

From the President



Dear OSSC Members!

We are coming off our first meeting held at UCI where many of us took our Optical Engineering Extension courses or watched them by Webex. Personally, the applications were a little new to me, but Dr. Barty was great and he presented the new topics in a way that was understandable to most of us in the audience. Plus, his x-ray sources were partially enabled by the same CPA technology that won the Noble Prize in Physics this past month. So, the topic was very timely in that manner. Plus, for those of you that missed the meeting, his company Lumitron Technologies is hiring, and we have a recording of the presentation on the OSSC website.

Moving forward, we have several events in November, including our monthly OSSC meeting in Pasadena on November 14th by Dr. James Beletic on “Detection of Visible and Infrared Light for Scientific Research”, at Cal Poly Pomona OSA Chapter meeting by our own Fellow and Past President, Donn Silberman on Careers in Optics & Photonics, and Optical Levitation: Fundamentals of Optical Tweezers. Finally, we have Mirror Tech Days in the next few days. So, optics and the OSSC is quite active in Southern California this month.

Finally, on a less positive note, Al Hathaway who received the OSSC Lifetime Achievement Award in June is no longer with us, and we have a section on him later. However, I wanted to share some advice he gave me at Precision Photonics before I was elected President last June. The BOD has had many discussions on how to handle events and meetings going forward, as we operate very differently from many other local societies and the economics are changing. Al Hathaway took me aside over dinner and reminded me that the real value of the society was not the talks, meal, or the venue; rather, it was the interaction with the other people in the local optics community that helped us learn, grow the optics community, and develop business contacts and opportunities. He said that the meeting at Precision Optical that night was an example of an event that emulated those attributes. This advice is something that I will continue to keep in mind while serving the society.

I look forward to seeing you at upcoming OSSC events!

Sincerely,

Nicholas J. Croglia Jr.
OSSC President 2018/19

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Welcome to the November 2018 Images Newsletter!

We had a great October meeting at the UC Irvine Division of Continuing Education. Professor Chris Barty of UC, Irvine introduced COSI, its senior faculty hire, and the academic and commercial x-ray activities that he is establishing at UCI and in Irvine. The presentation included an overview of the development, optimization and applications of compact, high-peak and high-average brilliance laser-Compton x-ray and gamma-ray sources. Applications of this technology span a wide range of precision imaging and material identification uses including; precision medical imaging, rapid drug development, theranostics, nuclear security, high-efficiency mining and additive manufacturing. The event was aired live and the video recording is available on the OSSC website.



President Nicholas Croglio presenting Professor Chris Barty his one year OSSC Membership Certificate.

As detailed in the October newsletter several volunteer positions are open for those who wish to contribute to OSSC while developing their leadership skills and getting to know the local optics community better. Please reach out to any of the BOD members to find out more about the open positions and responsibilities entailed.

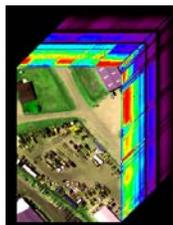
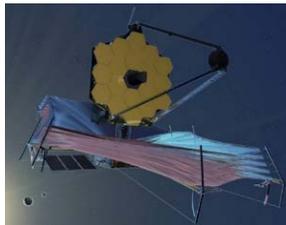
Detection of Visible and Infrared Light for Scientific Research

Dr. James Beletic, President, Teledyne Imaging Sensors

Wednesday, November 14th, 2018

Abstract: Electromagnetic radiation (light) is the primary messenger of information in the universe and detection of light is critical to many areas of scientific research. This is especially true in fields where “remote sensing” of distant objects is the only way to study those objects, such as Earth observation from airborne and space-based instrumentation, astronomy (from ground and space), and planetary exploration.

This talk presents examples of the instrumentation used in scientific research, and a high level introduction to the physics of detectors for visible and infrared light. Since Teledyne is a leader in high performance detectors, many of the forefront facilities and missions utilize Teledyne’s detectors. This talk presents some of these facilities / missions and the challenges involved in making detectors that are reliable in a space environment. This talk is prepared so as to be understandable by everyone, no matter a person’s age, education level or type of employment, but with enough technical information to interest professional engineers and scientists.



About our speaker:



Dr. James Beletic is President of Teledyne Imaging Sensors (TIS), which is a world leader in the development and production of high-performance focal plane arrays. Dr. Beletic has over 35 years of experience in instrumentation, with specialization in visible and infrared image sensor technologies. His career is a unique combination of international work

experience that includes scientific positions at major research centers (Harvard University, MIT Lincoln Laboratory, Georgia Tech Research Institute), leadership positions at the world’s foremost astronomical observatories (European Southern Observatory, Keck Observatory), and senior level management of an industry leader in infrared sensors (Teledyne).

