



## April 2007 Newsletter

### In this Issue

*Please note the following items:*

***Student Travel Grant Program***

***Call for Nominations***



***Editor***



Editor's Note

Chair's Message

Honors and Awards to DLS Members

In the News

Calendar

Executive Committee Minutes

Distinguished Traveling Lecturer (DTL) Program

DLS Executive Committee Members

Other Committees

Contact Editor

---

## Editor's Note

**Jenny Mages, April 2007**

There are many exciting past and future events included in this newsletter. We have new leadership. Many DLS members have become fellows of APS and OSA. Prizes have been awarded from APS, OSA, and ACS to DLS members. The symposium for undergraduate research was a big success thanks to H. Metcalf and his supporters. Rendering support for the new DLS generation may be more critical than widely recognized. Mentorship for science careers is critical in remaining competitive and in attracting new talent.

There are many exciting past and future events included in this newsletter. We have new

leadership. Many DLS members have become fellows of APS and OSA. Prizes have been awarded from APS, OSA, and ACS to DLS members. The symposium for undergraduate research was a big success thanks to H. Metcalf and his supporters. Rendering support for the new DLS generation may be more critical than widely recognized. Mentorship for science careers is critical for remaining competitive and for attracting new talent.

On another note, I would like to mention the memorial symposium dedicated to Lorenzo M. Narducci, whose name stands out for his major advances in Optical Coherence, Quantum Optics and Atomic Optics, as well as for his service to laser science and being a kind and thoughtful person. Details on the memorial symposium can be found below and at <http://www.physics.drexel.edu/narducci>.

In order for us to thrive as an APS Division we urge you each to recruit three more members. The APS membership is growing and in order for DLS to maintain its divisional status, our division also needs to grow

Remember, if you have any suggestions or input for the DLS newsletter or the organization as a whole, email [jenny.magnes@usma.edu](mailto:jenny.magnes@usma.edu).

---

## Chair's Message

**Leo W. Hollberg, April 2007**

It is an honor to have the opportunity to serve this year as the chair of the APS Division of Laser Science. It is also an excellent time for me to take over the reins, because DLS is in great shape thanks to the efforts of our previous leaders and a very strong and vibrant DLS Executive Committee (EC). Moving up through the apprenticeship ranks of DLS leadership I have learned tremendously from the previous chairs, Mark Raizen and Hal Metcalf, who preceded me. I thank both of them and the previous EC members for handing over an organization that is healthy and running smoothly. Hopefully, DLS will remain in good shape for Mark Johnson and Nick Bigelow who follow in line. As in most divisions, the secretary/treasurer does the bulk of the heavy lifting, and we owe a great deal to John Fourkas for keeping us on track. All of us will do our best to keep DLS heading in a positive direction and providing support to our membership, to science education and outreach.

We are especially indebted to Hal Metcalf for his diligent efforts and wise guidance of DLS during his term as chair (through October 2006), and for his past and continued organization of the Symposium on Undergraduate Research. Those symposia are run at the annual Laser Science (LS) meetings and have proven to be an outstanding success for DLS.

Since our last newsletter several people have completed their official terms of service to

DLS. Marjatta Lyyra and Alexander Gaeta finished three years on the DLS-EC and we are very grateful for their hard work and advice. We also lose the service of Joe Eberly who now relinquishes his role as our Division Councilor to APS, as he moves on to serve as the 2007 President of OSA. Our thanks to Joe for a job well done; we wish him great success in his new role. On the positive side, this gives us another strong connection to OSA.

It is a pleasure to welcome some new people to the DLS leadership. Roseanne Sension and Kurt Gible recently joined the DLS-EC as members-at-large, and Nick Bigelow becomes the new Vice Chair. Our thanks also go out to all that were willing to run for office and to offer their time in service to APS-DLS, it is greatly, greatly appreciated. Steve Rolston also joins us to take over Joe's position as our APS Councilor for DLS. Mentioning just these few changes does not provide an adequate or complete picture of our organization; there are many others that continue to provide very valuable service in various capacities, on programs and committees associated with DLS. The really important work is all too frequently hidden from view.

No doubt, you all know that Tom McIlrath retired in September 2006 from his position as Treasurer and Publisher of the APS. Tom has been a cornerstone in our community and his departure from APS represents a major loss to DLS. His long time involvement in laser science and optics, and his service and vast experience with APS and OSA has given us a unique representative within APS management and provided invaluable institutional memory. Tom was always looking out for our organization, served as a strong advocate for DLS and helped us build and maintain connections to other related organizations. Tom has provided invaluable service to DLS that goes way beyond what we understand. I doubt that we will ever fully recover from his departure, but we wish him well in his next endeavors.

### **Don't forget —**

In our own personal overloaded worlds it is easy to lose track of the activities, services, programs, and opportunities provided by DLS. If your memory is not perfect, or if you are not involved with the organization on a regular basis, it is easy to forget that DLS provides —

- [Student Travel Grant Program](#), which can assist with some partial funding for DLS student members to attend QELS or LS. **Deadline April 5**, for QELS 2007
- [Distinguished Traveling Lecturer Program](#), run by Rainer Grobe, that can bring outstanding lecturers to your institution (with preference given to locations with limited resources).
- And some great values — please [remind your students](#) that membership in APS is free to students for the first year (obviously they should also join DLS !).
- [New Laser Scientist Conference](#), is designed to provide a program of information and support to new faculty members and scientists working in laser science. It typically runs every 2 years, and Bob Jones and Mike Chapman coordinated a very successful NLSC-2006 in conjunction with the LS meeting in Rochester.
- APS Fellowship nominations through DLS are due at APS by 3 April 2007.

