

**From the President**



Dear OSSC Members!

Welcome to the 2018/2019 Program Year, which is our first year as a 501c(3) Non Profit Corporation. I want to thank Bo Wang, the BOD and everyone who made this possible. This year, we have some new faces joining our leadership and many returning leaders including a few Fellows who keep on giving to the society; however, we have opportunities for more.

Our leadership team includes our Past President Bo Wang (President '17-18'), Vice President Charles Gaugh (President '06-07' and Fellow), Michelle Langland as Secretary, Matt Samson as Treasurer, John Nunn as Membership Chair, Richie Nagi as Programs Chair, Alex Small (President '15-16' and Fellow) as Arrangements Chair, and our Councilors Graham Brewis, Justin Francis, and Russell Rauch. Shankar Baliga has stepped up as our Newsletter Editor, and Kim Abair is our new Corporate Membership Chair with many of the other leader positions as in previous years.

We have several exciting meetings planned or in planning including our first get together in Irvine with Dr. Chris Barty who will discuss the UCI Optical Convergence initiative and the academic and commercial x-ray activities he is developing, and then we are back in Pasadena for a talk by Dr. James Beletic from Teledyne Imaging Sensors

who will talk about visible and IR detection for scientific research. We have several other exciting talks in progress for the upcoming year.

Optics was in the news this past week, as Arthur Ashkin, Gerard Mourou and Donna Strickland were awarded the Noble Prize in Physics for work in lasers and optics. Both Dr. Mourou and Dr. Ashkin are OSA Fellows, Charles Hard Townes medal holders and have won many other OSA awards, while Strickland who is also an OSA Fellow was the OSA President in 2013 and is the first woman to receive a Nobel prize in Physics in 55 years. On a personal note, there are a couple of us in the OSSC who are from University of Rochester and who worked at the Laboratory for Laser Energetics at about this time. I personally spent most of my graduate work utilizing Chirped Pulse Amplification and applying it, and then worked on it 20 years later while at Ondax. This technology has had a significant impact on the Southern California optics community as a couple of companies have utilized it for eye surgery including LenSx/Alcon where we had a meeting in 2017 and IntraLase/AMO where we had a meeting in 2008, and several of our members have worked at these places over the years. So, we know the impact this technology has had. This is great news for three OSA Fellows, the OSA, and for all of us in Optics as we can show our friends and relatives another way optics impacts their lives.

I look forward to seeing you at upcoming OSSC events!

Sincerely,

Nicholas J. Croglia Jr.  
OSSC President 2018/19

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## OSSC Leaders

(See [www.oss.org](http://www.oss.org)  
for contact info)

Communications: **OPEN**  
Corporate Memberships: Kim Abair  
Development Coordinator: **OPEN**  
Fellows Chair: Alson E. Hatheway  
Golf Chair: Donald Miller  
Grants: **OPEN**  
Historian: Tom Godfrey  
Mentorship Coordinator: **OPEN**  
Mt. Wilson Coordinator: T. Scott Rowe  
Newsletter Editor: Shankar Baliga  
Newsletter Assistant: **OPEN**  
Outreach Chair: Justin Francis  
Student Chapters: Alex Small  
Website Content: Charles Gaugh

The first newsletter for 2018-2019 lists the Board of Directors, Councilors and OSSC Leaders along with their responsibilities and contact information. There are six OPEN positions where the OSSC BOD is reaching out for volunteers.

Opportunities Abound! We have a good mix of new faces, senior members and even one recent Fellow on the BOD and our leadership committee. However, we also have opportunities for new or returning volunteers.

**Communications Chair:** Our Past Communications Chair has taken over as the Chair of IEEE Southern California, and we will be holding some joint events with them this year. However, that means we need someone to fill this role. Even if you do not feel like you have the time to be the Chair, there are areas where we can use your help, including managing our social media and helping the OSSC network with other societies.

