



# *MicroNews*

## Summer 1999 Newsletter of the Microbeam Analysis Society

<http://www.microanalysis.org/>

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### **PRESIDENT'S MESSAGE**

Dear Members,

As I write this message, I am looking forward to a successful Annual Meeting in Portland. I visited the Portland area for the first time in March to attend the Program Production Meeting, and I was impressed with the beauty of the area and the number of activities planned by the Local Arrangements Committee. Both the Program Committee and LAC have done a superb job in preparing for this meeting.

As we did last year in Atlanta, MAS is sponsoring a Special Symposium, this one celebrating 50 years of electron probe microanalysis. Ryna Marinenko and Jim McGee and their committee have put together a comprehensive program on microprobe analysis. There will be talks covering the entire range of topics from the early days to the latest developments. MAS will continue to sponsor Special Symposia on topics of interest to our members, though it is not our intention to do these every year. However, if a member has a suggestion for a topic or place, please mention it to one of the Council members or to Valerie Woodward, our chairperson for Topical Conferences. Future symposia may be incorporated into the annual M&M meeting as this one is, they might be held before the meeting at a nearby location, or they might be held at another time of year as part of a local affiliates meeting. Again, suggestions are welcome and help is available.

For M&M '99, we have about 700 papers and over 100 exhibitors. Therefore, attendees will have a chance to hear the latest scientific developments as well as see the newest equipment for microscopy and microanalysis. The "Program at a Glance" appears later in this issue, and the full program is published in the most recent edition of *Microscopy and Microanalysis*. As is our custom, MAS will hold a social event in the SkyView Terrace overlooking the registration area in the Convention Center. This will be held following

the Annual Business Meeting scheduled for Wednesday at 5:00 PM. It is for paid members only, so get your tickets and renew your membership, if necessary, at the MAS Booth across from the registration area.

At the Presidential Happenings Session on Tuesday, MAS will honor the recipients of awards for the best papers from last year's meeting and the MAS student scholars selected for this meeting. I will also have the pleasure of presenting the Presidential Awards for Science, Service, and the Heinrich Award. As mentioned in the last *MicroNews*, the Presidential Science Award this year goes to Rob Sareen, the Service Award goes to Tom Huber, and the Heinrich Award goes to John Bruley. Presenting these awards is one of the more pleasant duties of this office. Following the awards ceremony, we will hear a talk by Joe Goldstein in which he will review some of the work done over the years on extraterrestrial materials. Joe gave a talk on a similar subject at our meeting in Breckenridge in 1995, and those of us who heard it were truly fascinated.

While in Portland, Paul Hlava will hold a luncheon meeting for Council members to meet with representatives of the Local Affiliates. At this meeting, the Local Affiliates Societies will choose four speakers for next year. Once the speakers and topics have been decided upon, each local society can select a speaker for one of their meetings next year and make arrangements through Paul. If you are a member of one of these societies and have a particular topic or speaker in mind, be sure to let the officers know.

As many of you are aware from the last *MicroNews*, our new Membership Services Director is Lou Ross. You can find ways to contact Lou listed under Additional Representatives later in this issue. Lou handles all membership-related services except dues. For dues, see the membership application on the back. You can also keep current on Society affairs by visiting our newly updated web site at <http://www.microanalysis.org/>

Several months ago, Dave Williams, Tom

Huber, and Gordon Cleaver assessed the state of the MAS archives and put them in historical order. However, they found that there was no record of past MicroNews issues and no compilation of past MAS Conference Proceedings. If anyone can help the Society and supply some of these records, we would be most appreciative.

This is my last Presidential Message, as the end of my tour of duty as President draws near. I wish personally to thank the members of Council and committees for their efforts, and to thank the members of the Society for their support.

I hope to see many of you at M&M '99 in Portland. Be sure to stop by the MAS booth while you are there.

John Friel

## EDITOR'S NOTE

There is a lot of information in this issue of MicroNews on the upcoming M&M'99 meeting in Portland including the schedule for the MAS regional affiliates lunch, the business meeting, and social. The *Meeting at a Glance* is included as well. There is also information on ordering an English translation of Castaing's thesis. This will be the last opportunity to order it.