- Nomination deadline for the [2008 Arthur L. Schawlow Prize](#) are due 1 July, 2007.

Naturally, additional information on all of these programs can be found on the DLS website, <http://www.aps.org/units/dls>.

### Meetings —

The 2006 DLS annual meeting, LS-XXII, held in Rochester in October turned out to be a great event, thanks to the stellar job that Poul Jesson and Arjun Yodh did in putting together an exceptional program. That meeting set a new standard and raises the bar of expectations. We owe a round of applause to Poul, Arjun and the others that assisted with the program.

Looking to the future, the two major conferences that DLS sponsors, QELS and LS, are on our immediate horizon.

The upcoming [CLEO/QELS](#) (“where technology is born”) will be in Baltimore 6-11 May 2007, and promises to be a great meeting.

- This year QELS has special symposia on [degenerate Fermi gases](#), as well as two joint CLEO/QELS special sessions: one recognizing [40 years of research on Self-Phase Modulation](#), and the other on [NanoPhotonics](#).
- **Capitol Hill Day 2007:** This year, a new program is being initiated to give CLEO/QELS participants the opportunity to have their voices heard on [Capitol Hill](#). Taking advantage of the close proximity to Washington D.C., visits to congressional offices are being organized jointly by OSA, IEEE, OIAD and APS-DLS. This will give us the opportunity to join our optics/laser/science colleagues to share ideas and concerns with the political leaders in Washington. Opinions on Capitol Hill are critically important to the health of science and technology. Participants will receive some brief training, advice and handout materials on the evening of May 9th, and the congressional visits will be scheduled for the following day, Thursday May 10th. I hope that many DLS members will participate; it is an excellent opportunity to express your opinions where they could actually make a difference. Nick Bigelow has kindly offered to coordinate the DLS part of the effort, and more information will be forthcoming.

This year we are very fortunate to have Fred Raab (LIGO-Washington) and Charles Schmuttenmaer (Yale) as the program chairs for Laser Science XXIII, and they are putting together a fantastic program. You will now find the special themes, topics and invited speakers listed on the conference website. The LS/FiO 2007 meeting will be held in San Jose, CA., but please beware that the meeting occurs earlier than usual, 16-20 September 2007. As a result the submission deadline is nearly upon us, 2 April 2007. (But, I cannot explain why the submission deadline moved forward faster than did the meeting...?) Please remember to register in the LS segment of the FiO/LS registration system.

I am also very happy to report that Lewis Rothberg (University of Rochester) and John

Kitching (NIST-Boulder) have graciously agreed to serve as the program chairs for the 2008 Laser Science meeting. So, DLS is in very good hands for LS-XXIV, which is scheduled to return to Rochester in October 2008.

We hope to see you at CLEO/QELS and LS-XXIII this year.

### **Other activities —**

One of the striking aspects of our division is the breadth of research covered by our membership. “Laser Science” brings us together under the APS umbrella, but we are a scientifically diverse group with wide-ranging scientific interests and endeavors. This fact becomes immediately obvious when interacting with other DLS members at our DLS banquets each year at the LS meetings. It is a great pleasure to learn something completely new and interesting. Even within APS the demographics of DLS are broad; our members appear in all of the 30 other APS units (Divisions, Topical Groups, and Forums). The diversity of our organization allows us to leverage our connections with other organizations; as a result, our efforts are not so diluted by repeating and duplicating programs. The synergistic connections are particularly evident in our co-sponsorship of the QELS part of CLEO/QELS with OSA and IEEE-LEOS, and in the co-location of our annual meeting Laser Science (LS) with the OSA annual meeting (FiO).

A new activity that is now underway in DLS, which is to enhance our website to include some basic information about DLS member’s research groups (at their option). This would include: research interests, key words, and location in a searchable data base. Dan Gauthier leads that web development effort, and we are looking forward to the new features coming live in the near future.

Most importantly, DLS exists to provide something useful for laser science, for our members, for education, outreach and the broader community. Please contact any of us on the Executive Committee with comments, suggestions or complaints on how we might improve our organization and better serve the community. Your input is greatly appreciated.



**Division of Laser Sciences Leadership  
Changes**



**Chair**  
**Leo Hollberg, NIST**

Leo Hollberg is working on high-resolution spectroscopy of laser-cooled and -trapped atoms, the development of semiconductor lasers for scientific and technical applications, optical coherence effects of driven multilevel atoms, chip-scale-atomic-clocks, optical frequency standards, optical frequency combs and optical atomic clocks. Areas of expertise include frequency stabilized lasers with ultra-narrow linewidths and high resolution optical spectroscopy and optical frequency standards.

