



# *MicroNews*

## **Fall 1999 Newsletter of the Microbeam Analysis Society**

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

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### **PRESIDENT'S MESSAGE**

As I assume the position of MAS President from John Friel, I feel honored that the society has placed its trust in me to carry on the great traditions of MAS. John Friel has done an outstanding job taking care of the many tasks that cross the President's desk during the course of a year. In addition to the MAS Executive Council and Directors, there is a long list of appointed MAS representatives (see inside) who volunteer their time throughout the year to keep MAS running smoothly. It is a pleasure to work with such a fine group of people.

Fall is election time. The nominating committee presented the following group of candidates for MAS Council at the annual business meeting in Portland: Richard Linton for President; Edgar Etz for Secretary; and Vinayak Dravid, David Kruger, Richard Leapman, and Valerie Woodward for Director. Please look at the biographies of these candidates in this issue of *MicroNews*. All the candidates have helped the society in some way or another and have distinguished themselves at the local or national level. Ballots will be mailed with the membership renewal notices, and, as usual, space is provided for write-in candidates. Your vote is very important — so be sure to vote when you renew your membership.

The Microbeam Analysis Society is having a very good year. The number of paid-up members is up slightly in all categories, and the finances of the society are in good shape. More than 100 MAS members are taking advantage of the reduced subscription rate for our journal, *Microscopy and Microanalysis*, available through MAS at \$15/year with your \$25 regular membership dues. The fraction of microanalysis papers published in *Microscopy and Microanalysis* is currently about half of the total. I encourage members to contribute manuscripts. Remember that in your main discipline, such as metallurgy or geology, the publication of results and their significance are of primary importance. This may mean that new methods of analysis or the analysis details of unusual problems may not be completely described; however, they can be presented in full detail as a separate paper in *Microscopy and Microanalysis*.

The M&M'99 meeting last August in Portland, OR, was the most successful M&M meeting ever. Part of the credit for this success goes to John Mansfield, MAS Program Co-Chair, who made sure that the society's core interests were well represented. A highlight of the meeting was the special symposium entitled "Fifty Years of Electron Probe Microanalysis." This symposium, co-chaired by Ryna Marinenko and James McGee, consisted of 17 presentations that offered a look back and a look forward for one of our important analytical techniques. Look for a number of these talks presented as full-length manuscripts in a special issue of *Microscopy and Microanalysis*.

The year 2000 also promises to be an exceptional one for microbeam analysis. The M&M 2000 meeting will be held in Philadelphia, August 13-17, 2000. The MAS contributions to the program are being organized by Scott Walck, our MAS Program Co-Chair. Philadelphia offers an exceptional new convention center, world-class museums, excellent restaurants, and a historical ambiance unique to the city of Ben Franklin, Betsy Ross, and the Declaration of Independence. Also, during the month previous to M&M 2000, the 2nd Meeting of the International Union of Microbeam Analysis Societies (IUMAS) will take place July 9-14, 2000, in Kailua-Kona, Hawaii. Dave Williams is organizing the program for this meeting. Yes, the IUMAS 2000 will be held in the same location as the memorable 1987 MAS meeting. Please note, however, that all official MAS activities will take place in Philadelphia.

To get the latest details on both of these meetings, check the MAS web site maintained by John Mansfield:  
<[www.microanalysis.org/homepage.html](http://www.microanalysis.org/homepage.html)>.

I thank all MAS members for the privilege of serving as your president. If you have any questions or concerns about the society, please contact me directly, <[CEL1@lehigh.edu](mailto:CEL1@lehigh.edu)>.

It promises to be a great year. See you in Philly!

Charles Lyman  
MAS President

## EDITOR'S NOTE

This issue of MicroNews, true of all fall issues, should be a reminder to you to renew your MAS membership and to vote for MAS officers and directors. You should have received a mailing with information enabling you to do both. If you have not received this information be sure to contact Lou Ross, our Membership Services Representative at

TEL: 1(800)4MASMEM or

EMAIL: [lross01@mail.coin.missour.edu](mailto:lross01@mail.coin.missour.edu).

