

2008

SOCIETY FOR APPLIED SPECTROSCOPY

OFFICER AND GOVERNING BOARD MEMBER PROFILES

Questions to Candidates:

“What are some of your ideas on what the goals of SAS should be? What are your opinions on the nature of the principle challenges facing the organization? What are your suggestions concerning how these challenges should be met?”



**PRESIDENT-
ELECT
MARK DRUY**

Dr. Mark A. Druy is the Technology Transition & Product Development Manager at Physical Sciences Inc. In this capacity Dr. Druy develops strategies and manages the execution of programs to transition PSI technology into commercial/government products. Dr. Druy has a broad technical background in spectroscopy and polymer science. Prior to his arrival at PSI, Dr. Druy was a product manager at Digilab, a manufacturer of FT-IR spectrometers. As a product manager at Digilab, he was responsible for the development of a series of application-specific infrared analyzers that enabled non-spectroscopists to characterize their materials of interest. Before entering the analytical instrumentation business, Dr. Druy spent 12 years at Foster–Miller, Inc., where he

successfully transitioned SBIR programs into commercial products (a line of fiber-optic probes based on mid-infrared transmitting optical fibers for laboratory infrared spectrometers that was marketed by Spectro–Tech and later purchased by Nicolet) and was responsible for the development of a number of specialized field-hardened FT-IR spectrometer systems for the Department of Defense. While at Foster–Miller, Mark was also heavily involved in developing nonlinear optical polymers and processing techniques for electro-active polymers. Dr. Druy is a R&D 100 Award winner and holds seven patents in the areas of conducting polymers and spectroscopy.

Dr. Druy has a Ph.D. in Chemistry from the University of Pennsylvania where he conducted research on conducting polymers and holds a B.A. in Chemistry from Brown University.

Dr. Druy is a long-standing member of SAS, the New England local section of SAS, and its technical affiliate, the Coblentz Society. Mark was previously the chair of the New England section and serves as its Secretary and Arrangements Chair. Mark is the Membership Chair of the Coblentz Society, and also serves on the Governing Board of the Eastern Analytical Symposium.

Response to Questions:

(1) What should be the goals of SAS?

The mission of SAS is to advance and disseminate knowledge and information concerning the art and science of spectroscopy, and other allied sciences, to advance the professional standing and growth of the Society and its members, to coordinate cooperative endeavors of its individual members and sections, and to promote and maintain a close bond among its members. To translate this mission into succinct goals would imply that SAS organize technical sessions at conferences, hold local section meetings and encourage the participation of students, and sponsor mixers at national meetings. I think that anyone who is familiar with SAS and who has attended a Pittsburgh Conference & Exposition, Eastern Analytical Symposium, FACSS, or any other analytical chemistry conference would agree that SAS and its local sections or technical affiliates does a good job of meeting these goals.

Simply put, there isn't anything wrong with the goals of SAS, but we could be doing more to get the word out about SAS and its contributions to the field of Spectroscopy.

(2) What are the challenges facing SAS and how do we meet these challenges?

Let me answer a question by posing some other questions.

So if that is the case, why is our national membership decreasing? Is it because many of our members are aging baby boomers and are retiring? Is it because our younger members don't understand the intangible benefits of belonging to a professional organization? Is it because we aren't doing a good job recruiting new members or keeping the members that we have? Is it because we don't have enough

strong local sections that keep the SAS "brand" in front of its membership in between the various national and regional conferences?

I believe the answer to the above questions is all of the above. So how are we going to reverse the trend of decreasing membership and non-active local sections or technical affiliates?

(3) What are your suggestions concerning how these challenges should be met?

Here are my suggestions. I and others in a variety of roles in other affiliations have implemented these suggestions and I know they work. In every case, where they have been implemented, there has been an increase in involvement in the organization and an increase in dues-paying memberships.

First, change the way we stay in touch with our membership. We need to be utilizing more effective electronic communication with our membership. Unfortunately, in this day and age, spam filters prevent many electronic messages from reaching their intended recipient. Fortunately, there is technology that ensures our electronic messages are received and even lets us know that they are being read and what is being read. Permission-based email marketing services enable organizations like ours reach its membership without our message being caught in a spam filter. Moreover, these services allow organizations such as ours the ability to conduct surveys and find out what our members want from our society. I recently implemented a permission-based email marketing campaign for one of our technical affiliates (The Coblenz Society) and the results were phenomenal. Over 40% of the recipients read the newsletter and many responded by sending in their dues. Our dues-paying membership has increased by nearly 20% during the past year. I will work

with the executive office staff to implement a similar function for SAS.