I have had a few responses from the regional affiliates regarding upcoming meetings. Thank you. A couple of my email messages were returned. Be sure to notify Paul Hlava of changes in email addresses or in changes of leadership so that he can pass the information on to me. I like to publish the date, location, and time of your upcoming meetings.

## MEMBERSHIP SERVICES

The second notice to renew your MAS membership was sent out several weeks ago. Just a reminder that for every MAS member registered at the M&M meeting in Portland, the Microbeam Analysis Society receives a portion of the profits. You still have a chance to renew your membership in Portland. Stop by the MAS booth to renew or become a member. I encourage all members to take a few minutes to come by the MAS booth to say "Hi" and verify that their membership information is correct. Also you will have to stop by for

a stamp to attend the MAS Social which will be at 6:00 p.m. after the MAS Business Meeting on Wednesday, Aug. 4. You can always contact me for corrections or comments by calling 800-4MASMEM, or by email or regular mail at the addresses listed under Additional MAS Representatives. See you in Portland!

Lou Ross, Membership Services

## MEETINGS AND SHORT COURSES

### Meetings

**MICROSCOPY & MICROANALYSIS '99**, Aug. 1-5, 1999 Portland, OR

Contact: MSA Meeting Manager, Tel:+1(877)MSA-MAS1 (toll-free in US), +1(708)361-6045; FAX: +1 (708)361-6166, e-mail: MSA@tradeshownet.com, internet: <http://www.msa.microscopy.com>

**Imaging Tech '99**, Aug.17-19, 1999, Chicago, IL, USA

Contact: Jennifer Putman, ASM Intl, Fax +1(440)338-4634; email: [jputman@po.asm-intl.org](mailto:jputman@po.asm-intl.org)

**Scanning Microscopy International**, Aug. 22-24, 1999, Conf: Cells & Materials: Bone & Soft Tissue Biomaterial Interactions, Davos, Switzerland

Contact: Dr.Geoff Richards. AO ASIF Res. Inst., Fax +41 (0) 81 4142 288, email: [geoff.richards@ao-asif.ch](mailto:geoff.richards@ao-asif.ch), internet: [www.ao-asif.ch](http://www.ao-asif.ch)

**EMAG 99 Electron Microscopy and Analysis Group Conference and Exhibition**, Aug. 25-27, 1999, Sheffield, UK

Contact: Institute of Physics, FAX: +44 (0) 171 470 4900, email: [conferences@iop.org](mailto:conferences@iop.org) [www.iop.org](http://www.iop.org)

**1st Intl Conf on Scanning Probe Microscopy of Polymers**, Aug. 27-29, 1999, Santa Barbara, CA, USA  
Contact: Terry Mahr, Fax: +1(805)967 7717; email: [terry@di.com](mailto:terry@di.com); Internet: [www.di.com/poly/poly](http://www.di.com/poly/poly)

**4th Multinational Congress on Electron Microscopy**, Sept. 5-8, Veszprem, Hungary  
Contact: +36 88 328 643, email: [mcem@almos.vein.hu](mailto:mcem@almos.vein.hu), Internet: [www.vein.nu/conference/mcem](http://www.vein.nu/conference/mcem)

**12th Intl Conf on Secondary Ion Mass Spectrometry**, Sept. 5-10, 1999, Brussels, Belgium  
Contact: SIMS12 Secretariat, email: [sims12@pcpm.ucl.ac.be](mailto:sims12@pcpm.ucl.ac.be) internet: [www.mapr.ucl.ac.be/sims12](http://www.mapr.ucl.ac.be/sims12)

**29th Meeting of the German Society for Electron Microscopy**, Sept. 5-10, Dortmund, Germany  
Contact: Dr. Karl Zierold, MPI f. Mol Physiol, Rheinlanddamm 201, 44139 Dortmund, Germany. Tel: +49 231 1206 455, Fax: +49 231 1206 464, e-mail: karl.zierold@mpi-dortmund.mpg.de

