

## **CHRIS DEENEY TALK:**

### **High Energy Density Science, Direct Drive Fusion and Advanced Lasers at the Laboratory for Laser Energetics (LLE)**

**Chris Deeney,**

Director of the Laboratory for Laser Energetics (LLE)

Friday May 10<sup>th</sup>, 11am -12pm

John Anderson Building (JA314)

This talk will review the development of lasers, high energy density science, and advanced computations at LLE.

Fusion research, starting in the 1970s, pioneered the development of major laser facilities, resulting in the two large Omega laser systems at LLE

( <https://www.lle.rochester.edu/about-the-laboratory-for-laser-energetics/videos-featuring-lle/> ) and the National Ignition Facility (NIF).

In the journey to fusion ignition, achieved at NIF in 2022, technologies and scientific advances have expanded the community's abilities to understand astrophysical phenomena and gather the material properties of giant planets and now exoplanets.

The development of targets and optical/x-ray/neutron diagnostics have enabled unique plasma and multi-Mbar regimes to be measured and enabled LLE to be a partner on the journey to ignition with inertial confinement fusion. This material is based upon work supported by the Department of Energy [National Nuclear Security Administration] University of Rochester "National Inertial Confinement Fusion Program" under Award Number(s) DE-NA0004144.

### **Biography**

Christopher Deeney, Ph.D., is the Director of the Laboratory for Laser Energetics (LLE) in the University of Rochester, New York, and graduate of the University of Strathclyde (Physics, 1984).

At LLE, Chris develops strategies with an emphasis on bringing high-quality science and technology solutions to address key challenges in fusion, high-energy-density physics, and laser technologies while maintaining effective operations of the academia's largest lasers and educating future generations of scientists and engineers.

He has had a long and successful career in this sector, largely based in the USA. We are delighted to welcome him back to Glasgow for this talk.

