

2016 Highlights

From the Director

Greetings and warm regards from The Institute of Optics, where it has been my honor to serve as the Director for the past five years. I appreciated having this great opportunity to work with wonderful friends and colleagues. However, as my extended term concludes at the end of June 2017, I am excited to start my next chapter with a year of academic leave. Terahertz technology remains a frontier ripe for new development, and I look forward to having the ability to focus strongly on my research and to continue strengthening our Institute reputation on research and education.

After celebrating the International Year of Light in 2015, the 100th anniversary of OSA was a year long event, culminating in a huge celebration during FiO 2016 in Rochester. A true highlight was realized as The Institute partnered with the OSA, Arizona, Florida and Stanford to hold a memorable optics alumni networking reception. We were honored to have Emil Wolf with us as we announced a Graduate Fellowship in his name, and unveiled a painting that will grace the halls of The Institute.

As of July 1, 2017, a new Director will take the mantle. The search is on, and nominations can be sent to Govind Agrawal, who is leading the search committee.

My lovely wife Wendy and I wish each of you a Merry Christmas and a Happy New Year!

And so, my friends and fellow colleagues, once again I sign off and wish you always:



Meliora!

Xi-Cheng Zhang

Xi-Cheng Zhang

Director and M. Parker Givens Professor of Optics

Awards

Dr. Robert Boyd is the recipient of the Arthur L. Shawlow Prize in Laser Science (APS), the Charles Hard Townes Award (OSA), and is an IEEE fellow.

Dr. Duncan Moore received the distinguished 2016 Doctoral Commencement Award for Lifetime Achievement in Graduate Education.

Dr. Andrew Berger received the 2016 Edward Peck Curtis Award for Excellence in Undergraduate Teaching.

Dr. James C. Wyant was presented with an inscribed plaque in recognition and sincere appreciation for 33 years of leadership and generous support for our Summer Course Series at our 2016 SPIE Photonics West Reception,

In collaboration with the Department of Physics and Astronomy, a new Emil Wolf Endowed Fellowship has been established.

Dr. Nick Vamivakas was awarded the Leonard Mandel Faculty Fellowship of the Department of Physics and Astronomy at U of R.

Undergraduate Program Manager Dan Smith received the Dottie Welch Student Enrichment Award at the Hajim Senior Design Day.

Dr. X.-C. Zhang received an Australian Academy of Science Selby Fellowship and was recommended for a Fulbright.

Faculty Updates

We welcome Dr. Jon Zuegel, Dr. Jake Bromage, and Dr. Brian Kruschwitz (all from LLE) with secondary appointments at The Institute of Optics.

Jannick Rolland reports that The Center for Freeform Optics (CeFO) now has 15 members. A generous donation from IA member Optimax resulted in the naming of the Optimax Systems Fabrication Lab in the R.E. Hopkins Center.



The Institute welcomed Dr. Jaime Cardenas as an Assistant Professor of Optics. His research focus is on next generation integrated photonic devices.

Dr. Miguel Alonso was promoted to full professor. He joined the The Institute of Optics in 2003 and is highly regarded as a brilliant teacher and gifted researcher.

Dr. Nick Vamivakas was promoted to Associate Professor with tenure. He joined The Institute as an Assistant Professor in July 2011, and this significantly early achievement reflects the stellar quality of his teaching, scholarship, and service.

A technique developed by Dr. Chunlei Guo and Dr. Anatoliy Vorobyev uses lasers to render materials hydrophobic. A photo illustrating this technique, by University photographer J. Adam Fenster, is one of ten finalists in the photo category for the National Science Foundation/Popular Science visual media contest, the Vizzies.

Conferences & Events

The Optical Society celebrated its 100th anniversary in Rochester during FIO/LS. The Institute of Optics hosted an Optics alumni networking reception (250+ attended), with OSA, Arizona, CREOL and Stanford.

Our 55th Optics Summer Course Series with about 140 attendees in June featured two new integrated photonics courses. This annual program provides a unique environment in which engineers, scientists and technicians can learn about the fundamentals of optics and the advancing state of the art.

The 4th annual Photon Camp was again a great success, with 21 students exploring the growing field of optics and optical engineering. Two of our incoming freshmen this year are Photon Camp alumni.

We now have 36 IA members, thanks in large part to the dedicated efforts of Ellen Buck and Jay Eastman. We grew from 17 members in June 2015, and had a

high of 39 in 2008. Our goal is to reach 50 in 2018. Our IA team is working to increase the value of this excellent program to make our meetings ever better!

