



MicroNews

Fall 1998 Newsletter of the Microbeam Analysis Society

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

President's Message

I am honored to serve as President this year, and I will work to justify the trust of the members. Ryna Marinenko did a superb job last year and is still working on behalf of MAS as Past-President. As a result of the efforts of the program and local arrangements committees, the M&M '98 meeting in Atlanta was a success despite competition from the ICEM meeting in Cancun and an overlap with the Semicon West meeting. Though MAS members make many contributions to these joint meetings every year, this year's "30 Years of EDS" Symposium stood out as a visible part of the program sponsored by our society. Jon McCarthy brought together 27 papers on topics ranging from the early years to instrumentation to performance measurement to the latest techniques not yet commercialized. Presentations on all of those topics together in one symposium drew a large attendance and anyone could get an education in our field in just two days. If you missed the session, however, you will get a second chance, because Jon is editing an issue of *Microscopy and Microanalysis* that will contain full versions of the papers from the symposium.

Next year at the M&M '99 meeting in Portland, OR, MAS will once again take a prominent role by sponsoring a symposium in memory of Raimond Castaing recognizing 50 years of electron probe microanalysis. Ryna Marinenko and Jim McGee are organizing it, and I know they will invite interesting speakers and produce a strong program. As with this year's symposium, the presentations will range from historical reviews to the very latest in equipment and technology. So plan to attend the Portland meeting; you will not be disappointed.

Since this is the fall issue of *MicroNews*, it includes election information. At the society business meeting in Atlanta, the nominating committee presented a slate of candidates, and the members who were present accepted them. The candidates are Charles Lyman for President, Harvey Freeman for Treasurer, and Ian Anderson, Raynald Gauvin, Louis Ross, and Scott Wight for Director. You can read more about the candidates later in this issue of *MicroNews*. They have all distinguished themselves at the local or national level and are willing to work for the Society on the Executive Council. Ballots will be mailed with

membership renewal notices, and space is provided for write-in votes. In a small society such as this, your vote has more of an effect than in a larger organization; so be sure to vote when you renew your membership.

The terms of two of our directors are expiring at the end of the year, and I thank Greg Meeker and Rich Linton for their work both on Council and other MAS activities. Both have made many contributions to the Society, and I am sure they will continue to do so.

MAS now has two new honorary members, Joe I. Goldstein and Ray Fitzgerald. They were voted on at the MAS business meeting after nominations and signed petitions were presented to the membership. Congratulations!

We now have a new membership directory as a result of the efforts of Scott Wight. It contains names, addresses, phone numbers, and e-mail addresses of our members. Also included is a history of the society written by Dave Wittry, along with lists of previous office holders and award winners. I have personally wanted an updated directory for several years, and I appreciate the amount of work it must have taken Scott to compile this information. Another source of information is our web site maintained by John Mansfield: <www.microanalysis.org/mashomepage.html> It is often updated and is worth visiting from time to time to stay abreast of society activities.

I encourage members to contribute manuscripts to the journal we jointly sponsor with other societies, "Microscopy and Microanalysis." If you use or have developed an interesting technique, consider publishing your work either in the *Journal* or presenting it at the joint meeting in the summer. If you later publish your results in a journal related to your field, you can always reference the MAS publication for the details of the microscopy or analysis. I also encourage members to support their local affiliated society. Those of you in academic positions are asked to urge your students to participate.

I thank the members for the privilege of serving as President, and invite you to contact me with any suggestions or issues you would like to see the society address.

John Friel

MEMBERSHIP SERVICES

Please send us your address changes, phone number changes (new area codes), and new email addresses so that we can keep our database up to date. Membership renewals will be in your mailbox soon. Don't procrastinate, if you do not pay your dues by June 30, you will be dropped from the membership and will not receive any MicroNews, renewal notices, or meeting information. Another good reason to renew is that MAS gets a portion of the meeting profits from M&M for every paid MAS member that attends the meeting. You may notice the line for contributions to Fiori and Potter funds on the renewal as optional opportunities to give in their memories. Anyone at any time can contribute to these funds by sending a check indicating the fund to either the treasurer or our accountant. The membership directory has some errors, my apologies. Please send email changes to scott.wight@nist.gov or call the 800 number.