Second, have strong local sections. I have been actively involved in the New England Section of SAS for a number of years either as the program chair, section chair, or as secretary and arrangements chair. Along with our section executive committee, we have instituted regular meetings (about seven times a year). Every year as part of our National SAS Tour Speaker event, we organize a poster session for students at our local colleges and universities. Every student who participates in the poster session gets a free (paid for by our local section) student membership to SAS. This year's event resulted in 15 new student members of SAS from the New England Section. Now that we have them as members, it is our responsibility to keep them.

In order to rejuvenate a local section or create a local section, we should provide some financial assistance to get the local section off and running by partially subsidizing the cost of holding dinner meetings. We should have a "How to Start or Reactivate a Local Section" tutorial (at Pittcon, FACSS, etc.) or publish a handbook, so that we lower the activation energy for getting a new local section up and running.

In closing, as the President Elect of SAS, I will work with our excellent and dedicated staff at our Executive Office and with our local sections to implement these suggestions. Doing so will enable SAS to effectively advance the professional standing and growth of the Society and its members, to coordinate cooperative endeavors of its individual members and sections, and to promote and maintain a close bond among its members.



**PRESIDENT-
ELECT
FRED
LAPLANT**

Fred LaPlant received his Ph.D. in Analytical Chemistry from Purdue University under the direction of Dor Ben-Amotz in 1995. Fred's research focused on developing novel applications of Raman spectroscopy, including fiber-based sensors, detection of subsurface materials, and high-pressure high-shear modeling of fluids.

Fred spent five years in product development at Perceptron in Ann Arbor, Michigan, a developer of process control and monitoring devices for the auto industry. His principle contribution was the development of a non-contact, laser-based ultrasound system to measure wet paint film thickness. He then moved into Analytical Research and Development at the Pfizer Ann Arbor site, where he applied his process monitoring experience to PAT, as well as promoting the use of spectroscopic tools in pharmaceutical development. He is currently in the Corporate Analytical Spectroscopy group at 3M in Saint Paul, Minnesota, where he is involved in a wide variety of projects, including introduction of new spectroscopic technology, nanomaterial characterization, and development of on-line monitoring methods.

Fred has been active in revitalizing the local Minnesota section of the SAS, serving as both president and treasurer. With the help of the other officers, the Minnesota section has attracted many new members and students, increased the number of regular meetings and social activities, and sponsored student speakers. Fred is currently

an at-large member of the governing board of the SAS.

Response to Questions:

(1) What should be the goals of SAS?
(2) What are the challenges facing SAS and how do we meet these challenges?
(3) What are your suggestions concerning how these challenges should be met?

What a fantastic society we are a part of. During my years as a society member, I have continually been astounded at the quality, the generosity, and the commitment to scientific excellence displayed by the members I have come to know. And as observational scientists, it has escaped the notice of almost no one that the society has undergone dramatic changes in the last decade. While preparing this statement, I reviewed what past nominees had to say about these changes. Each one gave very thorough analyses of the problems facing the society, along with many innovative approaches to increasing membership and enhancing visibility. I don't believe that I could claim to add anything new to this already substantive debate. However, I do believe that I can refocus the discussion in specific areas and make sure that directed, actionable strategies are implemented to help ensure that the society reaches its fullest potential.

First: Stop perseverating over declining numbers.

Membership has dropped precipitously; if the society were comprised of fissile material, our half life would be about 5 years. It's all too easy to see this trend and extrapolate the line to its obvious and dire conclusion.

I won't go into the reasons for this; many are beyond our control and reflect changes in technology, scientific specialization, and budgetary constraints. Some may be due to the society not adapting

rapidly enough to these changes. But focusing on membership numbers is a distraction from continuing to ensure that the society is an asset to our scientific community. If you throw a party, and four people show up, you break out the cheese, open a bottle of wine, and have an intimate discussion. If a thousand people show up, you close the block, hire a band, and roll out the kegs. In either case, you make sure that you have the best party you can throw instead of sitting in a corner feeling sorry for yourself that more people didn't show up. We need to make sure that the society is the very best it can be, whether we have five members or five thousand.

Second: Recognize that importance of the society as a social organization.

We all live in an increasingly interconnected world. I may get projects from Brazil, Australia, or Egypt in any given day, coming as materials to analyze, spectra to interpret, or problems to troubleshoot. Certainly technology has been a great enabler; I can communicate with colleagues around the world directly, rapidly, and cheaply. However, just as important is the dissemination of the information that I exist as a resource. Any amount of communication capacity is wasted unless there is also a network with connections that attaches people with problems to people with solutions.