Dr. Beletic received his Ph.D. and S.M. in applied physics from Harvard University and B.S. in physics from Fairfield University. Asteroid 14669 is named after him in recognition of his contributions to astronomy.

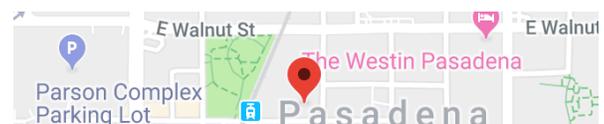
Wednesday, November 14th, 2018
OSSC Monthly Meeting

Reception: 6:00 pm; Dinner: 7:00 pm;
Talk: 8:00 pm Meal: Buffet Style

Dinner: \$35 for registration by Nov. 8, \$40 after
(OSSC Student Members \$10 by Nov. 8, \$20 after)

Venue:
Eden Garden Restaurant
175 E Holly St
Pasadena, CA, 91103
Ph: (626)-440-1421

On-line Registration: www.osscc.org or
Contact: Alex Small
Events@osscc.org, 240-672-7639



IN MEMORY



Alson E. Hatheway Remembered

Date of Passing October 13, 2018, age 82

SPIE Fellow Alson E. Hatheway, was an expert in optomechanical engineering technologies, and President of Alson E. Hatheway Inc.,. Al's areas of expertise included science and technology policy, management, technical education, technology commercialization, consortial research, and development activities.

An SPIE member since 1995, Hatheway was a chair of the International Technical Group on Optomechanics and chair for the conference on Optomechanical Engineering at SPIE Optics + Photonics. Hatheway also taught two short courses for SPIE -- "Optomechanical Analysis" and "Optomechanics and the Tolerancing of Instruments."

He was also a Fellow and Past President of the Optical Society of Southern California (OSSC).

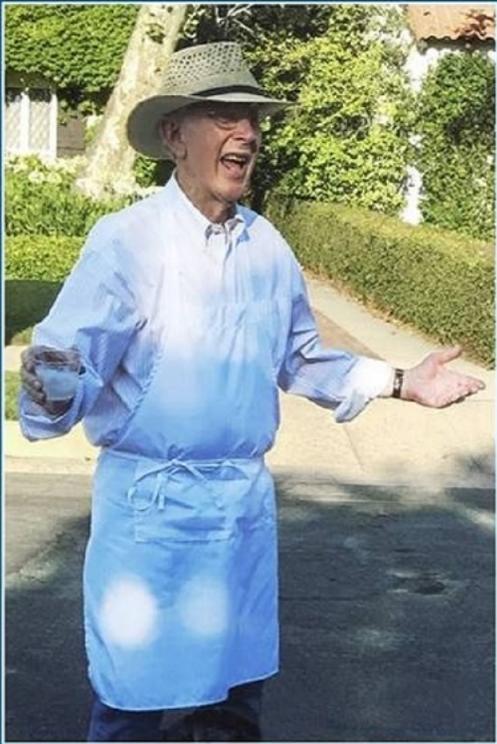
"Al was a great mentor and a greater friend," says Harvey M. Spencer, Director of Optical Engineering at Leonardo DRS. "He worked as a consultant on many programs at DRS, and together we solved many hardware problems. Whenever we had an issue with shock, vibration, alignment, or glass breaking, I got Al on board."

Spencer adds that Hatheway truly took joy in his work. "He was a fixture at our meetings and in the leadership of the OSSC," says Spencer. "His diligent work as Fellows Chairman will always be remembered and appreciated. His enthusiastic announcements at the beginning of our meetings for upcoming conferences that he chaired for OSA and SPIE were classic. The email blast 'Optomechanics,' that he often sent out, was a pleasure to read -- usually starting with something like 'Here, here.'"

"In an 'Optomechanics' from 2012, he wrote, 'And each of you has been a stimulus, a catalyst and a joy to have as a friend and a colleague. Now, all of you, step forward and take a bow (or two or three). (Deafening applause.) Thank you all for allowing me to participate in your adventures...'"

In June of 2018, Al was presented with the OSSC Lifetime Achievement Award, the third time it had ever been awarded.

At Al's request a public service will not be held. Instead, a collective toast, wherever one may be, in lifting a glass in Al's honor at 5 P.M., Saturday October 27th. Remembrance message from Al's family below.



Dearest Friends,

It is with full yet heavy hearts we share the passing of Alson Hatheway.