Much of this research is done in collaboration with his NIST colleagues and with scientists from around the world. Leo is currently the group leader of the Optical Frequency Measurements group in the Time and Frequency Division, NIST, Boulder



**Chair-Elect**  
**Mark A. Johnson**

Mark A. Johnson works on imaging of solvent-dependent structures of solutes and study the role that a solvent plays in controlling the outcomes of reactive encounters. Design, construction, and commissioning of argon nanomatrix spectroscopy to provide ever clearer, molecular level pictures of condensed phase processes is only a small part of the research.



**VICE CHAIR**  
**Nick Bigelow, Univ. of Rochester**

Prof. Bigelow's research interests are in the areas of [Quantum Optics](#) and Quantum Physics. His recent work has focused on the creation and study of ultra-cold quantum gasses, the manipulation and control of atomic motion using light pressure forces, the laser cooling and trapping of atoms and molecules, Bose-Einstein Condensation and the basic quantum nature of the basic atom-photon interaction.



**PAST CHAIR**  
**Harold J. Metcalf, SUNY**

Harold Metcalf's early work included precision measurements of fundamental constants, quantum beat spectroscopy, and pioneering advances in laser techniques. He was one of the initiators of laser cooling and atom trapping and has concentrated on optical and magnetic manipulation of atoms since then. Novel experiments lead to superposition states (Schroedinger's Cat), exceedingly low temperatures, and optical forces that exceed the normal limits. New types of microKelvin thermometry and atom manipulation techniques have recently emerged.



**DIVISIONAL APS COUNCILOR**  
**Steven Rolston**  
**University of Maryland**

Ultracold neutral plasmas, Bose-Einstein condensation, quantum computation, non-linear atom optics, production of antihydrogen, atomic frequency standards, laser cooling.

**sources:**

<http://www.physics.umd.edu/people/faculty/rolston.html>

<http://www.sunysb.edu/metcalf/profs/hal.htm>

[http://spider.pas.rochester.edu/mainFrame/people/pages\\_old/Bigelow.html](http://spider.pas.rochester.edu/mainFrame/people/pages_old/Bigelow.html)

<http://www.physics.umd.edu/people/faculty/cv/RolstonCV.pdf>

<http://www.chem.yale.edu/faculty/johnson.html>

## **Honors and Awards to DLS Members 2006**

We congratulate our members on the recognition of their achievements.



**Arthur L. Schawlow Prize in Laser Science:**

**Szymon Suckewer**  
Princeton University

*"For pioneering contributions to the generation of ultra-short wavelength and femtosecond lasers and x-ray laser microscopy."*



**Atomic, Molecular and Optical Physics: I.I. Rabi Prize:**

**Jun Ye**  
JILA

*"For advances in precision measurement, including techniques for stabilizing and measuring optical frequencies, controlling the phase of femtosecond laser pulses, and measuring molecular transitions."*



**Atomic and Molecular Spectroscopy or Chemical Physics: Herbert P. Broida Prize:**

**James C. Berquist**  
National Institute of Science and Technology

*"For seminal contributions to ultra-high-resolution laser spectroscopy and the realization of accurate optical frequency standards."*



**For outstanding achievement in theory, experiment or observation in gravitational physics: Einstein Prize:**

**Ronald Drever**

California Institute of Technology

*"For fundamental contributions to the development of gravitational wave detectors based on optical interferometry, leading to the successful operation of the Laser Interferometer Gravitational Wave Observatory."*



**Molecular Spectroscopy: Earle K. Plyler Prize:**

**Timothy S. Zwier**

Purdue University

*"For the design and implementation of multiple resonance methods that elucidate the potential energy landscapes of flexible biomimetic molecules and their hydrates by optical control of isomer populations"*



**Exceptional research accomplishments by a young scientist in the interdisciplinary area of precision measurement and fundamental constants and to encourage the wide dissemination of the results of that research: Francis M. Pipkin Award:**

**David DeMille**

Yale University

*"For wide-ranging studies of fundamental symmetries in atoms and molecules, including novel approaches to searches for the electric dipole moment of the electron and investigations of parity nonconservation and the spin-statistics connection."*

## **2006 APS Fellows that are DLS Members**

**Attwood, David**

University of California, Berkeley

**Citation:** For leading contributions to the characterization and use of coherent extreme ultraviolet and soft x-ray radiation, and for pioneering work in laser interferometry of dense plasmas.

Nominated By: Laser Science (DLS)

**Averbukh, Ilya**

Weizmann Institute of Science, Israel

**Citation:** For pioneering contributions to the understanding of wave packet dynamics in atoms and molecules, particularly the sequence of revivals and fractional revivals.

Nominated By: Atomic, Molecular, & Optical Physics (DAMOP)

**Höfer, Ulrich**

Philipps-Universität Marburg, Germany

**Citation:** For outstanding contribution to the development and application of laser-based techniques to the study of surface and interface dynamics.

Nominated By: Laser Science (DLS)

**Helmerson, Kristian P.**

National Institute of Standards and Technology

**Citation:** For pioneering work in cooling, trapping, and coherent manipulation of cold atoms and for the development of seminal techniques for the manipulation and control of objects with optical tweezers.

Nominated By: Laser Science (DLS)

**Hernandez, E. Susana**

University of Buenos Aires, Argentina

**Citation:** For her contributions to international physics, including remarkably diverse scientific contributions derived from her continuing efforts to bring together researchers from different areas and disciplines with particular emphasis on young scientists.