**25th California Microscopy Colloquium**, Oct. 1999, San Francisco SU, CA, USA  
contact: Greg Antipa, Internet: [online.sfsu.edu/~camicro/](http://online.sfsu.edu/~camicro/)

**ECASIA '99**, 8th Conf on App of Surf Int Analysis, Oct. 4-10, Seville, Spain,  
Contact: Dept Fsica Aplicada, C?XII, Facultad de Ciencias, Univ Autnoma de Madrid, Cantoblanco E28049, Spain. Fax: +34 1 397 3969, email: ECASIA99@uam.es, Internet: [www.uam.es/fa/ecasia99.html](http://www.uam.es/fa/ecasia99.html)

**Eastern Analytical Symposium and Exposition**, Nov. 14-19, 1999, Somerset, NJ, USA  
Contact: EAS hotline; +1 302 738 6217 email: easinfo@aol.com [www.eas.org](http://www.eas.org)

**16th Australian Conference on Electron Microscopy 2000**, February 6-11, 2000, , Canberra, Australia  
Contact: Dr Stuart Craig. Fax +61 2 6246 5000, email: stuart.craig@pi.csiro.au [www.anu.au/EMU/acem](http://www.anu.au/EMU/acem)

**MICROSCOPY & MICROANALYSIS '2000**, Aug. 13-17, 2000, Philidelphia, PA  
Contact: Mary Rebedeau, Chicago. Fax +1 708 361 6166, email: [msa@tradeshownet.com](mailto:msa@tradeshownet.com), Internet: [www.msa.microscopy.com](http://www.msa.microscopy.com)

**MICROSCOPY & MICROANALYSIS 2001**, Long Beach, CA

**MICROSCOPY & MICROANALYSIS 2002**, Quebec City, Quebec, Canada

**IUMAS 2000**, July 8-15, 2000, Kona, Hawaii.  
Contact: David B. Williams, (610)758-4224 FAX: (610)758-4244; Email: [DBW1@lehigh.edu](mailto:DBW1@lehigh.edu)

**EUREM 2000: 12th European Congress on Electron Microscopy**, July 9-14, 2000, Brno, Czech Republic  
Contact: Fax +42 0 541514337, email: [eurem200@isibrno.cz](mailto:eurem200@isibrno.cz), Internet: [www.eurem2000.isibrno.cz](http://www.eurem2000.isibrno.cz)

**ICEM 2002 - 15th International Congress on Electron Microscopy**, Sept. 1-6, 2002, Durban, South Africa  
Contact: Robin Cross, Fax +27 46 622 4377, email: [eurc@giraffe.ru.ac.za](mailto:eurc@giraffe.ru.ac.za), Internet: [www.ru.ac.za/affiliates/emu/icem2002.htm](http://www.ru.ac.za/affiliates/emu/icem2002.htm)

## Short Courses

**Summer School on Computer-interactive HRTEM image acquisition, processing and simulation**, Aug. 9-13, 1999, Berkeley, CA, USA  
Contact: Fax: +1 510 486 5888, email: [jlcvlina@lbl.gov](mailto:jlcvlina@lbl.gov), Web: [ncem.lbl.gov](http://ncem.lbl.gov)

**Imaging Tech '99**, Aug. 17-19, 1999, Chicago, IL, USA  
Contact: Jennifer Putman, ASM Intl, Fax +1 440 338 4634, email: [jjputman@po.asm-intl.org](mailto:jjputman@po.asm-intl.org)

**Asbestos Analysis by TEM**, Oct. 20-22, 1999, Norcross, GA, USA  
Contact: McCrone Res Inst: Fax: +1 312 842 7100

## Affiliated Regional Societies Meetings

**AREMS**, visit web site for information [www.clinch.edu/cvc/arems/arems.html](http://www.clinch.edu/cvc/arems/arems.html)

**MMMS**, visit web site for information: <http://www.msa.microscopy.com/MSALAS/MMMS/MMMSHomePage.html>

**CSMMS**, Oct. 22, 1999, Columbia, MO

## MAS TOUR SPEAKER PROGRAM

This year has been the busiest ever for the Tour Speaker Program that I have ever experienced. MAS sponsored speakers to nine societies this past fall and spring. Three more visits are already scheduled for this coming fall (see the two tables below). If your society wishes to have one of these speakers, they will be available until the end of the calendar year.