Please help the society by doing both before the end of the millennium.

I want to thank those Affiliated Regional Societies who keep in touch with me. I enter your meetings into the schedule if I am notified in advance. Often I get announcements of meetings that will be held before MicroNews will be sent out. All you have to know is the date and contact for me to include meeting information in MicroNews.

Ryna Marinenko, MicroNews Editor

## MEMBERSHIP SERVICES

The MAS membership booth at M&M'99 in Portland was quite successful, processing 42 new or renewal applications. This can be credited to our highly-visible location and to Gordon Cleaver and Bob Warner for the IUMAS (Kona, Hawaii, June 8-15, 2000) poster and advertisements. A few people joined to attend the MAS social held on the Skyview Terrace which was very well attended and a big hit, as always.

Our membership presently stands at 568. This is the same as last year, a result of our policy to drop nonpaying members after 6 months. I think we have tapered off and must turn our attention now to adding new members. From a suggestion by Dave Williams, we have sent application forms to Plenum Publishing to be distributed with the Goldstein et. al. textbook. Paul Hlava has encouraged the tour speakers to mention the benefits of our society, and I hope that membership applications are available at the regional meetings. If applications are needed, they can be found on the MAS web site or in some of the M&M journals. Also, John Mansfield and Paul Carpenter are developing an on-line application form for the MAS web site. But the best way to promote MAS is by the word of mouth to students, associates and co-workers.

MAS has comparatively low membership dues (\$25) along with the low cost of subscribing to the M&M journal (\$15). This is a bargain. You are encouraged to submit your renewal application with your ballot (which you should have already received in the mail) as soon as possible. As you can imagine, there is less confusion and fewer problems. If a problem does arise or you have a suggestion, please don't hesitate to contact me at 1(800)4MASMEM.

Lou Ross  
Membership Services

## MEETINGS AND SHORT COURSES

### Meetings

**MSSA '99 - 38th annual conference of the Microscopy Society of Southern Africa (MSSA)**, Dec. 1-3, 1999, Bloemfontein, South Africa.  
Contact: [www.uovs.ac.za/nat/mssa99/conference.htm](http://www.uovs.ac.za/nat/mssa99/conference.htm)

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

**Microscopy and Microanalysis of Engineering Materials (MMEM2000)**, Feb. 14-17, 2000, Melbourne, Australia  
Contact: Dr. Astrid Nordmann, Monash University, Australia. Tel: +61 3 9905 5791 Fax: +61 3 9905 4998 Email: [mmem@eng.monash.edu.au](mailto:mmem@eng.monash.edu.au)

**EMAS 2000 Regional Workshop: Electron Probe Microanalysis Today - Practical Aspects**, May 17-20, 2000, Trest, Czech Republic  
Contact: Secretariat, Fax: +420-2-688 60 95, email: [masek@mbox.troja.mff.cuni.cz](mailto:masek@mbox.troja.mff.cuni.cz), or [www.mff.cuni.cz/eng/news/emas2000.htm](http://www.mff.cuni.cz/eng/news/emas2000.htm)

**7th Asia-Pacific Conference on Electron Microscopy**, June 26-30, 2000, Singapore  
Contact: Conf Secretariat: Fax +65 776 4971, email: [micngml@nus.edu.sg](mailto:micngml@nus.edu.sg), or [www.med.nus.edu.sg/micsoc/7apem](http://www.med.nus.edu.sg/micsoc/7apem)

**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)

**MICROSCOPY & MICROANALYSIS '2000**, Aug. 13-17, 2000, Philadelphia, 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)

**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)

**Eastern Analytical Symposium**, Oct. 29- Nov. 3, 2000, Atlantic City, NJ, USA  
Contact: EAS hotline: Tel: +1 302 738 6218 email: [easinfo@aol.com](mailto:easinfo@aol.com), or [www.eas.org](http://www.eas.org)