**Treasurer or Treasurer Trainee:** Matt Sampson is still acting as our Treasurer, and he has been doing an excellent job. In the past year his career has really taken off, and it is great to see one of our former student members really excel. However, he has taken a very challenging position in the Bay area that requires travel, so we are looking for someone to be trained to take over for a 3-year duty. This is a great position for someone who has experience with previous treasurer positions, finance, or managing cost accounts. Alternatively, this could be great training for an engineer who is detail oriented and wants to broaden their experience for future management positions.

**Development Coordinator:** This is a new position that will oversee more than just grants, but will also work closely with the Corporate Membership Chair to develop fund raising activities for the society in general, specific events, student sponsorship for meetings, scholarships, and other special activities. This person will have a lot of latitude to network inside and outside the society including companies, other societies, individuals, and universities while working closely with the Corporate Membership Chair, Grants Coordinator, Outreach Chair, and BOD. The individual who takes this role would not be expected to do all these things themselves; however, a big picture person who enjoys developing relationships or someone who is looking to grow themselves into that type of role.

**Grants Coordinator:** This position would work closely with the BOD, Development Coordinator, and others to submit for OSA, SPIE, and other grants that have been used to support student members, visiting lecturers, and the OSSC in general.

**Mentorship Coordinator:** This is another new position, and this is a role for someone who really knows our senior members and Fellows and who also has some life experience. We always think of young people as the ones who need mentors, but there are many optics professionals who transition from technical to management or sales, transition between types of organizations, need to learn a new skill, or need help figuring out how to do a good job being an OSSC officer. We have a few volunteers for the Mentorship Committee who have volunteered to be mentors and work on the committee, but we need someone who will really define the way this operates and help match the mentors with the sponsors. This has been a defined need for quite some time.

**Newsletter Assistant:** This is a new position, and we had it filled; however, that individual left already. Shankar Baliga is doing a great job, but this is a difficult position for one person. Shankar would like help collecting content on a few key areas as we grow the society, and he would love someone with an eye for detail and style to help maintain and improve the look and feel of the newsletter. However, anyone who has a good technical or business article about their work in optics should contact him as the members would love to learn about what interests you!

**These and other Positions:** If one of those positions interests you, then you should contact me directly at [nicholas.croglia.oss@gmail.com](mailto:nicholas.croglia.oss@gmail.com). In fact, if one of the filled positions interests you, the current person holding the role will likely be glad to have the help. Then you would likely be the one most qualified to take over next year.



## UCI's Convergence Optical Sciences Initiative and the Development and Applications of Compact Laser-Compton X-ray Sources Dr. Chris Barty, Professor of Physics and Astronomy, University of California, Irvine

**Abstract:** In 2017, the University of California, Irvine established a new, multi-faculty hiring plan known as the Convergence Optical Sciences Initiative (COSI). COSI aims to explore the intersection of physical science, engineering, medicine, biology and industry around novel photonics technologies. This presentation will introduce COSI, its senior faculty hire, Prof. Chris Barty, and the academic and commercial x-ray activities that he is establishing at UCI and in Irvine. The presentation will include 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.

### About our speaker:

Chris Barty is a Distinguished Professor of Physics and Astronomy, member of the Beckman Laser Institute and Medical Clinic at the University of



California, Irvine, the chair of the International Committee on Ultrahigh Intensity Lasers, and the co-founder and CTO of Lumitron Technologies, Inc. Prior to arriving at UCI in the summer of 2017, he served as the Chief Technology Officer of the National Ignition Facility and Photon Science Directorate at the Lawrence Livermore National Laboratory. He received his Ph.D. and M.S. in applied physics from Stanford University and B.S.'s in chemistry, physics, and chemical engineering each with honors from North Carolina

State University. He is a fellow of the OSA, SPIE, APS, IEEE, AAAS and the 2016 recipient of the Harold Edgerton Award of the SPIE and the 2018 recipient of the R. W. Wood Prize of the Optical Society of America.