Nominated By: International Physics (FIP)

**Kivshar, Yuri S.**

Australian National University

**Citation:** For creative, stimulating, and seminal contributions to nonlinear optics, the physics of optical solitons, and the theory of nonlinear localized modes.

Nominated By: Laser Science (DLS)

**Raithel, Georg A.**

University of Michigan

**Citation:** For research on collisions and excitation blockades in cold gases of Rydberg atoms, Rydberg-atom trapping, and cold-atoms in optical lattices, atom guides and strong magnetic fields.

Nominated By: Atomic, Molecular, & Optical Physics (DAMOP)

**Reitze, David H.**

University of Florida

**Citation:** For leadership in the applications of lasers to in diverse areas from the detection of gravitational waves to the ultrafast response of matter.

Nominated By: APS

**Suits, Arthur G.**

Wayne State University

**Citation:** For pioneering work in the application of state-resolved and "universal" ion imaging techniques to a broad range of problems in chemical physics and reaction dynamics.

Nominated By: Chemical Physics (DCP)

**Trebino, Rick Peter**

Georgia Institute of Technology

**Citation:** For inventing and developing techniques for measuring ultrashort laser pulses.

Nominated By: Laser Science (DLS)

**Villeneuve, David M.**

National Research Council of Canada

**Citation:** For the first observation of a single electron orbital wave function using high harmonic emission, and novel applications of femtosecond lasers to controlling molecular internal and external degrees of freedom.

Nominated By: Atomic, Molecular, & Optical Physics (DAMOP)

**Wang, Hailin**

University of Oregon

**Citation:** For contributions to the study of coherent optical processes in semiconductors, especially the pioneering experimental work on electromagnetically induced transparency via exciton correlations.

Nominated By: Laser Science (DLS)

---

**Sources:**

<http://www.aps.org/programs/honors/prizes/schawlow.cfm>

<http://www.aps.org/programs/honors/fellowships/2006-fellows.cfm>

<http://www.aps.org/programs/honors/prizes/prizerecipient.cfm?name=Jun%20Ye>

<http://www.aps.org/programs/honors/prizes/prizerecipient.cfm?name=James%20C%2E%20Bergquist>

[http://www.nist.gov/public\\_affairs/images/06PHY013\\_Berquist\\_LR.jpg](http://www.nist.gov/public_affairs/images/06PHY013_Berquist_LR.jpg)

<http://www.aps.org/publications/apsnews/200703/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=52497>



## American Chemical Society



Ahmed Zewail Award in Ultrafast Science and Technology  
sponsored by the Ahmed Zewail Endowment Fund established by  
Newport Corporation :

Robin M. Hochstrasser  
University of Pennsylvania

**Sources:**

<http://www.rescorp.org/acs.06.html>

<http://www.chemistry.org/portal/a/c/s/1/acdisplay.html?DOC=awards%5Cawards2007.html>



## Optical Society of America

### 2006 OSA Fellows that are DLS Members

**Ilya Sh. Averbukh**

Weizmann Institute of Science, Israel

For the discovery of the universal scenario of quantum fractional revivals and seminal contributions to ultrafast optics of atomic and molecular wave packets, including applications.

**Nicholas P. Bigelow**

University of Rochester, NY, USA

For pioneering experimental leadership in both spin squeezing and two-species trapping of ultra-cold atoms and for service through meeting organization and journal editing.

**Rolf Binder**

University of Arizona, AZ, USA

For contributions to the theoretical understanding of many-particle effects and optical nonlinearities in semiconductors, especially for elucidating the analogies and differences between excitonic and atomic systems.

**Hui Cao**

Northwestern University, IL, USA

For groundbreaking experimental studies of coherent light generation and transport in disordered media, including the invention of microlasers.

**James Dunn**

Lawrence Livermore National  
Laboratory, CA, USA

For important contributions to the development of soft X-ray lasers and optical diagnostics of dense plasmas.

**John M. Dudley**

Université de Franche-Comté, France

For contributions to the fields of ultrafast optics, nonlinear fiber optics, and supercontinuum generation.

**John T. Fourkas**

University of Maryland, MD, USA

For experimental and theoretical contributions in ultrafast nonlinear optics as applied in chemical physics, microscopy, and microfabrication.

**Azriel Z. Genack**

Queens College of CUNY, NY, USA

For seminal contributions to the statistics of propagation and localization of optical and microwave radiation and the photonics of chiral structures.

**Galina Khitrova**

University of Arizona, AZ, USA

For leadership in research in fundamental optical phenomena in semiconductor nanostructures.

**Yurii A. Vlasov**

IBM T. J. Watson Research Center, NY, USA

For outstanding contributions to photonic bandgap materials and silicon integrated nanophotonic circuits.

Sources: [http://www.osa.org/aboutosa/awards/fellows/nomination/38-Fellows\\_Feb.pdf](http://www.osa.org/aboutosa/awards/fellows/nomination/38-Fellows_Feb.pdf)

---

## In the News

- **UNIFICATION OF OPTICS PAPERS IN THE PHYSICAL REVIEW.**  
Until now, papers on optics have been split between Physical Review A and Physical Review E. In order to better serve the needs of our research

communities, the Editors have decided to unify optics papers in Physical Review A -- the journal most closely associated with the DAMOP Division. For further information, see the full text of the announcement at (<http://link.aps.org/abstract/PRA/v75/e010001>).

