

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, Surgery and 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 or
Contact: Alex Small
Events@osscc.org, 240-672-7639

Parking Info:

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