In the society, we are woefully outdated in terms of our connectivity. While we personally have long lists of e-mail contacts, LinkedIn colleagues, or Facebook friends, the Society's contributions to networking are limited to the traditional outlets of conferences and publishing a membership directory.

We need to move the SAS into a more central position as the network hub for working spectroscopists. This could take several forms; for instance, actively developing on-line groups for people to join,

or allowing access to the membership directory through the web page, with search functions for location, interests, specializations, etc. Whatever the form, SAS needs to more effectively leverage its most important asset—its membership.

By developing this network, the Society also gains by promoting personal commitment to the organization. While we are all committed to scientific and professional excellence, commitment to an organization is much more difficult in an age of so many competing priorities. The SAS can attract members for the science, for the opportunity to speak at conferences, or for access to the journals, but retention of members must arise out of a sense of community. Strengthening the inter-connectedness of the organization can only benefit the SAS both in the near term and for years to come.

Third: Implement ideas that we already have.

Each incoming president has identified numerous areas where the SAS could make changes that would positively impact its membership. Although I certainly have my own opinions on potential improvements, I don't believe that the president's job is to drive forward his own agenda. In any organization comprising primarily volunteers, nothing can get done without the willing support of the members. However, the president can help direct the discussion of what the organization ought to do and develop consensus on our direction.

But most importantly, it is the president's responsibility to make sure that the ideas that the executive committee agrees upon become implemented. As applied scientists, it's seldom sufficient to only imagine experiments—at some point we need to perform them. Likewise, many smart people have offered their input on how to improve the SAS; now it's time to act. I'm confident that with your help we

can continue to maintain the qualities that have made the SAS a world-class organization, while enacting new strategies that will provide greater growth and prosperity in the years to come.

The voting members of the SAS Governing Board include 10 members elected by the membership-at-large. There are currently five (5) 2-year positions open on the board. The candidates are as follows:

MARK J. HENSON

I would like to apply as a candidate for delegate to the SAS Governing Board. I am planning on attending the 2008 and 2009 FACSS conferences. I have previously attended the 2002 (Providence, RI), 2003 (Ft. Lauderdale, FL), and 2004 (Portland, OR) FACSS conferences, presenting spectroscopic talks in 2003 and 2004. My research at Pfizer has been focused on vibrational spectroscopic analysis of solid-state samples, specifically chemical imaging of tablets to determine polymorphic identity of the drug at very low (<0.1%) levels.

What are the challenges facing SAS, and how can we meet these challenges?

While unfamiliar with some of the inner workings of SAS, during my attendance at FACSS and other conference events I have become friends with others who are active in SAS and the Coblenz Society and would like to be more involved in what I perceive to be a very collegial society. Based on my experiences at the past conferences, I would perceive one challenge of the governing board to be to increase the level of communication with society members. Reading through the Society charter and

constitution, I am intrigued by the details around technical sections, courses, etc. However, in my experience as a member, I have heard very little of these activities. Additionally, I have noted that whether due to budgetary issues or some other cause, attendance at the FACSS conference has declined somewhat over the years. This may present an additional challenge—to scientifically engage the membership despite travel and budgetary limitations.

JANIECE HOPE

I am currently working with Cargill, Inc., Scientific Resources, on the corporate analytical problem solving team). I have Board of Directors experience as the SAS Local Section Secretary (1 year), with the Minnesota Chromatography Forum as Director (1 of 3 Directors) (2 years), and with the Pointe West Homeowners Association as a member at large (1 year) and as Vice-President (2 years). I have technical experience in GC and LC, IR, Raman, and MS, as well as project and team management.

What are the challenges facing SAS, and how can we meet these challenges?

There are a few opportunities for improvement within the SAS organization. I think that it is possible to work from the strengths of the organization as an expert in technical groups in spectroscopy, etc., with strengths in technical theory/applications, education, and professional networking to translate into something that meets the various needs of members of professional societies. The area that is of particular interest to me is to plan for the long-term success of the organization by ensuring that younger members become and remain actively engaged in the organization. I think we have the opportunity to engage younger members more fully in small ways

(revisions to FACSS student involvement to increase networking at meetings, the specific inclusion of student presenters at local area SAS meetings) or in larger ways by putting an emphasis on using SAS involvement as a hiring ground to find younger talent, etc. As with many organizations there are always opportunities, but I believe that the stronger organizations are the ones with that provide a structure that is very welcoming and engaging. I feel that SAS has a lot of potential in that respect.