Call for Abstracts for the M&M 99 Meeting in Portland have been mailed. If you did not receive one or want to request an extra, call the MSA Meeting Manager at 708-361-6045 or fax 708-361-6166. Deadline for abstract submission is Feb. 15, 1999.

If anyone knows the current address of Tixier (France), Cheol-Woong Yang (Korea), or Natarajan (India) please forward it to me.

I am resigning as membership services chair effective immediately. So, if anyone is interested in taking over the position please contact me and I will let you know what is involved. I will work with the new chair to ensure a smooth transition.

Scott Wight, 800-4MASMEM

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MEETINGS AND SHORT COURSES

Meetings

PITTCON 99, 50th Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, March 7-12, Orlando, FL,
Contact: (800)825-3221, Internet: <http://www.pittcon.org>

27th Ann Symp Florida Chapter of the American Vacuum Society and 17th Ann Mtg Florida Soc for Microscopy, Mar. 15-16, Orlando, FL
Contact: Dr. Karl Muffly, kmuffly@com1.med.usf.edu

Scanning 99 Conference and Exhibition, Apr. 11-14, 1999, Chicago, IL
Contact: Mary Sullivan, Fax: (201) 818 0086, email: scanning@fams.org, www.scanning-fams.org

EMAS 99, Workshop on Dev and Applic in Microbeam Analysis, May 3-7, Konstanz, Germany
Contact: Secretariat, Univ Antwerp, Belgium, Fax +32 3 820 2376 email: vantdack@uia.ua.ac.be

4th Multinational Congress on Electron Microscopy, Sept. 5-8, 1999 Veszprem, Hungary
Contact: +36 88 328 643, email: mcem@almos.vein.hu, Internet: www.vein.hu/conference/mcem

29th Meeting of the German Society for Electron Microscopy, Sept. 5-10, 1999, 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

ECASIA '99, 8th Conf on App of Surf Int Analysis, Oct. 4-10, 1999, Seville, Spain,
Contact: Dept Fisica Aplicada, C?XII, Facultad de Ciencias, Univ Autonoma de Madrid, Cantoblanco E28049, Spain. Fax: +34 1 397 3969, email: ECASIA99@uam.es, Internet: <http://www.uam.es/fa/ecasia99.html>

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

MICROSCOPY & MICROANALYSIS '2000, Date TBA, Philadelphia, PA

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

Short Courses

Analytical Light Microscopy Course for Chemists, Am. Chem. Soc., Mar. 5-7, Orlando, FL
Contact: 1 (800) 227 5558, Internet: <http://www.acs.org>

Introduction to TEM- Techniques and Applications Course, Mar. 12-16, 1999, Chicago, IL
Contact: Nancy Daerr, McCrone Res Inst. Fax + 1 312 842 1078 email: ndaerr@mcri.org, , Internet: <http://www.mcri.org>

PASEM 99, Practical Aspects Series of Short Courses on Microscopy. May 17-28, 1999, Univ. Maryland, College Park, MD
Contact: Tim Mangel, Fax +1 301 314 9358, email: 11@umail.umd.edu internet: <http://www.life.umd.edu/pasem>

Lehigh U. Microscopy Short Courses, June 13-25, 1999, Lehigh U., Bethlehem, PA
Contact: Prof. David B. Williams, C; Department of Materials Science and Engineering; Whitaker Laboratory; 5 East Packer Avenue; Lehigh University; Bethlehem, PA 18015-3195; (610)758-4224 FAX: (610)758-4244; Email: DBW1@lehigh.edu; web site: <http://www.lehigh.edu/~inmatsci/Microscourses.html>

Introduction to SEM and EDS for the New SEM Operator, June 13

Scanning Electron Microscopy and X-ray Microanalysis, June 14-18

Advanced Scanning Electron Microscopy with Digital Image Processing, June 21-25

Quantitative X-ray Microanalysis of Bulk Specimens and Particles, June 21-25

Analytical Electron Microscopy: Analysis of TEM Specimens, June 21-25

Atomic force Microscopy and Other Scanned Probe Microscopies, June 21-25

3D Microscopy of Living Cells Course, June 16-27, 3D Image Processing, June 29-Jul. 1, 1999, U. of BC, Vancouver, BC, Canada

Contact: Jim Pawley, U. Wisconsin, Madison; Fax: (608) 265 5315, email: jbpawley@facstaff.wisc.edu, Internet: www.cs.ubc.ca/spider/ladic/course/bulletin.html

Electronic Image Acquisition, Processing and Analysis Course, June 21-25, Chicago, IL.