I am soliciting names for candidate speakers for the 1999-2000 MAS Tour Speaker Program, so I urge you all to give some thought to this. I would appreciate having them in advance of the ARS meeting but will accept them there, also. I do have a list of last year's ideas and would like to add a few more before going to the meeting.

Don't forget that all of MAS Council and at least one representative from each of the affiliated societies are invited (expected?) to be present at the MAS Affiliated Regional Societies meeting which will be held on Tuesday, Aug. 3, 1999 at noon in room 105 of the Convention Center. As usual, MAS will host the lunch. I am currently planning for a cold buffet.

For Paid MAS members only and their guests (\$15 charge).

### Completed Tours

Society	Speaker	Date
AIMS - AZ	Platek	March 11, 1999
IAS - Pitts	Platek	Nov. 19, 1998
M2S - Metro	Hlava	April 27, 1999
MAMAS	Wollman	May 18, 1999
MIKMAS	Hlava	Oct. 16, 1998
MMS - MN	Wollman	May 13, 1999
NCSMMA	Andrews	Oct. 30, 1998
NMMBUG	Platek	March 10, 1999
WestMAS	Wollman	April 9, 1999

### Scheduled Tours

Society	Speaker	Date
NCSMMA	Wollman	Oct. 29-31, 1999
PSM - Phila.	Platek	Sept. 23, 1999
SSTP - RI	Platek	Sept. 24, 1999

Respectfully Submitted,  
Paul F. Hlava, Director of the Affiliated Regional Societies

## IUMAS 2000

An IUMAS 2000 brochure was enclosed in the last issue (Spring '99) of MicroNews. We hope many MAS members will be attending this extraordinary international meeting in Kona, Hawaii. If you are planning to participate, please return the form in the brochure to Sharon Coe [(610)758-5133] or Dave Williams (dbw1@lehigh.edu) at Lehigh University. You will receive hotel and abstract submission information in the fall. For additional information visit the web site at

<http://www.microanalysis.org/iumas2000/>

Dave Williams

## DATES to REMEMBER at M&M'99

### Regional Affiliates Lunch

Tuesday, Aug. 3, 1999, 12:00 noon, Room 105, Convention Center

### MAS Business Meeting

Wednesday, Aug. 4, 1999, 5:00 pm, Convention Center

### MAS Social

Wednesday, Aug. 4, 1999, 6:00 pm, SkyView Terrace, Convention Center

## MICROSCOPY & MICROANALYSIS 99

This year there are almost uncountable excellent reasons for attending the annual Microscopy and Microanalysis meeting that will be held in the beautiful city of Portland, Oregon. We probably have one of the strongest microanalysis programs ever. The centerpiece of this meeting is the special Microbeam Analysis Society sponsored "Fifty Years of Electron Probe Microanalysis". This symposium is dedicated to the "father" of electron probe microanalysis, Professor Raimond Castaing. Invited speakers from across the globe will review the history of electron probe analysis and discuss its future in the analysis of modern materials. A second special symposium that will be of special interest to many of our members is the "A. Howie Symposium, A Celebration of Pioneering Microscopy". This symposium honors Professor Archie Howie and celebrates his many outstanding contributions to electron microscopy and microanalysis.

Other symposia with definite interest for the microanalyst include: *Quantitative X-ray Microanalysis*, *Optical Microanalysis via Molecular Spectroscopy*, *Atomic Structure and Microchemistry of Interfaces*. There will be two diffraction symposia, *Electron Diffraction in the SEM* and *Electron Diffraction in the TEM* as well as two symposia focused on scanned probe microscopies, *Developments in SPM of Polymers* and *SPM: Much More than Just Beautiful Images*.