**MICROSCOPY & MICROANALYSIS 2001**, Aug. 5-9, 2000, Long Beach, CA

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

### Short Courses

**Course on Time-Resolved Fluorescence Spectroscopy**, Mar. 20-24, 2000, Baltimore, MD,  
Contact: J.R. Lakowicz, U. Maryland: Fax: +1 410 7068408, email: [cfs@cfs.umbi.umd.edu](mailto:cfs@cfs.umbi.umd.edu), or [www.cfs.umbi.umd.edu](http://www.cfs.umbi.umd.edu)

**Intro to XPS, Scanning Auger Microscopy and SIMS**, Guildford, UK, Apr. 3-7, 2000, U. Surrey  
Contact: Fax: +44 01483 876291, email: [D.Saunders@surrey.ac.uk](mailto:D.Saunders@surrey.ac.uk) or [www.surrey.ac.uk/MME](http://www.surrey.ac.uk/MME)

**Advanced FTIR Microscopy Course**, Apr. 10-14, 2000, McCrone Research Inst., Chicago, IL, USA  
Contact: Nancy Daerr, Fax: +1 312 842 7100, email: [ndaerr@mcri.org](mailto:ndaerr@mcri.org), or [www.mcri.org](http://www.mcri.org)

**Lehigh Microscopy School Course**, June 11-23, 2000, Bethlehem, PA, USA:  
SEM and X-ray Microanalysis (12-16)  
Intro to SEM and EDS (11)  
Advanced SEM (19-23)  
Quantitative X-ray Microanalysis (19-23)  
Analytical EM (19-22)  
Atomic Force Microscopy (20-23)  
Microdiffraction (19-23);  
Cryo SEM (21-23)  
Contact: Sharon Coe, Fax: +1 610 758 4244, or [www.lehigh.edu/~inmatsci/Microscourses](http://www.lehigh.edu/~inmatsci/Microscourses)

**Digital and Video Photomicrography Course**, June 12-16, 2000, McCrone Research Institute, Chicago, USA  
Contact: Nancy Daerr, Fax: +1 312 842 7100, email: [ndaerr@mcri.org](mailto:ndaerr@mcri.org) [www.mcri.org](http://www.mcri.org)

**Scanning Electron Microscopy Course**, June 19-23, 2000, McCrone Research Institute, Chicago, USA  
Contact: Nancy Daerr, Fax: +1 312 842 7100, email: [ndaerr@mcri.org](mailto:ndaerr@mcri.org) [www.mcri.org](http://www.mcri.org)

**5th Ann Intl 11-Day Short Course on 3D Microscopy of Living Cells**, June 19-29, 2000, Vancouver, Canada  
 Contact: Dr. Elaine Humphrey, U. British Columbia, or  
[www.cs.ubc.ca/spider/ladic/course/bulletin.html](http://www.cs.ubc.ca/spider/ladic/course/bulletin.html)

**INTER/MICRO 2000 Conference and Exhibition**,  
 June 26-29, 2000, McCrone Research Institute, Chicago, USA  
 Contact: Nancy Daerr, Fax: +1 312 842 7100, email:  
[ndaerr@mcri.org](mailto:ndaerr@mcri.org) [www.mcri.org](http://www.mcri.org)

**4th Post-Course Workshop on 3D Imaging Processing**,  
 July 1-2, 2000, Vancouver, Canada  
 Contact: Dr. Elaine Humphrey, U. British Columbia, or  
[www.cs.ubc.ca/spider/ladic/course/bulletin.html](http://www.cs.ubc.ca/spider/ladic/course/bulletin.html)

**Fluorescence Microscopy Course**, July 10-14, 2000,  
 McCrone Research Institute, Chicago, USA  
 Contact: Nancy Daerr, Fax: +1 312 842 7100, email:  
[ndaerr@mcri.org](mailto:ndaerr@mcri.org) [www.mcri.org](http://www.mcri.org)

#### Affiliated Societies Meetings

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

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

**AIMS**, Feb. 10, 2000, Wilson Rm, TahonoChul Park,  
 7366 N. Paseo Del Norte, Tucson, AR.

### MAS TOUR SPEAKER PROGRAM

I have been perusing the MAS Affiliated Regional Societies contact list - <http://www.microanalysis.org/mas/masas/masas.html> - and have found more than a few discrepancies. In an attempt to correct some of these, I went to the affiliated societies' webpages and still found problems. It is time for every society to review and update their contact info and email me with the changes or let me know that your webpage has been updated so I can use that information.