Contact: Nancy Daerr, McCrone Res Inst. Fax: (312)842 1078, email: ndaerr@mcri.org, Internet: <http://www.mcri.org>

INTER-MICRO-99 Meeting, June 28-July 1, 1999,
Chicago, IL
Contact: Nancy Daerr, McCrone Res Inst. Fax: + 1 312
842 1078, email: ndaerr@mcri.org, Internet: http://
www.mcri.or

Affiliated Societies Meetings

MAMAS, May. 14, 1998, NIST
Contact: R. Marinenko, (301)975-3901, email:
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MMMS, visit web site for information: http://
www.msa.microscopy.com/MSALAS/MMMS/
MMMSHomePage.html

MMSM, 2/20/99 , 3/6/99, and 4/24/99 Project Micro,
Sci. Mus. Of Minn
3/24/99 Ann. Joint Mtg. With ASM, St. Louis
Park VFW
5/13/99, Ann. Sprg. Symp., Sheraton Midway,
St. Paul
Contact: sue.okerstrom@medtronic.com

SCSMM, 1/22/99, Queen Mary; 4/22/99 CSU, Fullerton
Contact: zedmason@csulb.edu

THE MAS TOUR SPEAKER PROGRAM FOR 1999

As most of you know, MAS offers to sponsor a speaker to each of the (continental) affiliated societies once a year and at no cost to the member society. We believe that this year's program is well-rounded with speakers on three widely diverse subjects being presented by three accomplished speakers. The three MAS Tour Speakers for 1999 are:

1. Paul F. Hlava of Sandia National Laboratories in Albuquerque, New Mexico speaking on the "Strategy and Tactics of (Microprobe) Analysis" (Chuck Fiori Memorial Tour Speaker for 1999),
2. S. Frank Platek of the U.S. Food and Drug Administration's Forensic Chemistry Center speaking on "Applications of SEM/EDX to Forensic Cases and Research Related to Food Product and Pharmaceutical Tampering and Counterfeiting", and
3. David A. Wollman of the National Institute of Standards and Technology (NIST) in Boulder, Colorado speaking on "Microcalorimeter EDS with 3 eV Energy Resolution".

In very short order, all the data (speaker names, bios, and photos, talk titles and abstracts) will be accumulated and

sent to the MAS webmaster so all of you will be able to access this info at <http://www.microanalysis.org/mas/masts/masts.html>. So far this fall, three visits have been scheduled - Hlava to MIKMAS on Oct. 16th, Wollman to NESM Dec. 4th, and Andrews, one of our 1998 speakers, to NCSMMA on Oct.30th to Nov 1st. This reminds me that you have the option to have your society's contact person ask for one of last year's speakers, if your society so desires, and MAS will try to accommodate you. Just be sure that, no matter who you wish to visit your society, your representative contacts Paul Hlava to officially arrange the visit. Paul is waiting for the flood of calls/emails (505.844.1890/pfhlava@sandia.gov) to come in.

respectfully submitted,
Paul F. Hlava

Director of the MAS Affiliated Regional Societies and Tour
Speaker Coordinator

HISTORY of MAS PAPER AWARDS

The current MAS paper awards include the Castaing, Macres, Birks, and Cosslett Awards.

The Castaing Award (\$500) which is given for an outstanding student paper presented at the annual meeting was established in 1972 as the JEOL Award. It was renamed the Castaing Award in 1982, and in 1989, support for the award was changed from JEOL, USA to Cameca Instruments.

The Macres Award (\$500) was established in 1973 to honor the memory of Dr. Victor Macres, one of the pioneers of electron probe analysis, a dedicated teacher, and a competitive instrument manufacturer. This award is given for the best instrumentation paper presented at the annual meeting, and through 1997, it was sponsored by Hitachi Scientific Instruments.