Our world is a better place for having shared a life with this man of such integrity, wisdom and grace. We are profoundly grateful he chose to spend his life with us.

Although he preferred to not have a service, he would most enjoy being honored with a collective toast.

Please join us, where ever you may be, in lifting a glass in Al's honor. He, of course, preferred a dry martini, stirred with one olive.

Saturday, October 27, 2018
5 pm PST

Please do keep in touch. Memories or stories that you might share would be so appreciated.

With Love,
Robin, Jason and Teale Hatheway

Adapted from Harvey Spencer's Obituary in the SPIE Newsroom.

http://spie.org/newsroom/-al-hatheway_obit

A more detailed write-up on Al's life, career and society contributions can be found on the OSSC website at

<https://www.osscc.org/bio-al-hatheway>

Corporate Member News

This summer, Donn Silberman, OSSC Fellow, Past President & Technical Services Manager for Starrett Kinematic Engineering (SKE) in Laguna Hills, CA, (OSSC Corporate Member & Website Sponsor) successfully completed leading his second Starrett Technician Training Workshop. While these are currently targeted to be repeated and improved upon each year, SKE now has 22 trained technicians who are employed by SKE partners (distributors) and work in concert with the SKE Factory Technicians. This new service business model parallels and works in conjunction with the Starrett Factory Sales Team (Product Specialists). Now both Factory Sales & Service Teams work closely with our Distributors' Sales & Service Teams to build strong relationships with our end user customers. <https://www.ske-service.com/authorized-service-partners>

Starrett Kinematic Engineering designs, manufactures and sells Optical Comparators and Advanced Vision Metrology Systems for measuring dimensions of complex manufactured parts for industries across the globe. These include medical devices, aerospace, telecommunications, packaging and much more. Our services include installing, calibrating & repairing these systems, as well as training our end user customers to get the most productivity from these modern machines. <http://www.starrett.com/metrology/metrology-products/metrology-equipment>

As training and educating our staff, partners and end users is a key function of the SKE Technical Services Team, many new and innovative technologies are being used to teach. These methods start with the traditional hands-on in person in the user's lab or a specific training facility. Now we have included remote over the internet training and technical assistance where a trainer can access a student's system (from anywhere in the world) and together they go step by step through detailed instruction to get to the desired result of the specific technical application. <https://www.ske-service.com/training-hardware-software>

In November, a new Lead Trainer will join the Starrett Technical Services Team under Donn's guidance to further these activities, improve the documented training materials and capabilities. This teaching model is being expanded with more innovations to come. <https://www.ske-service.com/>

Photos of a Starrett Training Session on the next page and on the website above.





Local Corporate News

Coherent Inc. has completed the acquisition of Ondax, a producer of volume holographic gratings (VHG), wavelength-stabilized diode lasers, and THz-Raman laser systems. See write-up in Photonics.com provided by Kim Abair.

https://www.photonics.com/Articles/Coherent_Inc_Acquires_Ondax/



is proud to co-host...

18th Annual Mirror Technology
SBIR/STTR Workshop with...



Raytheon

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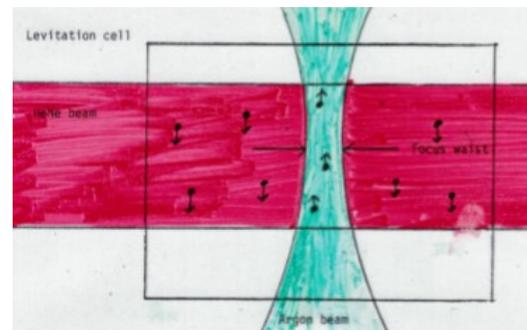
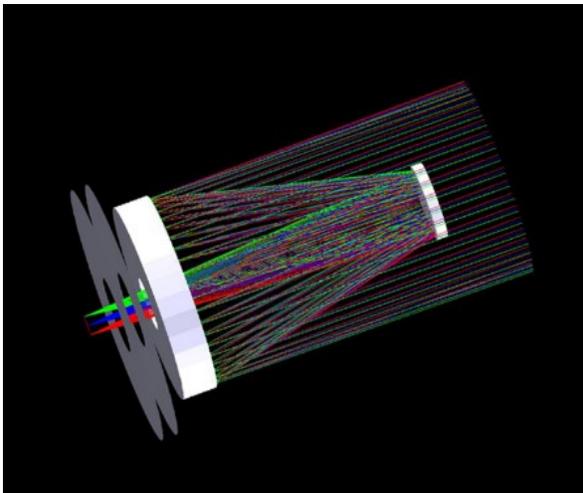
Better known as Mirror Tech Days, the 18th Annual Mirror Technology SBIR/STTR Workshop returns to Southern California and will be held at the Raytheon Space and Airborne Systems headquarters in El Segundo, CA November 5-7th. Registration is still open to those with a current Raytheon Visitor badge, unfortunately application for those badges closed 22nd October. OSSC is a co host, and has organized the exhibits for this years meeting. Currently, we have 19 exhibitors registered for the meeting. For more information, please visit the SPIE Conferences website, <https://tinyurl.com/yb6ymbdr>.