GREG KLUNDER

I have a Ph.D. in Analytical Chemistry (1990, North Carolina State University) and was a postdoctoral scientist at Lawrence Berkeley Laboratory (1990–1993) and Lawrence Livermore National Laboratory (1993-1995). I have been a staff scientist at LLNL since 1995 and am currently working primarily in the area of spectroscopy at the Forensic Science Center.

I have been a regular member of SAS since 1991 and a student member prior to that (1986–1990). I attend the annual FACSS meeting regularly and recently have been heavily involved in the organization of the meeting. In 1994, I organized five sessions on Forensics and Laser Ablation. Last year (2007), I was the Awards Chair and am the Program Chair for the 2008 meeting in Reno.

What are the challenges facing SAS, and how can we meet these challenges?

I think two of the challenges facing SAS are maintaining/increasing the membership and dealing with the on-line world.

SAS is one of the best deals going for membership in a professional society, so what is holding people back from joining? In order to get people to realize the value, they need to know what they get as part of

the membership. This needs to be advertised and they need to have convenient ways to join. Advertising can be done in *Applied Spectroscopy* and through emails. There should be a benefit of being a member at conferences and workshops. The SAS Chicago workshop on atomic spectroscopy may be a great advertising avenue for the society, but members and non-members pay the same. Providing more workshops like this with member privileges would accentuate the benefits and encourage membership.

As we now exist in an internet culture, we need to be prepared to move with the times. The on-line journal as part of the membership is a great deal. SAS should also investigate, if they haven't already, the possibilities of on-line workshops and short courses. These courses can be very cost effective and reach out to a broad community and again provide even more value to the membership.

JOHN A. McLEAN

John A. McLean is an Assistant Professor in the Department of Chemistry at Vanderbilt University. The research focus of the McLean group is in the areas of bioanalytical and biophysical chemistry through the development of new structural mass spectrometry techniques. Dr. McLean has received a number of prestigious awards including the Bunsen–Kirchhoff Prize, a 2008 ASMS Research Award, an R&D-100 Award, and the FACSS Student Award. He has presented and published over 150 presentations, 35 papers, and 14 patents in spectroscopic and allied areas. He holds a B.S. from The University of Michigan and a Ph.D. in Chemistry from The George Washington University where he worked under the direction of Professor Akbar Montaser in the area of analytical atomic spectroscopy prior to performing post-

doctoral research with Professor David H. Russell at Texas A&M University. Dr. McLean has been a member of the SAS since 1996.

What are the challenges facing SAS, and how can we meet these challenges?

First, several benefits of the society should be underscored. The society brings together individuals who share a common enthusiasm for the development, application, and education of spectroscopy and allied scientific pursuits. By uniting us, communication, networking, and dissemination of emerging research ideas and findings are facilitated. Tangible examples of these member benefits are local section meetings, the SAS national meeting (i.e., FACSS), the society journal *Applied Spectroscopy*, and others. No less important, but seemingly less tangible, are benefits in the form of mentorship and education of young scientists or scientists refocusing their careers in spectroscopic areas. As a student member, I first established relationships with many friends, colleagues, and mentors at venues such as local section and FACSS meetings. Although anecdotal, these experiences and the knowledge shared by others are clearly benefits stemming from membership in the SAS.

The primary challenge for the SAS is the decline in membership. Of the several suggested reasons for this trend, the prevalence and availability of electronic literature is compelling. If the perceived primary benefit for membership in a society is its journal(s), then electronic access undoubtedly reduces societal membership. Other benefits must then be the motivation for membership recruitment and retention.

There are many members who are motivated by societal benefits for the greater good of the scientific community. In many cases they share a common view that the SAS is regarded as a “steward of

spectroscopy.” Continued efforts to promote student membership will add to these ranks in the future. More challenging is convincing individuals that the SAS is inclusive of spectroscopy and spectrometry in general, rather than centering on a narrow subset of specialized techniques for which there are more focused, established societies. The SAS may address this by reaffirming its spectroscopically inclusive mission, while continuing to promote and foster younger “stewards.” Answering the membership challenge will be difficult, but it must be addressed for the enduring success of the society.

BRIAN SMITH

I am the Founder and Principal of Spectros Associates, an infrared spectroscopy training and consulting firm. I am the current Treasurer of the New England Section of SAS and the former Chair and Secretary of the New England Section of SAS. I have been an At-Large Delegate to the Governing Board for 2 previous terms and have served the National SAS as the SAS Tour Speaker Coordinator and on the Lester Strock Award Committee.