If the scientific program were not enough to attract you, there are numerous fun social events. On the Saturday evening prior to the meeting, a "Brew Bus" will tour a number of Portland's exemplary microbreweries. An extra night in Portland? Well, your managers will like the fact that the Saturday night stay will reduce your overall airfare! The Sunday evening reception this year will be held at the Oregon Zoo and promises to be a fun time. This meeting is has been designed with MAS members in mind. Don't disappoint us - be sure to attend - bring the family. Portland is a really nice city to visit! Remember, Portland in August definitely does not have the humidity of Atlanta!

John Mansfield, MAS Program Co-Chair

## MAS Celebrates

### Fifty Years of Electron Probe Microanalysis

A Symposium Dedicated to Prof. R.  
Castaing

Organizers: Ryna Marinenko, Jim McGee, Paul Carpenter,  
Greg Meeker, and John Armstrong

MAS is presenting a very special symposium at the M&M'99 meeting in Portland, OR, Aug.2-5, 1999 to celebrate the 50 years since Prof. Raimond Castaing's publication describing his development of the electron microprobe. This promises to be an enlightening as well as entertaining symposium. Invited speakers who knew or worked with Castaing have been asked to share their memories of this exceptional scientist. The final program for the symposium is complete. Titles of the oral presentations of the invited speakers (though not necessarily in order of presentation) are on the opposite page. We hope you all will be there to share in this rare opportunity to experience the early development of EPMA and some personal accounts of professional associates of Prof. Castaing as well as other early participants in field. As you can see from the program, subsequent developments in instrumentation and matrix correction procedures, and the impact of EPMA on applications will be presented. The program will end with a discussion of what to expect in the future.

If you have historical photos (or copies) of Castaing and other scientists who worked in the field during the early years, as well as photos of early instruments, or meetings, please send them to Ryna Marinenko (address in the "Executive Council" list). All photographs will be returned. Written stories or anecdotes are also most welcome; these will be enlarged for easy reading. A "50 Years Remembered" bulletin board will be prepared for the occasion.

## CASTAING'S THESIS

As part of the *50 Years of EPMA* Symposium that will be held at the Portland M&M meeting on August 2 and 3, 1999, MAS is preparing copies of the English translation of Prof. Raimond Castaing's 1951 thesis. The translation, by Pol Duwez and David Wittry, was printed in 1955. The copies, which will be about 160 pages, including figures, will be spiral bound and xeroxed. Only enough will be made for those persons requesting and paying for them in advance. This is your last opportunity to place an order. Copies will be sent out via air mail shortly after the M&M meeting. The total cost, including shipping will be \$27. Payment may be made by check or credit card. Make checks payable to MAS. Fill out the form below with all the correct information. If payment is by check, send it with the form to Jim McGee at

James J. McGee  
Department of Geological Sciences  
University of South Carolina  
Columbia, SC 29208

If you are charging it to VISA or MASTERCARD (only these cards and no others), you may FAX the information to Jim at

FAX (803) 777-6610

Or for more information from him, his email address is  
jmcgee@sc.edu

Please send me a copy of the English translation of  
Castaing's thesis to

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_

COUNTRY \_\_\_\_\_

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MAS Celebrates  
***Fifty Years of Electron Probe Microanalysis***  
A Symposium Dedicated to Prof. Raimond Castaing