STUDENT MEETING ANNOUNCEMENT



Tuesday - 13 November 2018

Light at the End of the Tunnel: Careers in Optics & Photonics and Optical Levitation: Fundamentals of Optical Tweezers



Venue: Cal State Poly Pomona, College of Science, Bldg 8 Room 241

12 Noon -Presentation

Pre-registration is not required.
Please sign-in at the entrance to be notified of future events

[Download the flyer to share with friends and colleagues](#)

Donn Silberman

**Fellow & Past President
Optical Society of Southern California**

OUTREACH CORNER...

This year for outreach there are two events currently scheduled: one at Petco Park in San Diego and the other at the OC Fair & Event Center in Costa Mesa. The first event is the San Diego Festival for Science and Engineering on March 2nd, <https://www.lovestemsd.org/>. Last year we had about 10 volunteers to help out. We demonstrated polarizers, Fresnel lenses, prisms, color mixing, and fibers. The second event is the Vital Link STEM and Arts Career Showcase which is hosted for three days in April. The dates for this event are still to be determined, <http://www.vitallinkoc.org/stem-and-arts-career-showcase>. Last year we had about 15 volunteers over the 3 days. These two events are a great way of giving back to the community and getting from young children to college students interested in optics. At each event there are hundreds of children who stop by our booth to learn about optics.

We have an opportunity for a new Outreach Chair. Justin Francis will be moving out of the area, so he will be unable to attend the events this year. Consequently, we are looking for someone to take over this role. We thank Justin for his contributions and wish him luck going forward.

Outreach & Education

The OSSC is assisting local university students with OSA Student Chapters. Contact OSSC Student Chapter Liaison [Alex Small](#) if you would like to support these efforts. Currently, the following universities have on-going chapters: [UC Irvine](#), [UCLA](#), [UC Riverside](#), [Cal Poly Pomona](#), [UC San Diego](#), [Caltech](#)

Aim and Purpose

It is the aim and purpose of this society to increase and disseminate the knowledge of Optics and closely allied sciences, to promote the mutual interests of investigators, teachers and students in these fields, and of designers, manufacturers and users of optical instruments and allied scientific apparatus as well as those who have optics as a hobby and to encourage cooperation and establish acquaintanceship among these persons.

Optical Society of Southern California
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www.oss.org

Upcoming Meetings & Events

Date	Location	Speaker	Topic
November 5-7	Redondo Beach	Workshop	SPIE Mirror Technology Days 2018
November 13	Cal Poly Pomona	Donn Silbermann	Light at the End of the Tunnel
November 14 (OSSC Monthly Meeting)	Eden Garden Restaurant, Pasadena	Dr. James Beletic, Teledyne Imaging Sensors	Detection of Visible and Infrared Light for Scientific Research
December 12	Orange County location	Dr. Simon Prince, Illumina	Optics for DNA Sequencing

OSSC Corporate Members & Sponsors

These companies and organizations provide the Optical Society of Southern California with financial resources, time and talent. We are grateful for their generous support.

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AVS Southern California Chapter	Micro Laser Systems	Ross Optical Industries
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Cambridge Technology	Newport Corporation	Silicon Lightwave Technology
Cimarron Optical Consulting	Newport Industrial Glass	Spectrum Scientific
Curt Deckert Associates	Newport Thin Film Laboratory	SPIE
Diverse Optics	Ohara Corporation	Starrett Metrology
DMK Engineering	Optic Systems Group	Supply Chain Optics
e-Las Americas	OptiPro Systems	Synopsis
4D Technology	OptoSigma	Trio Optics
Guernsey Coating Laboratories	OSA - The Optical Society	II-VI Optical Systems
Hardin Optical	Photonics Media	UC Irvine Division of Continuing Education
Infinite Optics	Precision Glass & Optics	Zygo
Isuzu Glass	Raytheon SAS	

Speakers Bureau

The OSSC has formed a Speakers Bureau, to create a roster of individuals interested in giving talks for student chapters, OSSC meetings, and similar events. If you have something interesting to share with our local optics community, especially career-related topics of interest to students, please contact a member of the OSSC Board of Directors.