What are the challenges facing SAS, and how can we meet these challenges?

I feel the situation of SAS at the moment is one of “It was the best of times, it was the worst of times.” Our journal, *Applied Spectroscopy*, is being expertly run by a superb staff of dedicated people, and we see annual increases in the number of articles published and revenue generated. This operation should be allowed to purr along as is. Our biggest challenge, which should come as no surprise, is our declining membership. Traditionally our membership has been made up of “professional spectroscopists”, people with a graduate level education who do spectroscopy full

time for a living. For a number of reasons the numbers of these people are declining. However, every year more and more spectrometers are sold and more and more people practice spectroscopy as part of their job. These “spectroscopy users” are numerous and are a group of people we should try to recruit. I think SAS should consider certification programs for spectroscopy users. Completion of some sort of SAS sanctioned training course would entitle users to a certification and full membership in the society. I realize the work and pitfalls associated with this proposal, but other Professional societies run similar programs, and this may be a good way to expand our membership so we can ensure SAS is around for another 50 years. If re-elected as a Governing Board Delegate I promise to work with SAS leadership to ascertain the feasibility of implementing spectroscopy user certification programs.

GREGORY K. WEBSTER

I am very much interested in being a delegate to the Society for Applied Spectroscopy’s Governing Board. I believe I would be a successful delegate for the society. Not only have I been a member of SAS for many years and a frequent attendee at FACSS, but during my tenure as an analytical chemist in the pharmaceutical industry I have been able to participate in several professional societies and conferences, which broadens my perspective on the workings of these organizations.

What are the challenges facing SAS, and how can we meet these challenges?

Like many professional societies, the greatest challenge facing the Society for Applied Spectroscopy is competing for membership, participation, and attendance to its national meeting (FACSS).

Membership in professional societies is

in decline.¹ In my professional experience, I believe this trend is resulting from three main sources: (1) budget constraints are resulting in cutbacks of company sponsorship of membership dues and travel, (2) the competition among several societies for these limited resources, as well as (3) travel for many industrial chemists must be justified in terms of relevance to their current job activities. All three of these notions are interrelated. For the Society for Applied Spectroscopy to remain relevant in industry today, it must become the “destination” society and conference for its members.

For much of its history, the SAS and FACSS have been too focused on limited areas of interest. In my time in graduate school, atomic spectroscopy was the center of activity. Recently, it seems that Raman spectrometry is the main center of activity. This is great if your work is focused in these areas. However, if your professional activities are broader or if this is not the primary tool in use for your job, it is less likely the professional will justify his membership in SAS or attend FACSS. More general conferences such as the Pittsburgh Conference or the Eastern Analytical Symposium, with their expansive analytical focus, will be easier to justify. These conferences showcase relevant sessions in all facets of analytical chemistry. Spectroscopy and its applications are broad in scope; this scope must be ever broadening to gauge industrial interest. For example, analytical chemistry is moving to a smaller scale in instrumentation. The society must see this and highlight these forums. Where are sensor platform forums seen in SAS?

The future of the society (and FACSS) is broadening its scope to focus not only on

the academic and theoretical aspects of these techniques. The society is unique in its capability to address issues in analytical spectroscopy. The society must *lead* in the industrial applications of these tools to solve *relevant* industrial problems. For example, sessions must not only focus on the sensitivity of spectroscopy techniques, but illustrate how this sensitivity can be used to solve *current* industrial problems our members face everyday. More specifically, (1) instead of focusing on the capabilities of nonmetal analysis, hold forums on how this capability can be used to address genotoxic impurity issues in Pharma, or (2) rather than focus on the increasing capabilities of Raman spectroscopy, focus on the ability of spectroscopic techniques to improve process analytical chemistry.

Forums that speak to important industrial issues can easily be marketed to the pharmaceutical industry, where 70% of industrial chemists are employed. Meetings that focus on issues rather than techniques provide the needed justification for travel spending and dues allocation for our membership. The American Association of Pharmaceutical Scientists (AAPS) was a small conference based on Pharmacy schools a few years ago. It is now the major conference being attended in the pharmaceutical industry. This is mainly because its sessions focus on relevant pharmaceutical issues faced by the scientific professional. However, AAPS has not developed yet into a lead analytical conference. SAS can still lead in being a broad analytical resource that addresses relevant industrial issues.

As a delegate to the Society for Applied Spectroscopy’s Governing Board, my experience can speak to these issues and help lead the society into the future.

¹“Census Bureau: Volunteerism Down”, by Steve Jordahl. Family News in Focus (2/13/2003).