Keynote Address <i>The Time of the Pioneers</i>	Jean Philibert
<i>Microprobe Design in the 1950's - Some Examples in Europe</i>	Peter Duncumb
<i>The Golden Ate of Microanalysis</i>	Kurt Heinrich
<i>Development of Electron Probe Instrumentation During those Early Days when Professor Castaing Visited Japan</i>	Ryuichi Shimizu
<i>Crystal Spectrometers and Monochromators in Microanalysis</i>	David Wittry
<i>Advances in WDS Crystal Performance</i>	Charles Nielsen
<i>EDS and WDS Automation: Past Development and Future Technology</i>	Jon McCarthy
<i>Today's and Tomorrow's Instruments</i>	Claude Conty
<i>Quantitative Electron Probe Microanalysis: Fifty Years of Developments in the Application of Castaing's "Z" and "A" Corrections</i>	John Armstrong
<i>Characterization and Continuum Fluorescence in Electron Beam X-ray Microanalysis</i>	Clive Nockolds
<i>Fundamental Constants for Quantitative X-ray Microanalysis</i>	David Joy
<i>Minimizing Errors in Electron Microprobe Analysis</i>	Eric Lifshin
<i>Selecting Standards to Optimize Electron Microprobe Analysis</i>	Eric Essene
<i>Application of the Electron Probe Microanalyzer to the Analysis of Planetary and Geological Materials: A Historical Perspective</i>	Klaus Keil
<i>A Few Examples of Electron Microanalysis of Art Objects at the Boston Museum of Fine Arts</i>	Robert Ogilvie
<i>Minimally Invasive (Energy) Dispersive Analytical Spectroscopy (MIDAS). The Golden Touch for In-Situ X-ray Microanalysis of Bulk Bio-Organic Samples</i>	Patrick Echlin
<i>Castaing's Electron Microprobe and its Impact on Materials Science</i>	Dale Newbury

## EXECUTIVE COUNCIL

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## HONORARY MEMBERS

L. S. Birks (Deceased)  
I. B. Borovskii (Deceased)  
Raimond Castaing (Deceased)  
Arthur A. Chodos  
V. E. Cosslett (Deceased)  
Peter Duncumb  
Charles E. Fiori (Deceased)  
Raymond Fitzgerald  
Theodore Hall

K. F. J. Heinrich  
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Joseph I. Goldstein  
L. L. Marton (Deceased)  
Robert E. Ogilvie  
Jean Philibert  
Stephen J. B. Reed  
Gunji Shinoda (Deceased)  
Georges Slodzian  
David B. Wittry

## ADDITIONAL REPRESENTATIVES

### Accountant, Dues and Mailing List

#### William S. Thompson

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P.O. Box 502; Fairport, NY 14450-0502  
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### Affiliated Regional Societies

#### Paul Hlava

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pflava@sandia.gov

### Awards Committee for MAS 1999

#### Don Parker (see directors)

#### Cathy Johnson (see directors)

### Computer Activities Committee

#### John F. Mansfield

(734)936-3352 FAX: (734)763-5567  
jfmjfm@umich.edu

#### Paul Carpenter (see directors)

(256)544-6216 FAX (256)544-8762  
Paul.Carpenter@iss.msfc.nasa.gov

### Conference Proceedings Inventory

#### C. Susskind

San Francisco Press, Inc.; Box 6800  
San Francisco, CA 94101-6800  
(510)524-1000

### Corporate Liaison Committee

#### Thomas G. Huber

JEOL (USA) Inc.; 11 Dearborn Road  
Peabody, MA 01960  
(978)535-5900 FAX:(978)536-2205  
<http://www.jeol.com>

### Finance Committee, Archivist & Historian

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### International Liaison

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### MAS-MSA Liaison, Nominations and President's Awards

#### John Friel(see President)

### Membership Services

#### Lou Ross

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### Topical Conferences Liaison

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# AFFILIATED REGIONAL SOCIETIES

Full Name (Acronym) (arranged alphabetically by full name)  
Contact (Position in that Society)  
Address  
Phone  
FAX (only one number given indicates phone unless otherwise noted)  
email

## **Appalachian Region Electron Microscopy Society (AREMS)**

Chuck Turnbill (President)  
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Parker

## **Arizona Imaging and Microanalysis Society (AIMS)**

Clark Lantz  
P.O. Box 245044  
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Life Sciences North Room 447; University of Arizona  
Tucson, AZ 85721  
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lantz@u.arizona.edu  
<http://www.msa.microscopy.com/MSALAS/AIMS/AIMSOFF.HTM>

## **Central States Microscopy and Microanalysis Society (CSM&MS)**

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