- **Job Opportunity: Program Manager for Atomic, Molecular, and Optical Sciences.** The Office of Basic Energy Science, US Department of Energy, is seeking qualified applicants for a career federal position managing its Atomic, Molecular, and Optical Sciences Program. This program supports mission-oriented basic science at universities and national laboratories. A link to the announcement and on-line application instructions is at <http://www.sc.doe.gov/bes/BESjobs.html> . Applications must be submitted by May 21, 2007. The AMOS program is described at <http://www.sc.doe.gov/bes/chm/Programs/programs.html>. For questions about this position and working at BES, please contact Michael Casassa, [michael.casassa@science.doe.gov](mailto:michael.casassa@science.doe.gov) .

- **H. Metcalf reports on the Symposium on Undergraduate Research at LS-XXII in Rochester:**

The Symposium on Undergraduate Research at LS-XXII in Rochester began with a dinner on Sunday night, 8 October, at the Saddle Ridge restaurant in the trendy High Falls region, about 15 minutes walk from the Clarion Hotel where most people were staying. There was plenty of very good food and we were the beneficiaries of some very pleasant people who run the place. It was a pleasant time to make acquaintance with one another and discuss the forthcoming adventure.

This was the sixth such symposium in a series that began in 2001 and has brought well over 100 students to our annual meeting to present the first research papers of their budding careers. It has grown from ten papers in that first year to forty-one this year, on projects done at more than 20 universities.

Once again we had students who did their research in various European laboratories under a program run by Professor Martin Richardson of the College of Optics and CREOL at the University of Central Florida. Thus, the symposium provided a reunion for these students whose European summers had been coordinated through this program. All the past symposia programs as well as many photos can be found at <http://www.aps.org/units/dls/research-symposium/index.cfm>

The symposium began with a poster session having 26 papers, located in the attractive and pleasant Riverside Court of the Rochester Convention Center. It started immediately after the OSA plenary session at 12:00, well ahead of the

regularly scheduled sessions, and thus there was a large amount of traffic from the conferees throughout the entire session. It was chaired by Nick Bigelow from the University of Rochester who was recently elected to the leadership chain of DLS and will become its chair in 2009. The entire area was abuzz with conversation and discussion as the delighted presenters talked about their work to interested scientists. A box lunch was provided for all the student participants, and the munching facilitated further networking among them.

The oral presentation sessions began at 1:30 and lasted until well after 6:00. The first one (7 talks) was presided by Carl Grossman from Swarthmore College and the second one (8 talks) was presided by Volkmar Dierolf from Lehigh University. The oral sessions were an unqualified success, largely because of the high quality of the talks given by the students. The questions that came from the audience were broad and ranging, and these emerging young scientists handled them with poise and confidence. The students were well-prepared, informed, articulate, and otherwise excellent. Every single one of them had both a complete grasp of their role in their project and simultaneously a view of where their work fit into the larger scheme of things. It was gratifying to see these very young scientists giving their first talks at a professional meeting, and it was clearly a memorable event for them. About 1/3 of all the presenters were female, a fraction well above the national average of physics students.

The symposium ended with a dinner served in the Clarion Hotel that was enjoyed by all. One of the guests was Dr. Fred Raab, Director of the Hanford site of LIGO, and co-chair of the upcoming DLS meeting in San Jose in September, 2007. He entertained the students with the story of LIGO, and answered a wide range of questions about career options as well as gravitational wave detection. His special brand of personal humor was most appreciated by everyone.



Judging from the enthusiastic notes that accompanied their final expense reports, the participants will surely remember this meeting throughout their professional lives. Some of the comments were:

- “I had a great time at the conference and felt that it was well organized. The poster session was arranged really nicely so that the viewers could walk from poster to poster. Also the schedules that were provided were informative of talks and poster session.”
- “I enjoyed my time there and thought it was very well organized. It was informational and inspirational for me as an undergraduate uncertain about my future in physics.”
- “As for the conference, I had a fantastic time. It was a wonderful opportunity to get to meet students and professionals and learn what's going on in modern science. It's very different from what is available in most of my textbooks!”
- “I thoroughly enjoyed the experience. It was wonderful to converse with undergraduates from outside of (my own school) to gain additional research-related perspectives. (And I was able to meet some amazing people!)”
- “The location of the posters this year was absolutely amazing. I'm sure we could fit more in that space, as there were more posters on Sunday evening there. Both dinners were nice. Going to High Falls on Sunday introduced the area and allowed some of the kids to go back there on Monday night for drinks after dinner.”
- “Everything was great! I had a really excellent time, and met many interesting people. The schedule was free enough such that it allowed time for the students to walk around Rochester, or go to sessions if we wished. It was only unfortunate that most of us could only stay one or two days. There was a really excellent session on ultracold Rydberg gases on Tuesday morning that I would have loved to be able to see more of, but I had to leave halfway through to catch my flight. It was really great seeing (highly visible person) and meeting, talking and sharing ideas with him.”
- “I thought the poster session was a good size, and long enough such that everyone had the chance to see most of the other presentations. I had a really wonderful time, and I thank you for the opportunity afforded to us, and I am most appreciative of the respect with which you spoke to and of us.”
- “The organizational aspects of the undergraduate sessions were well put together. Additionally, I would have liked to attend more of the undergraduate talks but this became difficult as there were many other interesting/informative sessions occurring at the same time (this is just a consequence of being at a large conference). Thanks again for organizing this event. I learned a great deal from attending the talks and viewing the posters on display.”