**Wednesday, October 10th, 2018**

**Reception: 6:00 pm; Dinner: 7:00 pm;  
Talk: 8:00 pm**

**Meal: Buffet Style**

**Dinners: \$25 for registration by Oct. 4,  
\$30 after  
(OSSC Student Members \$10 by Oct. 4,  
\$20 after)**

**Venue:**

**UC Irvine Division of Continuing  
Education**

**510 E. Peltason Dr., Yosemite  
Conference Room (2010 and 2020),  
Irvine, CA, 92627**

On-line Registration: [www.osscc.org](http://www.osscc.org) or  
Contact: Alex Small

### Parking Info:

\$10, either at [Anteater Parking Structure](#) (East Peltason and Anteater Drive) or Social Sciences Parking Structure ([4502 Campus Drive, Irvine, CA 92617](#))

**OSSC 2018 Summer Planning Meeting at D'Vine, Fullerton, CA**



**Planning Meetings Summary:**

We had two meetings this Summer including the Summer Planning Meeting and the Programs Planning Meeting. We had 16 of our BOD and leaders attend the first meeting where we discussed a few key points.

Last year, Bo Wang, the BOD, and our leaders really spent a lot of time on the new corporate organization. Many on the inside know that I was very persistent in wanting to simplify the documents, and we made good progress on that. The new rules may be more complicated, but if we follow them properly we will be on good legal grounds. The plan for this year is to learn and apply the rules that we have, so that we understand in detail what works and what does not. Then we will document and request clarification before proposing any changes to the recently approved rules.

We plan to take advantage of the new corporate non-profit status by having a greater focus on both Development and Corporate Membership to help add some new features to the society. So, first off, we are looking for a Development Chair to help fund many of the projects that we have talked about for years, and our new Corporate Membership Chair will be working with the other board members to create greater value for our corporate members and get them more involved.

Finally, we are working to start a Mentorship Program, and we have volunteers for the Mentorship Committee; however, we are still looking for a Coordinator. We feel this is needed for a variety of reasons, but the idea is that we pair mentor with mentee. One of the obvious goals is that we lose young members as soon as they start their careers, and we usually think of someone needing a mentor as being a young person. However, many of us are trying to gain new skills, transition our career from technical to marketing or management, learn a new organization, start a business, consult, prepare for retirement, or learn how to take a leadership role in technical societies like the OSSC. Typically, the small employers that most of us work at do not have this available, and there are conflicts of interest at many of the larger organizations.

Overall, we covered a lot of ground in the Planning Meeting and the Programs Meeting; however, we need a few more active members to pull off our goals, and we are still looking for a couple of meeting venues and speakers to fill out our program year.

**Mirror Tech Days 2018**

by

**T. Scott Rowe, P.E.**

**OSSC Past President, Fellow and MTD 2018 Exhibit Coordinator**

Just a brief note to update everyone on the activity surrounding the NASA Mirror Tech Days coming to Raytheon in El Segundo November 5<sup>th</sup> through the 7<sup>th</sup>. First a bit of history, from OSSC's perspective. OSSC first became involved in MTD (formal name Annual Mirror Technology SBIR/STTR Workshop) back in 2013, when it returned to SoCal and located at the NGC Aerospace Presentation Center. OSSC, as a local professional society, was asked to provide logistical support for the meeting for SPIE, while NASA (through Phil Stahl, then SPIE president) provided the technical curation. An opportunity opened up to host an exhibition at this meeting, which became an income stream for OSSC. Fast forward, the same opportunity presented itself in 2017 when MTD returned, and again this year with MTD at a new venue, but still in SoCal. Many OSSC members have dedicated significant hours pro bono to make this meeting a success for NASA, SPIE, the attendees, the exhibitors and of course OSSC! What is Mirror Tech Days? This is the meeting where NASA asks all of its SBIR and STTR awardees in mirror technologies of any sort, including design, manufacture, materials, testing, cleaning, etc. to present updates of their work. There are typically 150-200 registrants for this international meeting, which includes an ITAR session at the end. A highlight of the meeting is a tour of the James Webb Space Telescope, currently in integration over at Northrop Grumman. More about the meeting can be learned from the SPIE website, <https://tinyurl.com/y9vvayg9>

