

LA³NET Event

Laser and Accelerator Communities merge for Cross-discipline Training



The Spanish Pulsed Lasers Centre (CLPU) in Salamanca, Spain hosted the Advanced School on Laser Applications at Accelerators on behalf of the [LA³NET](#) consortium between 29th September and 3rd October 2014. The event comprised lectures from internationally renowned speakers, study sessions, an industry-focussed day and poster/industry exhibition attracting over 70 participants from all over the world.

The school was opened by [CLPU](#) Director Prof. Luis Roso and Dr. Enrique Conejero Jarque from the University of Salamanca with introductions on behalf of the host institutes. This was followed by a brief overview of LA³NET before the main lecture programme started. The first day included talks about an introduction to lasers, the history of accelerator development in Europe, accelerator applications, as well as beam generation, acceleration and diagnostics.

Day two included lectures on laser ion sources, photo injectors and Free Electron Lasers (FELs), in addition to a two-hour study session giving delegates a chance for a hands-on look at some of the topics covered. An outreach talk about "attosecond science" by Prof. Luis Plaja in the evening on the main University of Salamanca campus attracted more than 100 students from the university and local high schools in addition to the

school participants. The presentation in Spanish with English slides was a most entertaining and enlightening success which was well received by the audience across both languages and so proved worthwhile for inclusion in future events in other countries.

The following days covered advanced topics in ion and electron acceleration, commonly used simulation codes for accelerator design and optimization, as well as industry applications of accelerators and lasers. This was complemented by a [Laserlab](#)-sponsored visit to the facilities at CLPU - an intriguing excursion to the forefront of laser technology and applications with a tour of five laboratories. This included the mechatronics lab where components are manufactured, a laser lab where investigations are underway to investigate the application and effects of ultra-short x-ray pulses for radiographs and a new laser development lab for the first Spanish tuneable femtosecond laser. In addition, the tour covered the user target room for the first and second phase terawatt Vega lasers which are currently operational and then the pièce de résistance, the new building where all three Vega lasers will be housed to achieve petawatt capability for end-user experiments. There was also a second study session and a lively poster display and industry exhibition, sponsored by [Danfysik](#).