I hope that everyone has had an opportunity to review the MAS Tour Speaker choices for 1999-2000 at - <http://www.microanalysis.org/mas/masts/masts.html>. We have three excellent speakers this season with Ian Anderson talking about spectrum imaging, Vinayak Dravid speaking about "upper" SE detectors, and Scott Walck tutoring on the small angle cleavage technique (SACT) of TEM specimen preparation. If your society has a meeting coming up in the spring (through next fall) and one of these speakers fits into your program, make sure your contact person connects with me to arrange for a tour.

By the time you get this issue of MICRONEWS, MAS will have sent Tour Speakers to five societies and we have one more scheduled for the spring. The societies visited, the speakers, and the dates are:

Society	Speaker	Date
<b>Finished</b>		
CSM&MS	Anderson	Oct. 22, 1999
MAMAS	Walck	Nov. 4, 1999
NCSMMA	Anderson	Oct 29-31, 1999
SSTP	Platek	Sept. 24, 1999
WestMAS	Dravid	Nov. 12, 1999
<b>Scheduled</b>		
AIMS	Hlava	Feb. 10, 2000

Remember, MAS pays for the visit by our tour speakers (as long as you go through me) so you get a speaker for your program (once a year) at no cost to your society. But you have to initiate the request or nothing happens.

Paul F. Hlava, Affiliated Regional Societies

### IUMAS II - KONA, HAWAII

The organizing committee signed a contract with the King Kamehameha for 250 rooms at a standard rate of \$95 plus tax. Attendees must register directly with the Hotel using the form provided with the meeting notice materials. We did not make separate provisions for student housing. Those who need help in this area should work with the program organizers. The Hotel will provide for up to four (4) multiple occupants for a shared room.

Pre-registration for IUMAS II is \$300 (by May 30). On site registration will be \$375 for attendees. Students and registered guests (spouses and significant others) pay a \$100 fee and are entitled to the socials and access to the exhibits area. Students receive a copy of the proceedings included in the \$100 fee. We arranged three separate events for attendees. They include a Sunday evening welcoming social, a Monday evening Luau and a Tuesday sunset and/or moonlight dinner cruise if sufficient registrants apply. Registrants may select either the sunset or moonlight event time if registration achieves minimum attendance requirements.

The general meeting area will be the same as in 1987. The large ballroom will provide meeting space for the plenary session and will break down conveniently into three separate session meeting areas. The pre-function hallway connecting the ballroom entrances will serve as additional exhibit space to one section of the ballroom. There are a limited number of exhibit spaces available and most have been committed to MAS sustaining members that inquired about the meeting in advance of the general mailing of contract information. Contract information will be forwarded to MAS Sustaining Member contact individuals in

the near future.

KONA-Kailua is served by the Keahole International Airport about 20 minutes from the King Kamehameha Hotel. No complimentary shuttle service is available for local travel between Kona and the Airport. There is currently a \$25 Taxi fee that can be shared by multiple riders as well as fee shuttle vans, limos, etc. Conference travel can be arranged with "the Traveling Agent", Betsy Jordan, owner (800) 235-8728, [bjordan@traveling-agent.com](mailto:bjordan@traveling-agent.com), IUMAS II official travel agent. Arrangements can be made for reasonable family accommodations for an extended pre or post conference stay at any of the Hawaiian Islands. At the '87 meeting, many attendees added vacation time with family to prolong their visit at Hawaii.