The event was supported by funds from several sources. A significant part of the total cost was provided by the departments and colleges of some of the participants. Sincere thanks go to Brigham Young Univ., Truman College, Univ. Illinois-Champaign-Urbana, Kansas State Univ., Wesleyan Univ., N.I.S.T., Swarthmore College, Rowan

Univ., Creighton Univ., Lawrence Univ., Univ. Texas, Univ. Connecticut, Drew Univ., Lehigh Univ., Univ. California Berkeley, Univ. Arkansas, Univ. Rochester, Yale University, and Colgate Univ. Their total contributions are unknown because not everyone reported, but they surely exceeded both the \$8000 from DLS and the \$4000 from NSF. This support has been essential to the ability to provide 100% support to the students, including registration, travel, housing, and meals. It has been greatly appreciated.

In addition to the financial support, the symposium benefited from several intangible support modes (priceless). Of course, the DLS provided the schedule space so that it could be held at all. But very strong support came from OSA. The meetings department provided the poster boards and numbering system, and especially the use of the beautiful Riverside Court of the Convention Center. Also, the oral sessions were moved to a room adjacent to the Court so that communication between the two locations was easy. OSA also allowed us to vary the schedule of sessions from the block scheduling of all its other sessions, and was kind enough to include these changes in its program. In addition, they provided printed copies of the program in every single registration package for all attendees at FiO/LS, not simply those of DLS members. This was greatly appreciated. Finally, they registered all the students en masse to minimize the work for us. The key OSA people are Heather Schoch, Heidi Hopper, Kristin Mirabal, Manuela Costa, and of course the leadership of Liz Rogan and Will Ryan.

The entire symposium was organized and arranged by Prof. Harold Metcalf of Stony Brook University, your recent past chair. I benefited from significant help from my Stony Brook colleague John Noé and undergraduate Azure Hansen, and also the several people from OSA's meetings department. The symposium will be repeated at FiO/LS in San Jose next September; information can be had from the DLS leadership, accessible through the DLS website at <http://www.aps.org/units/dls/>.

This event organized by  
Harold Metcalf, DLS chair  
with help from  
John Noé and Azure Hansen  
Stony Brook University

---

## Executive Committee Minutes

- **Meeting Place:** Rochester, NY, October 2006.
- **Membership:** DLS is 2.92 % of APS. We need a few more members to reach the 3% requirement.
- **New Editor-in-Chief at APS** - Gene Sprouse

- Mark Johnson reported that the fellowship committee will meet at APS in November. APS greatly wants to increase foreign membership, and we can get more fellowship slots if we do. We had 5 nominations, with 1 leveraged against a foreign member. There were about 18-20 nominations total.
- Rainer Grobe has provided a list of 12 people to vote on for 4 additional Distinguished Traveling Lecturers. Requirements for DTLs include that the school be geographically isolated and not be a research institution.
- Dan reported on the web site. He brought in a printout of the web site of the Division of Biological Physics. The web site includes a researcher database on which 60 labs have entered information. Dan suggested that we do something similar for research centers in laser science. Dan would like suggestions for keywords.
- Dan Gauthier reported on the web site. He brought in a printout of the web site of the Division of Biological Physics. The web site includes a researcher database on which 60 labs have entered information. Dan suggested that we do something similar for research centers in laser science. Dan would like suggestions for keywords.
- The new OSA abstract submission system worked well, thanks to Poul and Arjun. [It now appears that this system will not be used in the future.]
- The Symposium on Undergraduate Research was a big success. Three meals were provided at three different venues, dinner Sunday night before the event at Saddle Ridge, catered box lunches at the event, and a dinner at the Clarion afterwards. The science was excellent. The poster session was scheduled to start just as the plenary session got out, so there was lots of foot traffic. Many of the students got support from their schools, to the tune of \$7,000 or \$8,000 in all likelihood. The entire cost was \$18,000-\$20,000. We allocated \$8,000 and there was \$4,000 from NSF. We would like external support.
- Joe Eberly reported on APS Council issues. The entire top leadership may well turn over in a period of five years (plus the head of AIP), so we should be aware of this. There is still a big homeland security issue for foreign invitees to meetings, due in part to jurisdictional issues among different agencies. One worry is that experienced foreign scientists are more likely to be suspected to be spying than are inexperienced scientists, particularly as the former have likely visited the US recently.
- We still need to figure out who are our DLS members. Mark Johnson obtained a list of members from which we can get a glimmering of the answer to this question. Mark suggested that we need to make this a “go-to” meeting for our members. He suggested that we make new technologies a major focus of the LS meeting. Laser physics has involved considerably over the last 20 years, which has probably really shifted our user base.
- Steve Cundiff suggested instituting a travel award for graduate students in their first few years who are not presenting papers, perhaps in lieu of a postdoctoral program. He will make a formal proposal to the EC via email.
- The idea of a career committee was brought up by Hal Metcalf.

