International Committee on Ultrahigh Intensity Lasers - August 2019 Report to IUPAP

On behalf of the committee and as Chairman of the International Committee on Ultrahigh Intensity Lasers (ICUIL), I submit this report of ICUIL-related activities and events over the past 10 months to IUPAP. Obviously the biggest news in this time period is the most recent. On October 2, Professor Gerard Mourou, who was ICUIL's first chairman from 2004 to 2008, and Professor Donna Strickland were awarded the 2018 Nobel Prize in Physics for the invention of the chirped pulse amplification concept upon which nearly all of today's ~\$5B worth of ultrahigh laser activities are based. Below are photos from the awards ceremony in Stockholm. As mentioned in previous reports, Professor Mourou was the ICUIL's first chairman and served in this role from 2004 to 2008.

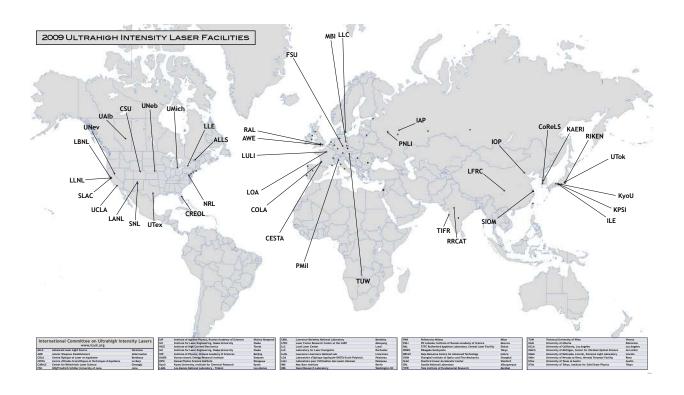


December 2018 - Gerard Mourou (ICUIL's 1st chairman) and Donna Strickland (left in red) Nobel Prize ceremony.

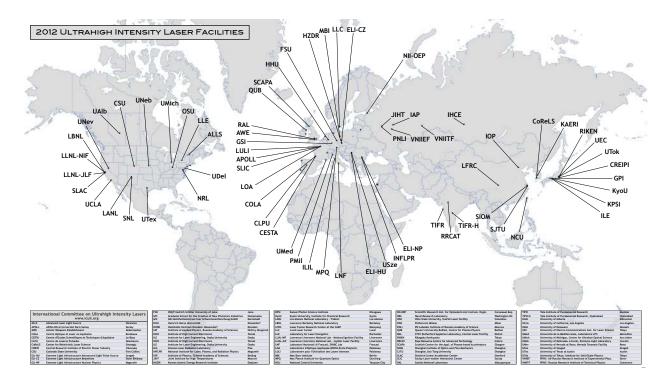
The International Committee on Ultrahigh Intensity Lasers (ICUIL) was established in 2004 as an IUPAP working group devoted to the promotion and outreach of ultrahigh intensity laser capabilities around the world. By the committee's estimate there are approximately \$5B of world wide projects and facilities today devoted to the creation and use of ultrahigh intensity laser capabilities.

On a biennial basis, ICUIL sponsors the International Conference on Ultrahigh Intensity Lasers. The 2020 meeting has now been scheduled to occur in September of next year on JeJu Island in South Korea. Professor Chang Hee Nam and Professor Chris Barty (ICUIL's present chairman) will be the conference chairs for the 2020 meeting. The annual meeting of the ICUIL will take place during the conference. One of the primary agenda items will be leadership and membership rotation. In advance of these discussions the community has been contacted and asked for their nominations for the next chair of the committee.

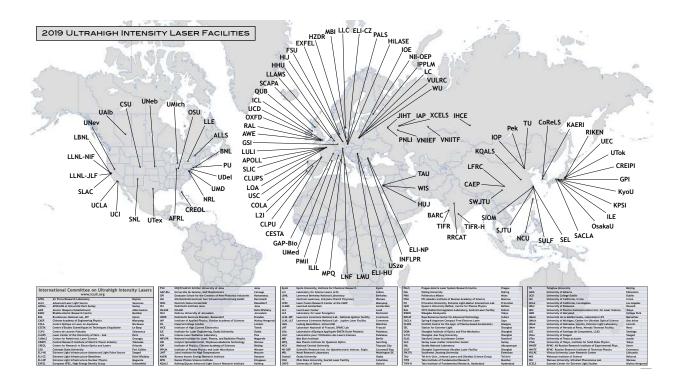
One of the primary functions of the ICUIL is coordination and facilitation of interactions within the community. A primary tool in this regard has been the ICUIL world facility survey and resulting maps. Over the past 18 months, ICUIL has undertaken a completely new census of world facilities and has created both high quality static maps that may be used in various technical and proposal presentations and a new interactive web based map that may be used by potential users to determine where they may be able to perform given experiments. A series of the high quality maps showing the evolution of ICUIL related facilities from 2008 to the present is shown below. This series rather dramatically expresses the explosion of world wide activities related to ultrahigh intensity lasers over the past decade.



2009 ICUIL World Map of ultrahigh intensity laser facilities.



2012 ICUIL World Map of ultrahigh intensity laser facilities.



2019 ICUIL World Map of ultrahigh intensity laser facilities.

Later this fall the 10th newsletter of the ICUIL will be published and will highlight both the 2018 Nobel Prize and provide details on the static and interactive maps.

Sincerely,

Professor Chris Barty

Chairman of ICUIL