Special activities including fishing cruises, snorkeling, beach activities, whale watching, visiting botanical gardens, historical parks and residences, taking helicopter and plane overviews are all available for a price ranging from reasonable to less so. The King Kamehameha Hotel is central to access for many of these and is within walking distance for many local theme and strip shopping malls, convenient fast food places, Walmart's, Safeway and K-Mart. Fine dining is available at many restaurants at moderate to high cost, but, reasonable cost meals are available along Alii Drive (ocean-front) at numerous locations. Basic food costs are particularly high in Hawaii for obvious reasons. Be prepared to pay \$4 for a loaf of bread if you wish to live on sandwiches or \$6 for a small box of cereal if you wish to feed youngsters breakfast in your room. A Safeway club membership is available and dollar wise.

A special overnight volcano tour has been organized by Greg Meeker and was nearly fully committed by individuals signing up following the description of the tour at the MAS business meeting in Portland this past Summer. The principals have suggested possibly organizing a post Meeting overnight volcano tour if sufficient interest exists. Please contact Greg for more information about this event.

Additional information about some of the special attractions near Kona and the big island of Hawaii will be included in the next issue of MicroNews. Please contact David Williams or Gordon Cleaver for interim information.

Gordon Cleaver  
Local Arrangements Committee Chairman

## M & M 2000 MEETING

I was talking to several friends in Portland at last year's Microscopy and Microanalysis meeting who asked if I was going to the MAS meeting next year. I said that yes I would be in Philadelphia for it. They insisted and tried to convince me that the MAS meeting would be in Hawaii. Being someone that is easily confused and being the MAS Program Chair for 2000, I double checked and was relieved

to find out that I was right; the "official" annual MAS meeting is indeed the Microscopy and Microanalysis 2000 in Philadelphia. This will be a joint meeting with the Microscopy Society of America (MSA) and the Microscopy Society of Canada (MSC/SMC) and will be held August 13-17, 2000 (Note the date change!). So for those of you who can't make the "real" MAS meeting in Hawaii or for those who are lucky enough to go to both the "real" and the "official" MAS meetings, the M&M 2000 meeting will still be a great meeting in Philadelphia.

In addition to the perennial favorite topics, there are a number of sessions, short courses, and tutorials that should prove to be of interest to our members. Look for tutorials on Energy-filtered Imaging (Jim Bentley), Microscopy and Microanalysis over the Net (Nestor Zaluzec) and Atom Probe Tomography (Mike Miller) as well as a Short Course on Basic Introduction to X-ray Energy Dispersive Spectroscopy (PK Carpenter). Dale Newbury is again chairing the "Problem Elements and Spectrometry Problems II". Jim Mancuso and Jon McCarthy have an interesting new session entitled, "New Detectors -Benefits and Drawbacks." Paul Hlava and Greg Meeker are also having a uniquely oriented session entitled, "Microprobe Age-Dating of Minerals." Ian Anderson and Paul Kotula are focusing on the problems inherent to "Spectrum Imaging: Applications and Methods of Analysis." John Hunt and G. Botton are tying their "Electron Energy Loss Spectroscopy and Imaging" session to the "The Theory and Practice of Scanning Transmission Electron Microscopy" (N. Browning). Two problem areas of microanalysis are addressed in the sessions, "X-ray Microanalysis of Rough Surfaces" (Raynald Gauvin and Eric Lifshin) and "Low Voltage Scanning Electron Microscopy and Microanalysis" (ED Boyes, P Echlin, and DC Joy). We can always count on Joe Michael to plan a good and original session and his "Texture Analysis" should be just that. Ron Anderson Jose Mascorro will again be having the "Problem Solving with the Experts" special session and the topics include Electron Backscatter Patterns, Scanned Probe Microscopy, and Photography, Imaging, and the Role of the Classic Darkroom.

Stacie Kirsch and the local arrangements committee are pulling out the stops to insure that the social and business parts of the meeting are successes. Keep a close watch on the calendar. The Call for Papers should be coming out about the same time as this MicroNews issue. The Abstract deadline in February 15, 2000. Detailed information on the meeting can again be found on the net at <http://www.msa.microscopy.com>. As we look forward to the new millennium, we should also remember our history. I can't think of a more appropriate place to do that than the birthplace of our Constitution. See you in Philly.