- Mark Johnson brought up the idea of instituting a real early career award for perhaps three people a year. The idea would be to give the award to pre-tenure scientists. Awardees must be DLS members.
  - Please direct any comments to the appropriate [committee member](#).

## Call for Nominations

- Nominations for **APS fellowships** are processed for DLS through Nick Bigelow; submission deadline is 3 April 2007. For specifics visit <http://www.aps.org/programs/honors/fellowships/deadlines.cfm> and/or contact Nick Bigelow at [nbig@lle.rochester.edu](mailto:nbig@lle.rochester.edu).
  - The 2008 **Arthur L. Schawlow Prize in Laser Science** nominations can be submitted to Lou F. DiMauro [dimauro@mps.ohio-state.edu](mailto:dimauro@mps.ohio-state.edu) by July 1, 2007. For more information go to <http://www.aps.org/programs/honors/prizes/schawlow.cfm>.
- 

## Calendar

- Make plans now to attend the **2007 DAMOP/DAMP $\Phi$**  conference in the beautiful city of Calgary, Alberta June 5 - 9, 2007. For information go to <http://www.phas.ucalgary.ca/DAMOP07/>.
- **Rochester Conference on Coherence and Quantum Optics**, which has been held once each six years since 1960, will have its ninth meeting (CQO9) on campus at the University of Rochester during the week of June 10-16, 2007 with a sister conference, the “**International Conference on Quantum Information**” (ICQI). For more information go to <http://osa.org/meetings/topicalmeetings/CQO/default.aspx>, and <http://osa.org/meetings/topicalmeetings/ICQI/default.aspx>.
- **LS-XXIII, Annual Meeting of the DLS** (co-located with the OSA Annual Meeting, Frontiers in Optics 2007), September 16-20, 2007, San Jose, CA
- **CLEO/QELS** will be held on May 6-11, 2007 in Baltimore, Maryland. For information on the conference go to <http://www.cleoconference.org/>.
- **FiO/LS** will be held September 16 - 20, 2007. Submission deadline has been extended to 11 April 2007. Form more information <http://www.osa.org/meetings/annual/program/>. Graduate Students who are DLS members get the LS registration reimbursed.
- **Margaret Murnane** will be the dinner speaker at the NYSS APS/AAPT Spring meeting at the U.S. Military Academy in West Point, NY, 13-14 April 2007. [http://www.dean.usma.edu/departments/physics/APS\\_AAPT.htm](http://www.dean.usma.edu/departments/physics/APS_AAPT.htm).

- **LORENZO M. NARDUCCI MEMORIAL SYMPOSIUM: Advances in Coherence, Quantum Optics, and Atom Optics**

You are invited to attend a Memorial Symposium honoring and celebrating Professor Lorenzo Narducci's life and work. Lorenzo Narducci was a long time member of the American Physical Society, including the Division of Laser Science and the Division of Atomic Molecular and Optical Physics, and he made many significant contributions to the fields of laser science, optical coherence, nonlinear dynamics, to name just a few. The meeting will take place at Drexel University, Bossone Research Center, on May 24-25, 2007. The meeting will be chaired by Frank Narducci. The preliminary program and other details can be found at <http://www.physics.drexel.edu/narducci>

There will be a registration fee (\$75), primarily to cover the costs of the conference dinner and coffee breaks. A block of rooms has been reserved at the Sheraton University City Hotel, which is within walking distance of the University campus. Be sure to mention the group code "**Memorial Symposium**" to secure a special discounted rate. These rates expire on **19 April 2007**.

For further information contact [narduccisymposium@physics.drexel.edu](mailto:narduccisymposium@physics.drexel.edu).

More complete descriptions and additional information about registration, deadlines, publication requirements, etc., will be available on the OSA website under the Meetings category starting at <http://osa.org/meetings/topicalmeetings/CQO/default.aspx>, and <http://osa.org/meetings/topicalmeetings/ICQI/default.aspx>.

For other details see:

<http://www.osa.org/meetings/annual/>  
<http://www.osa.org/meetings/topicalmeetings/>

---

## Student Travel Grant Program

Contact John Fourkas for more info at [fourkas@umd.edu](mailto:fourkas@umd.edu) .

---

## Distinguished Traveling Lecturer (DTL) Program

This program is very successful with the number of college applications for speakers in balance with the number of speakers available. We have nine volunteers as Distinguished Travelling Lecturers leading to enough flexibility with respect to accommodating the colleges' first choices for speakers

The list of current DTLs include:

- **Jim Kafka**, Spectra Physics
- **Carlos Stroud**, The Institute of Optics, University of Rochester
- **Lee W. Casperson**, Dept. of Electrical Engineering, Portland State University
- **Eric Cornell**, JILA, University of Colorado
- **Robert Byer**, Department of Applied Physics, Stanford University
- **Ron Walsworth**, Harvard Smithsonian Center for Astrophysics, Harvard University
- **Luis A. Orozco**, Physics Department, University of Maryland
- **Christopher Monroe**, Department of Physics, University of Michigan

The DTL Committee members are:

- Rainer Grobe (Chair)
- Margaret Murnane
- Ian Walmsley
- Matt Anderson
- Elizabeth McCormack
- Mark Beck

## DLS Executive Committee Members

### Executive Committee Officers

#### CHAIR

**Leo W. Hollberg**  
(becomes Past Chair after LS-XXIII)

5052 N. Foothills Hwy

Boulder, CO 80302

Ph: (303) 497-5770

FAX: (303) 497-7845

email: [hollberg@boulder.nist.gov](mailto:hollberg@boulder.nist.gov)

#### CHAIR-ELECT

**Mark A. Johnson**  
(becomes Chair-Elect after LS-XXIII)

Department of Chemistry

Yale University

New Haven, CT 06520-8107

Ph: (203) 432- 5226

Fax: (203) 432-6144

### Executive Committee Members-at-Large

#### Daniel J. Gauthier (to 10/07)

Dept. of Physics

Duke University

P.O. Box 90305

Durham, NC 27708

Ph: (919) 660-2511

FAX: (919) 660-2525

email: [gauthier@phy.duke.edu](mailto:gauthier@phy.duke.edu)

#### Luis A. Orozco (to 10/07)

Dept. of Physics

Univ. of Maryland

College Park, MD 20742-4111

Ph: (301) 405-9740

email: [lorozco@physics.umd.edu](mailto:lorozco@physics.umd.edu)

#### Steven Thomas Cundiff (to 10/08)

Univ of Colorado

JILA

email: [mark.johnson@yale.edu](mailto:mark.johnson@yale.edu)

#### **VICE CHAIR**

**Nick Bigelow**  
**(becomes Chair-Elect after LS-XXIII)**

Dept of Physics & Astronomy  
Univ of Rochester  
Bausch & Lomb Hall  
Rochester, NY 14627-0171  
Ph: (585) 275-8549  
Fax: (585) 275-8527  
email: [nbig@le.rochester.edu](mailto:nbig@le.rochester.edu)

#### **PAST CHAIR**

**Harold J. Metcalf**  
**(rotates off EC after LS-XXIII)**

Department of Physics  
SUNY-Stony Brook  
Stony Brook, NY 11794-3800  
Ph: (631) 632-8185  
FAX: (631) 632-8176  
email: [harold.metcalf@sunysb.edu](mailto:harold.metcalf@sunysb.edu)

#### **SECRETARY-TREASURER**

**John T. Fourkas**  
Dept. of Chem. & Biochem.  
Univ. of Maryland  
College Park, MD 20742  
Ph: (301) 405-7996  
Fax: (301) 314-4121  
email: [fourkas@umd.edu](mailto:fourkas@umd.edu)

#### **NEWSLETTER EDITOR**

**Jenny Magnes**  
Bldg 753  
Physics/Bartlett Hall  
United States Military Academy  
West Point, NY 10996-1790  
Ph: (845) 938-2337  
email: [jenny.magnes@usma.edu](mailto:jenny.magnes@usma.edu)

#### **DIVISIONAL APS**

#### **COUNCILOR**

**Steven Rolston**

Campus Box 440  
Boulder, CO 80309-0440  
Ph: (303) 492-7858  
Fax: (303) 735-0101  
email: [cundiffs@jila.colorado.edu](mailto:cundiffs@jila.colorado.edu)

#### **Anne Myers Kelley (to 10/08)**

Div of Natural Sci  
Univ of California, Merced  
PO Box 2039  
Merced, CA 95344  
Ph: (209) 724-4345  
email: [amkelley@ucmerced.edu](mailto:amkelley@ucmerced.edu)

#### **Kurt Gibble (to 10/09)**

Physics Dept  
Pennsylvania State University  
104 Davey Lab 232  
University Park, PA 16802  
Ph: (814) 863-5343  
Fax: (814) 865-3604  
email: [kjibble@phys.psu.edu](mailto:kjibble@phys.psu.edu)

#### **Roseanne Sension (to 10/09)**

Department of Chemistry  
University of Michigan  
Ann Arbor, MI 48109-1055  
Ph: (734) 763-6074  
Fax: (734) 647-4865  
email: [rsension@umich.edu](mailto:rsension@umich.edu)

Department of Physics  
Univ of Maryland  
College Park, MD 20742-4111  
Ph: (301) 405-7189  
Fax: (301) 314-9525  
email: [rolston@umd.edu](mailto:rolston@umd.edu)

### **Other committees**

#### **DLS Nomination Committee**

Carol Tanner (Chair)  
Mike Chapman and  
Chris Monroe

#### **DLS Fellowship Committee**

Mark Johnson (Chair),  
Members: John Sipe,  
Louis Bloomfield  
Jeff Shapiro  
Liz McCormack

#### **The Schawlow Prize Committee**

Lou diMauro (Chair),  
A. Marjatta Lyyra (Vice Chair)  
Paul Lett,  
Paul Corkum  
Gerd Leuchs

#### **APS/DLS Representatives on the Joint Council for Quantum Electronics (JCQE)**

Wendell T. Hill, University of Maryland  
Winthrop W. Smith, University of Connecticut  
Henry Kapteyn, JILA, University of Colorado

### **Newsletter Editor**

[J. Magnes](#), U.S. Military Academy