editor of the Beam. At our last meeting, **David Burk** at LSU had agreed to take on the responsibility of editorship, but became quickly overwhelmed by a new baby and various hurricanes. Hopefully David will be on board for next year's issue. If you have ideas, articles, news, micrographs, or pictures, please begin to help David out.

I've been getting e-mails from our President-Elect, **Johnny Carson** about finding nominees for the various officers this year. Seems there are few willing members to participate. I realize we are all busy, but a society cannot function if there are no people willing to step up to the plate. As it is, we keep having to "recycle" our previous officers. Johnny Carson is one of those exemplary members willing to do what it takes to make SEMS a viable and relevant organization. As a past president, I can envision my oncoming recycling of another future term in office because of the lack of participants. I don't mind serving the society, but the prospect that there are few other options to recycling active members is disheartening and, I believe, threatens the future of this society. If we cannot bring on fresh, young members to be active participants of our society, then when the "old guard" are no longer available, SEMS will be at risk for extinction.

Let's hope we don't become extinct.
John Shields

**Microscopy Society of America
Application for Membership**

230 East Ohio Street, Suite 400
Chicago, IL 60611-3265
800-538-3672, 312-644-1527, Fax: 312-644-8557
Email: BusinessOffice@MSA.Microscopy.Com

To Apply, please go to
<http://www.msa.microscopy.org/MSAUnits/Members/NewMemberApplication.html>

And fill out the form online

**CHANGE OF AFFILIATION,
PHONE, E-MAIL, ADDRESS?**

Contact one of these individuals with your new information so members can find you!

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1600 Clifton Rd.
CDCMS G30
Atlanta, GA 30333
404-639-3306
cgoldsmith@cdc.gov

Karen Kelley, Treasurer
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klk@biotech.ufl.edu

John Shields, Editor
EM Lab
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Univ. of GA
Athens, GA 30602
706-542-4080
jshields@cb.uga.edu

Southeastern Microscopy Society Membership Application

The purpose of SEMS is to increase and spread knowledge of microscopy. Most members share an interest in the biological and physical sciences, applications of light microscopy, and transmission and scanning electron microscopy, and microscopical analysis. The annual meeting presents invited speakers, contributed papers and posters, as well as commercial exhibits of light and electron microscopes and related equipment and supplies.

Annual dues for regular members are **\$20**, students (with signature of faculty advisor) **\$10** and corporate members **\$100** for the calendar year.

Name: _____

Company or Institution: _____

Mailing address: _____

City, State, zip: _____

Telephone: _____ E-mail: _____

Fax: _____ URL: _____

Membership: Regular Student Corporate

*Signature of Faculty Advisor: _____

Make checks payable to **SEMS** and mail to:

Karen Kelley, Treasurer
PO Box 118525
University of Florida
Gainesville, FL 32611

MICROBEAM ANALYSIS SOCIETY

(FEIN 23-7044608)
PO BOX 502
Fairport, NY 14450-0502
MEMBERSHIP APPLICATION
(web)



MEMBER INFORMATION (Please print or type)

Name: Last _____ First _____ M. Initial ____ Title _____

Affiliation: (Agency/Business/School) _____

Mailing Address () Home or () Agency/Business/School

Street address: _____

City: _____ State: _____ Country: _____ Zip: _____

Phone Numbers: Home _____ Agency/Business/School _____

Fax Number: _____ Email: _____

Are you a member of MSA? () Y () N Are you a member of a MAS affiliated regional society? () Y () N

NOTE: MAS makes its mailing list available to our sustaining members and other companies in the field for a fee.
If you do not want your name included on these labels, check here ()

MEMBERSHIP TYPE (CHECK ONE)

() Regular Member () Student Member (**must** complete the following)

Faculty Advisor (Print): _____ Graduation Date: _____

Advisor's Signature: _____

MEMBERSHIP DUES

REGULAR (\$25.00), STUDENT (\$5.00) _____

Additional mailing costs for foreign members (\$5.00) _____

Microscopy and Microanalysis Journal (\$15 for US residents, \$38 for non-US residents) _____

MSA members: the Journal is included in your MSA membership dues

Contribution to Fiori Fund* _____

(supporting a MAS tour speaker presenting topics of technical interest)

Contribution to Potter Fund* _____

(supporting students attending the annual M&M meeting)

Use of both funds is at the discretion of the MAS Council* **TOTAL ENCLOSED \$ _____

METHOD OF PAYMENT (US Dollars Only)

___ CHECK Make payable to Microbeam Analysis Society. All checks must be drawn on a US bank with the US Micro transit code. Foreign drafts without this code will be charged an additional \$20 to process.

___ CREDIT CARD () Visa () MasterCard

Name of cardholder (PRINT): _____ Expiration Date: _____

Signature of cardholder: _____ Card Number: _____

Billing Address if different than above: _____

Your canceled check or credit card charge statement is your receipt. If you want a separate receipt, check here ()

I hereby apply for admission as a member of the Microbeam Analysis Society and agree to be governed by the Constitution and By-laws of the Society and to promote its aims and objectives.

Applicant's Signature: _____ **Date:** _____

Mail application with credit card information or check to: Microbeam Analysis Society, PO Box 502, Fairport, NY, 14450-0502

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151 Barrow Hall
University of Georgia
Athens, GA 30602

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Spring 2006 **Mar. 1, 2006**

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