Why have an exhibition at this meeting, and why would my company want to participate? If your business serves the space or ground telescope building communities, this is a great opportunity to connect with existing or potential customers in this space. A high-quality meeting with many decision makers present really stands apart from many conferences today. In addition, your exhibit space will be located next to the Raytheon cafeteria in the E4 building, a gathering place for thousands of Raytheon employees that will pass by, most all of whom are focused on developing electro-optical systems. Our presence here shows SPIE that meetings and exhibitions in the LA and Orange County areas continue to be of high value and encourages further conferences to be located here. I hope that you will join me in supporting this meeting, and I will see you at this years MTD! Questions? Don't hesitate to contact me at my new email address [scott@rowetechnical.com](mailto:scott@rowetechnical.com). Thanks!

OSSC Past President and Fellow Dr. Martin Hagenbuechle getting perhaps the ultimate in optical "selfies" with the JWST!



MTD 2013 and 2017, including a sizeable OSSC support contingent! One can really see the growth of this meeting, which is expected to grow again for 2018.



## IN MEMORY



Robert "Bob" H. Ginsberg

Noted optical physicist Robert H. Ginsberg (Bob) passed away on July 10, 2018 at age 93 in Los Angeles. Bob was born in Grand Forks, N.D. on March 1, 1925 to Lithuanian Jewish immigrants Charles and Bertha Ginsberg. After graduation from Central High School he enlisted in the Army Air Corps and served as navigator of a B-24 Liberator bomber on missions in Southern Italy, Germany, and Austria. Discharged in 1946, he earned his B.A. degree in Physics from the University of Minnesota, Minneapolis, graduating in three years Magna Cum Laude and Phi Beta Kappa, and his M.S. in Optics and Applied Optics at the University of Rochester, N.Y. in 1951.

Bob's career in Optics began with Bausch and Lomb Optical Co., Rochester, followed by four years as a Research Associate at the Univ. of Rochester's Institute of Optics. His projects there included fabricating the special lenses for the new wide-angle Todd-AO movie process, whose first film was Oklahoma! Bob returned to Minneapolis as Optics Specialist for General Mills' Aerospace Division, where his most memorable project was as a technical director on the Atlas missile system.

In 1963 Bob settled in Los Angeles, working 29 years as Senior Scientist for Hughes Aircraft Co. on hundreds of projects largely involving the U.S. space program. He served two terms as an officer of the Optical Society of Southern California. After retirement from Hughes, he continued for several years as Consultant for Raytheon and DRS.

Bob was a legendary master problem-solver in his profession, a perfectionist, insatiably curious and outspoken. He is also remembered for his devotion to friends and family, his passion for photography, classical music and tennis, as well as his remarkable personal fitness, which gave him the appearance of someone decades his junior, especially on the dance floor. For his last 30 years, Bob lived at the Marina City Club in Marina del Rey, enjoying a community of friends and as a gifted self-taught pianist playing his arrangements of popular standards in the Club at dinner time.

Bob is survived by seven nieces and nephews, twelve grand-nieces/nephews, and seven great-grandnieces/nephews. He was predeceased by his siblings Sara Lee Edelstein, Bess Silvers, Belle May Stern, Nessa Kelberg, Albert Ginsberg and Bennett Ginsberg.

At Bob's request, a public memorial will not be held. Memorial contributions may be made to the charity of one's choice.

## OUTREACH CORNER...from Outreach Chair, Justin Francis

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 2<sup>nd</sup>, <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.

### 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.

## Upcoming Meetings & Events

Date	Location	Speaker	Topic
November 5-7	Redondo Beach	Workshop	SPIE Mirror Technology Days 2018
November 14	Eden Garden Restaurant, Pasadena	Dr. James Beletic, Teledyne Imaging Sensors	Detection of Visible and Infrared Light for Scientific Research

## 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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### 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.