MAS Co-chair  
ScottWalck

## '99 ELECTION OF OFFICERS - COUNCIL NOMINATIONS

### **President**

#### **Richard W. Linton**

Richard W. Linton received his B.S. degree with Highest Honors from the University of Delaware in 1973 and his Ph.D. from the University of Illinois in 1977, both in chemistry. Rich is currently the chief research officer for the University of North Carolina (UNC) system of 16 institutions and a chemistry professor at the University of North Carolina- Chapel Hill. His administrative responsibilities include oversight of the extramural funding of UNC programs (~\$600 million in FY99), and UNC centers and institutes involved in research and/or public service activities (~180 units). He currently manages information technology resources on sponsored programs, scientific equipment, faculty expertise, funding opportunities, and research institutes that support UNC research ventures. In addition, Rich leads university-wide efforts in international programs. For example, he has worked recently with the NC Governor's Office on international research programs in Europe and the Middle East, and has developed agreements with more than 40 countries since 1997.

Rich's academic specialty is analytical chemistry, emphasizing surface spectroscopies and microanalysis techniques. His research group has addressed a diversity of applications spanning the environmental, biological, polymer, and materials sciences, including extensive cooperative programs with industry. Since arriving at UNC-Chapel Hill in 1977, Rich has co-authored approximately 175 technical publications and graduated 35 Ph.D. students from his research group. He has served on the boards of directors for national scientific societies such as MAS and AVS (Applied Surface Science Division), as well as program committees for many national and international scientific conferences (e.g. ACS, AVS, MAS, SIMS). He has been awarded visiting scholar appointments in Taiwan and Belgium.

Rich has been active in MAS since 1975 when he presented his first scientific paper at the annual MAS conference while a graduate student under Charles A. Evans. Rich twice has been a director on the MAS Council (1988-90, 1996-98), has been a member of the local arrangements or program committees for numerous MAS meetings, was the chair of the MAS Publications Committee from 1989-1996, an MAS tour speaker, and the Founding Editor-in-Chief of Microbeam Analysis prior to its merger with Microscopy and Microanalysis. He has also received two MAS Awards: the Heinrich Award for the Outstanding Young MAS Scientist in 1990, and the Presidential Service Award in 1995.

Rich looks forward to assisting MAS in expanding its niche in microanalytical sciences by continuing the support of annual conferences, exploring innovative applications of information technology, providing services to the industrial sponsors and local affiliated societies of MAS, and enhancing cooperative ties with national and international microbeam groups and microscopy societies.

### **Secretary**

#### **Edgar S. Etz**

Edgar Etz is a research chemist at the Chemical Science and Technology Laboratory of the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland. There he is a member of the Microanalysis Research Group within the Surface and Microanalysis Science Division. He received his Ph.D. in chemistry from Clarkson College of Technology (now Clarkson University) and came to NIST (then the National Bureau of Standards, NBS) in 1969 to join the electroanalytical group. By the mid-1970s he was involved in analytical spectroscopy and the development of the NBS Raman microprobe. He has been active in the Raman microanalysis field since that time, with focus on optical microprobe instrumentation and methodology development.

Edgar has been an active member of the

MAS since 1977. In large measure he has been responsible for introducing the optical microprobe techniques (initially micro-Raman and luminescence and, subsequently, FT-IR microspectroscopy) as complementary methodologies into the scientific agenda of the MAS. On many occasions, over the past twenty years, he has organized the sessions, or special symposia, on "Optical Microanalysis" at the annual MAS conferences. In 1995, he was the Technical Program Chair of the MAS meeting in Breckenridge, Colorado. For next year's IUMAS-2000 Meeting, he is committed to organize a strong optical spectroscopy program under the banner of "30 Years of Optical Microanalysis". He has served as Secretary of the MAS for the past two years.

