

NCCHPS

Northern California Chapter-Health Physics Society

May 2017



NCCHPS May 2017 Dinner Meeting and Affiliates' Night

Thursday, May 18, 2017

Oakland Yacht Club, Alameda

5:30 pm Social / 7 pm Dinner / 8 pm Affiliate Recognition and Technical Presentation



“A Billion Times Brighter”

An Overview of the Revolution Underway in X-ray Science.

This talk will provide an introductory overview of the world's first “hard x-ray free electron laser facility”, known as LCLS, operated by Stanford University on behalf of the US Department of Energy. The x-rays produced by LCLS are a billion times brighter than can be produced by conventional sources, such as a synchrotron, and are delivered in ultrafast bursts - typically a few tens of femtoseconds (10^{-15} seconds). This opens up revolutionary opportunities for the study of novel states of matter, quantum materials, ultrafast chemistry, and structural biology. Since its initial operation in 2009, LCLS has enabled a remarkable series of studies, via its ability to provide atomic resolution information, with freeze-frame ‘movies’ of how atomic, chemical and biological systems evolve on ultrafast timescales. Based on this success, a major upgrade project is now underway that will increase the repetition rate by 4 orders of magnitude and open up entirely new scientific opportunities. Access to LCLS is open to everyone, based purely on the scientific merit of the proposed experiments. Hopefully this talk will help engender further ideas and opportunities for future use of this remarkable new science facility.

About the Speaker: **Professor Mike Dunne**

**Director LCLS, SLAC National Acceleratory Laboratory,
Stanford University, USA**

Mike Dunne is Director of the Linac Coherent Light Source (LCLS), the world's first "hard x-ray free electron laser facility". The x-rays produced by LCLS are a billion times brighter than can be produced by conventional sources such as a synchrotron, delivered in ultrafast bursts to study the dynamics of matter at the atomic scale, with applications ranging from structural biology to quantum materials, catalytic chemistry, atomic physics and plasma science.

Mike is an Associate Laboratory Director at the SLAC National Accelerator Laboratory, and Professor of Photon Science at Stanford University.

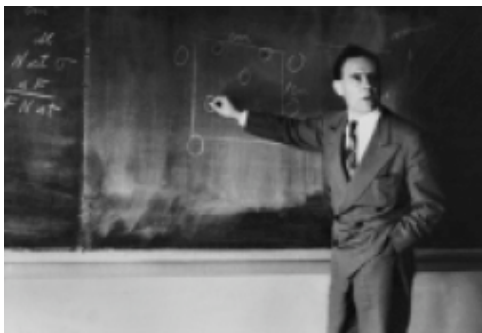


Mike has substantial experience in the design, construction and operation of a wide variety of photon science research facilities. Prior to joining SLAC, he was director for Laser Fusion Energy at the Lawrence Livermore National Laboratory. His role was to ensure full advantage is taken of the US National Ignition Facility, a \$3.5 billion investment designed to demonstrate the proof of principle of laser fusion.

Mike previously served as Director of the United Kingdom's Central Laser Facility, working for the Science and Technology Facilities Council where he secured a number of significant advances, including the Astra-Gemini two-beam Petawatt laser and the Artemis ultra-fast X-ray science facility. As director of the Photon Science Department he took on additional responsibility for developing coupled laser and accelerator facilities; pursuit of a next-generation Free Electron Laser facility; and oversight of the final phase of the UK's Synchrotron Radiation Source.

As international project leader for the European laser fusion project 'HiPER,' Mike created a consortium of 26 institutions across 10 countries to develop one of the few Giga-Euro scale facility opportunities accepted onto the "European roadmap" of future research infrastructures. Mike obtained his doctorate in laser fusion and laboratory astrophysics research from Imperial College, London. His personal research as part of the Photon Science faculty at Stanford focuses on the development and application of high power lasers to high energy-density science.

News from Burton J. Moyer Memorial Fellowship Fund Committee



The Burton J. Moyer Memorial Fellowship Fund (BJMMFF) was established by NCCHPS to provide financial support to a full-time graduate student in health physics. It has been continuously awarded since 1985. Currently HPS co-sponsors the Fellowship with NCCHPS. The Burton J. Moyer Memorial Fellowship is the most prestigious fellowship in the field of health physics with an annual award of \$10,000.

The Academic year 2016/2017 Burton J. Moyer Memorial Fellowship was awarded to Taiee (Ted) Liang from Georgia Tech. Ted is conducting his PhD research at SLAC. Ted was the speaker at our NCCHPS dinner meeting in November 2016 at the Faculty Club of UC Berkeley. His presentation was on *Ionizing Radiation from High-Intensity Optical Lasers*. In March Ted delivered his dissertation defense at Georgia Tech (<https://youtu.be/3IxIDicwFnY> - this is youtube link of his dissertation defence). Currently he is wrapping his coursework and will be graduating in May. Ted has accepted a research associate position at SLAC Radiation Protection and will do some traveling between graduation and his start date at SLAC. His next career goal is to work towards CHP certification. Ted sent us his thanks and appreciation to NCCHPS and HPS for supporting his doctorate studies with Burton J. Moyer Memorial Fellowship.

The Burton J. Moyer Memorial Fellowship (BJMF) Committee consists of a Chairperson and at least two Members. **We are currently seeking one or two candidates to join the BJMF Committee.** If you are interested, please contact Radoslav Radev (radev1@llnl.gov or (925) 422-3044).