In 1984, the Birks Award (\$500) was established for the best contributed paper at the annual meeting. It was originally supported by Cameca Instruments, but since 1989 it has been supported by JEOL, USA.

In 1989, the Cosslett Award was established by MAS as a nonmonetary award for the best invited paper at the annual meeting.

Past MAS paper awards included the Corning and Proctor and Gamble Awards. From 1974/75 until 1982, Corning Glass supported the Corning Award (\$300) established for the most outstanding contributed paper presented at the annual MAS meeting. From 1986 to 1988, Proctor and Gamble supported a second student award for an outstanding student paper presented at the annual meeting.

Inga Holl Musselman and Ryna Marinenko

IUMAS II FOR YEAR 2000

MAS members who attended the 22nd MAS meeting, "ANALYSIS '87", at Kona, Hawaii, will remember that it was one of the most memorable meetings in MAS experience. For those of you who were unable to attend the '87 meeting this is your opportunity to catch up on what you missed in 1987.

The International Union of Microbeam Analysis Societies, IUMAS, has decided to revisit Kona July 13-18, 2000 with their second international meeting, IUMAS II. The program committee under the organization of Dave Williams has laid out an ambitious technical program that includes sessions on topics of interest to our membership. We have reserved rooms at the remodeled King Kamehameha Hotel at \$95 plus the usual taxes. Even socials will include the very popular and improved beach Luau as well as Capt. Bean's Catamaran Dinner Cruise. More details on the meeting will be presented in subsequent issues of MicroNews.

Gorden Cleaver

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. Everyone in the electron probe community is persuaded to send 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, and of participants in some of the early electron microprobe meetings. 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.

The symposium will be two days with poster sessions each day from 1-3 pm each day. Contributed papers are encouraged, but will probably be poster presentations since time may not permit oral presentations in addition to the

invited speakers. Abstracts are due February 15, 1999. The scope of the symposium will include the early history and the profound impact the development of EPMA had on the scientific community, the developments of instrumentation and matrix corrections throughout the years to the present time, and what we can predict for the future for EPMA. We are honored and very pleased that Prof. Jean Philibert, a former student and professional associate of Prof. Castaing, has agreed to be the keynote speaker. Peter Duncumb, Kurt Heinrich, and Ryuichi Shimizu will also share some memories with us on the early contributions to EPMA in Europe, the USA, and Japan. David Wittry, Charlie Nielsen, Jon McCarthy, and Claude Conty have agreed to speak about developments in instrumentation such as spectrometers, crystals, EDS detectors, light and electron optics, etc. The importance of standards, correction procedures, and parameters for quantitative analysis will be discussed by Eric Essene, John Armstrong, Clive Nockolds, and David Joy. Also, a few noteworthy applications where the electron microprobe has made a significant impact throughout the years, will be discussed. Some examples are Art and Archeology (Robert Ogilvie), Planetary Materials (Klaus Keil), Electronics, Biology, and Materials Science. Not all speakers have been included in this list. A conscious effort has been made in the planning of the symposium not only to bring experts to the podium, but also to bring some speakers who contributed significantly to MAS in the past but who have not been seen at recent meetings. A publication of symposium papers is planned. We hope you will be there for this very special celebration of "50 Years".

For an abstract of the symposium refer to page 8 of the M&M'99 meeting announcement which all members should have received by now.

FROM THE EDITOR

This column is a bit out of place in this issue - to make room for more important items on the second page. Note the directory changes there. I'd like to remind the local affiliated societies to contact me when there are leadership changes or meetings planned. I put the date, time and place of upcoming local affiliates' meetings at the end of the *Meetings and Short Courses* column. The contacts for the societies, including name, address, telephone, FAX, email, and web site, if any, are listed under the *Affiliated Regional Societies* column.

There is a new article in this issue of MicroNews on the history of the MAS Paper Awards. There were some errors in the article in the last issue which were corrected in the web version. In addition, beginning this year, MAS has lost the sponsor of the Macres Award, Hitachi Instruments. If any of our sustaining members would like to assume this role, please contact our Sustaining Members Committee Chair, Cathy Johnson, at (303)744-4592.

My thanks to Scott Wight for all his help and cooperation since I have been editor of MicroNews. I will miss his useful advice and contributions.

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