Edgar's publications in the field have focused on the application of micro-Raman techniques to diverse problems in materials characterization, from environmental pollution studies to molecular microanalysis of biological tissues. Currently, the focus of his research is on the development of Raman standards for relative intensity calibration. He is a member of several professional societies, among them the ACS, SAS, and ASTM.

If re-appointed to the position of Secretary of the MAS, Edgar would go beyond carrying out his official functions that go with this assignment. He would aim for the Society to enlarge and broaden the membership base through active recruitment of young scholars from all microanalytical disciplines of the materials sciences. He feels strongly also that the ever-improving relations with MSA are important to the well-being of both societies and the success of the joint annual meetings for years to come.

#### Directors

Vinayak P. Dravid

Vinayak P. Dravid received his undergraduate B.Tech degree in Metallurgical Engineering from the Indian Institute of Technology (IIT), Bombay - India in 1984, and his PhD in Materials Science & Engineering in fall of 1990

from Lehigh University. He then gathered his courage to venture into academic career the same year with the Department of Materials Science & Engineering at Northwestern University. Though aged considerably more than nine years, he has survived the academic world at Northwestern thus far. He is now an associate professor and directs the electron probe instrumentation center (EPIC).

Vinayak's research and teaching interests revolve around nanoscale phenomena in solids - specifically interfacial phenomena in solids and nanostructured materials, and the prudent use of emerging as well as conventional electron probe techniques. He has authored about 110 refereed journal publications and holds several patents in these areas. Vinayak has been blessed with supporting peers and senior colleagues who helped him receive the usual assortment of research awards including: NSF Young Investigator Award, Exxon Foundation Fellowship, IBM Faculty Development Award, the Microscopy Society of America (MSA) Burton Medal, the Robert L. Coble award from the American Ceramic Society and the Kurt F.J. Heinrich award from the Microbeam Analysis Society (MAS). He has served the microscopy, microanalysis and materials community in various capacities. He has been member of MAS since his graduate days at Lehigh, dating back to 1986. One of Vinayak's passions (and challenges) is to increase the societal awareness of science and technology, specifically that in materials science and technology. He enjoys touring and hosting local area high schools, and attempts to convey the beauty, diversity and complexity of materials via electron microscopy and microanalysis.

David W. Kruger

Since 1994, I have held management positions in IBM's Analytical Services Group in East Fishkill, New York. The departments I have managed provide analytical support to IBM's advanced semiconductor and electronic packaging development and manufacturing projects. These techniques include electrical

and SEM-based physical failure analysis, TEM, SIMS and Auger Electron Spectroscopy. Since 1993, this support has been offered to external clients as well. The exposure to the analytical needs of a wide variety of customers has provided me with valuable insight into the challenges faced by analysts in industrial, government and academic laboratories throughout the world.

I have a B.S. in Physics from the University of Illinois, Masters degrees in Materials Science and Physics and a Ph.D. in Materials Science from the University of Wisconsin-Madison. I joined IBM in 1988 as an analyst in the electron microprobe group in East Fishkill, performing materials analysis on advanced semiconductor and electronic packaging development projects. I was Secretary/Treasurer of the Metropolitan Microscopy Society (NY-NJ-PA), (1990-1991), and served as Chairman when the Metro section successfully filed for Local Affiliate Status with the (E)MSA in 1992. I have attended the national meetings of the Microbeam Analysis Society roughly every other year for the last decade.

When speaking to colleagues in other companies, I often hear about reduced laboratory staffs, increased work loads for analysts, and a lack of funding for new capital equipment. These problems make it very difficult for analysts and technical staffs to perform the advanced analytical and investigative work necessary for the success of their projects. I believe that one of the most important roles that technical societies such as the Microbeam Analysis Society can perform is to help the analytical community become more productive and, therefore, to regain some of the stature that analysts seem to have lost in recent years. By sponsoring national and regional meetings, and by providing educational opportunities, technical societies can play a vital role by helping analysts and technologists to maintain their technical edge, thereby increasing their effectiveness within their organizations. As a Director of the MAS, I would seek to expand this valuable relationship between the Society and

its members, in order to assist analysts to reach their professional goals. I would also act as an advocate for analysts and technologists employed in industry, since most MAS directors and officers come from government laboratories and the academic community.