A group of nine Optics undergraduate students participated in two events in leading Russian universities: in the International Conference on Laser Physics and Optics in the National Research Nuclear University MEPhI (Moscow) and in the Summer Research Camp in Photonics in ITMO University (Saint-Petersburg) which were held in May-June.

Dr. Xi-Cheng Zhang brought together world experts for an international workshop exploring Bright Terahertz (THz) sources. Twenty-two scientists representing leading THz groups from eight countries spent two days in a forum exchanging information, sharing ideas and working together to continue development in this frontier.

Student Updates & Activities

In 2016, we had 31 incoming MS students, 16 incoming PhD students and 30 entering freshmen. Our numbers are just right, and we have a wealth of countries represented in our student population.

ABET accreditation for our Optical Engineering program was approved retroactively from October 1, 2014. ABET enhances further opportunities, provides assurance of international recognition, and adds even greater value to the significant achievement of the degree. The process requires intensive team effort and is a reflection of the solid commitment of faculty and staff for our success.

The sixth annual Photon Cup, which brings together optics and physics in a friendly game of soccer, ended with an Optics win this year.

Graduate Program Coordinator Kari Brick hosted several of our "away from home" graduate students at her home on Thanksgiving, illustrating the true welcoming spirit of our Institute.



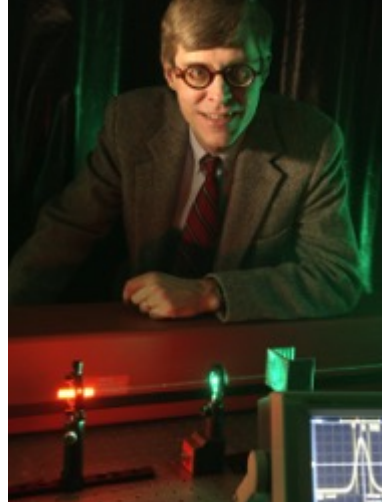
Ph.D. candidate Kenny Goodfellow placed 2nd in the 2016 Rochester Marathon. Kenny also led a contingent of about 100 Rochester runners in the

Boston Marathon, where he placed 72nd overall out of 30,741, and 63rd out of 16,629 men.

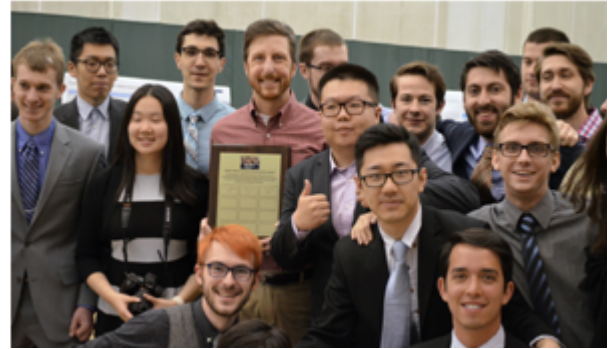
Our best wishes for a Happy and Healthy 2017!



Welcome to our newest faculty member, Jaime Cardenas, Assistant Professor of Optics.



2016 was a year of achievement for Robert Boyd; receiver of the APS Schawlow prize, OSA Charles Townes Award and became a Fellow of IEEE.



Daniel Smith, The Institute's undergraduate program manager, was selected by students to win the 2016 Dottie Welch award, presented during the Hajim School Design Day.



Duncan Moore recognized with the Lifetime Achievement in Graduate Education during the UR 2016 commencement.



The Optics/Physics Emil Wolf Fellowship was announced during the Optics Alumni Reception during OSA's 100th Anniversary at FIO. Optics and Physics commissioned an oil painting of Emil, also unveiled at the celebration.



Nick Vamivakas promoted to Associate Professor with Tenure; and earned 2016 Mandel Award.



Andrew Berger earns the Edward Peck Curtis Award for Excellence in Undergraduate Teaching.



Chunlei Guo and Anatoliy Vorobyev developed a technique using lasers to render materials hydrophobic;. This photo by Adam Fenster was a top 10 finalist in the NSF Vizzies



Miguel Alonso promoted to full professor.



2016 Photon Camp: coordinators Dan Smith, Nick Vamiakas and Per Adamson, with Institute personnel who ran the 2016 camp.

James Wyant receives recognition at SPIE Photonics West for 33 years of teaching dedication for The Institute of Optics' summer course series.