For the past year we received donations to the Burton J. Moyer Memorial Fellowship Fund from Vanguard Charitable Fund (John and Elsa Nimmo), Kathleen and John Shingleton, Mike Grissom, Charles Schmidt, Paul Swearingen and Lydia Tai for a total of \$1,470. Thank you very much for your generous donations.

Burton J. Moyer Memorial Fellowship Fund monies are invested into 7 Fidelity mutual funds and one money market account. As of April 3, 2017, the value of BJMMFF investments totals \$129,932 thanks to the favorable market conditions. BJMMFF is governed by NCCHPS Bylaws and these monies are separate from the NCCHPS operational funds. The value of the Burton J. Moyer Memorial Fellowship Fund (including donations) for the past year were

| | |
|-----------|-----------|
| 5/2016 - | \$118,471 |
| 8/2016 - | \$118,274 |
| 10/2016 - | \$117,636 |
| 2/2017 - | \$128,620 |
| 4/2017 - | \$129,932 |

Burton J. Moyer Memorial Fellowship Fund DONATIONS: We appreciate donations to BJMMFF of any amount, no matter how small; the donations are tax deductible.

Checks payable to NCCHPS may be sent to our treasurer, with the notation "For the Moyer Fund" or you can contribute when you pay for your dinner meeting with one combined check. You may indicate if you wish your donation to remain anonymous.

Radoslav Radev, Chairperson, NCCHPS Burton Moyer Fellowship Committee



Reminder:

NCCHPS Board of Directors Election

The deadline to vote in the 2017 NCCHPS Board of Directors elections is 11:45 PM on May 8, 2017. If you did not receive a ballot and believe you should have received one, contact admin@ncchps.org.

62nd Annual Meeting of the Health Physics Society

9-13 July 2017, Raleigh, NC

Official Meeting Hotels:

[Raleigh Marriott City Center](#)

500 Fayetteville St.
Raleigh, NC 27601
Last day to book: June 16, 2017

[Sheraton Raleigh Hotel](#)

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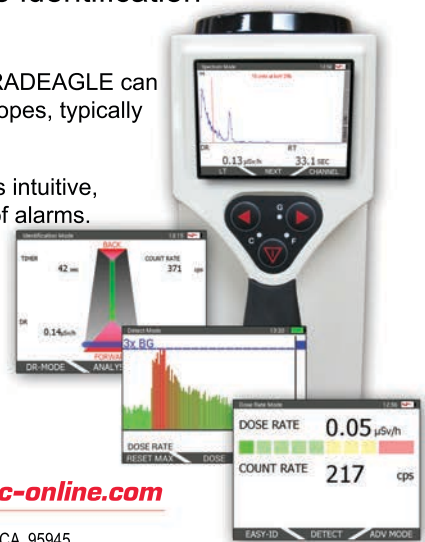
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| <p><i>Upcoming NCCHPS Meetings...</i></p> <p>May 18, 2017 Affiliates' Night</p> <p>Mailing Address: NCCHPS 4435 First Street #141 Livermore, CA 94550</p> <p>Email: ncchps@gmail.com</p> <p>Website: http://hpschapters.org/ncchps/</p> <p>Newsletter Editor: Warren TenBrook warren@tenbrook.org (925) 423-1470</p> <p>Affiliate Liason: Nelson Chiu ncchpsaffiliatecontact@gmail.com (414) 559-5586</p> | <p><u>The Next NCCHPS Meeting!</u></p> <p>Affiliates' Night Thursday, May 18, 2017 5:30 pm no-host meet & greet 7:00 pm buffet dinner 8:00 pm announcements, presentation, and affiliate appreciation.</p> <p>Oakland Yacht Club 1101 Pacific Marina Alameda, CA 94501 Phone: (510) 522-6868</p> <p>Register at the following link: http://www.hpschapters.org/ncchps/docs/pages/meetings.html</p> <p>NCCHPS members \$30 (\$35 @ door) NCCHPS guests \$35 Students \$10 Non-members \$40</p> <p>Please register by 11pm Tuesday, May 9, 2017. Only online registrations accepted.</p> <p>Contact Member-at-Large Paul Swearingen ONLY if you encounter difficulties using the form: swearingen.paul@gene.com</p> <p>Please note that in order to avoid unnecessary costs to the Chapter, you may be charged for no-shows. Cancellations may not be made after the RSVP deadline.</p> | <p><u>2016-2017</u> <u>NCCHPS</u> <u>Board Members:</u></p> <p>President Lydia Tai Tai4@llnl.gov (925) 422-0475</p> <p>President-Elect Ibrahim Ozcan iozcan@lbl.gov (510) 495-2842</p> <p>Past President Greg Jones jones88@llnl.gov (925) 423-9875</p> <p>Secretary Maranda Cimenio mcimeno@slac.stanford.edu (650) 926-7978</p> <p>Treasurer Chad Hopponen hopyinhi@gmail.com (925) 422-7128</p> <p>Member-at-Large Paul Swearingen swearingen.paul@gene.com (650) 255-3088 (work)</p> <p>Member-at-Large Craig Maxwell Craig.maxwell56@outlook.com (415) 264-2983</p> |
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