Richard D. Leapman

Richard Leapman has been an active member of MAS since 1980 when he came to the National Institutes of Health to work with Chuck Fiori on electron energy loss spectroscopy and electron probe x-ray microanalysis. Richard served on the organizing committee of the 1995 MAS Meeting in Breckenridge and has helped to organize and co-chair symposia at numerous other annual MAS meetings.

Currently, Richard is Acting Director of the Bioengineering and Physical Science Program and Chief of the Analytical Electron Microscopy group at the NIH. His main interests are in solving practical problems in the biomedical sciences by determining composition at the nanometer scale. Richard's research has focused on developing methods based on EELS for high-resolution elemental mapping of biological structures. However, he maintains an interest in all types of microanalytical techniques and applications ranging from biology to materials.

Richard received his Ph.D. degree in physics from the University of Cambridge in 1977. Before moving to the NIH he did post-doctoral work in the Department of Metallurgy and Materials Science at Oxford and in the School of Applied and Engineering Physics at Cornell. Richard received the MAS Birks Award in 1986 and the Heinrich Award for the Outstanding Young MAS Scientist in 1989. He also received the Burton Medal from the Microscopy Society of America in 1986, the Samuel Wesley Stratton Award from NIST in 1994, and the NIH Director's Award in 1995. Richard currently serves as North American Editor for the Journal of Microscopy.

Richard believes that the most important task facing the society is to increase member-

ship by appealing to students and other younger analysts in application-oriented laboratories. Because there are so many competing societies and meetings from which scientists can choose these days, it is essential that MAS create the strongest and most relevant scientific program at national and local meetings and at topical workshops. The society must seize the opportunity to incorporate new emerging techniques into these scientific programs as well as maintain its reputation as the leading forum for research in the established techniques.

#### Valerie Woodward

Valerie Woodward is a research and development chemist in the Microscopy and X-ray Analysis Section of the BFGoodrich Performance Materials Segment. She graduated from West Virginia University with a bachelors degree in biology and from the University of Akron with a bachelors degree in chemistry, and has two years graduate study in polymer science at the University of Akron. She has been an electron microscopist and x-ray spectrometrist since 1976, starting in electrical ceramics and, since, venturing into rubber, polymers, aerospace materials and plastics and polymer additives. She is currently supervisor of the microscopy, x-ray diffraction and x-ray fluorescence laboratories at the BFGoodrich R&D Center in Brecksville, Ohio, where she has been employed since 1984.

Valerie has been a member of MAS since 1989. She is currently the Regional Topical Conference liaison for MAS (appointed at M&M '98 in Atlanta), and recently worked closely with Paul Hlava to resurrect the CleveMAS affiliate as part of the existing MSA affiliate, Microscopy Society of Northeastern Ohio (MSNO). The group, of which many of the members are already MAS members, will now be a joint MAS/MSA affiliate. She is the affiliate secretary, currently serving her third term, and was a member of the M&M '97 (Cleveland) LAC.

Valerie would like to preserve the identity of MAS as a society. The push for joint

meetings and even joined societies is great with today's hectic schedules, but sometimes, the joining weakens one or more of the societies with respect to another. Members of the "absorbed" societies lose interest, decline committee and officer positions, and eventually cease participation on the local level. She agrees with the current directors that student participation is key to the longevity of the Society, and we must find innovative ways to capture their recognition of and retain their interest in MAS. Regional topical conferences may be a way to do both, as they are normally less expensive to attend, and on a smaller scale than the national meetings, so could be less daunting to the less-experienced student. She would also enjoy the one-on-one interaction with the ARS's, and with her experience as a member, committee chair and officer in the local groups of the American Chemical Society, Iota Sigma Pi Chemistry Honorary and MSA, might lend some new insights into increasing the local level participation in MAS.

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