



**10<sup>th</sup> July 2018 - 10:00 h**

**CFEL – Building 99, seminar room IV (first floor)**

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### **Femtosecond Molecular Dynamics Studied Via Femtosecond XUV Photoelectron Spectroscopy**

Chemical dynamics are complex, involving a dynamic flow of energy between electronic and nuclear degrees of freedom. Understanding these require global probes that can monitor the full reaction pathway often requiring high photon energies or high intensities. In this presentation, I will discuss the issues and opportunities brought about by the development of femtosecond XUV photoelectron spectroscopy. I will discuss the use of XUV photoelectron spectroscopy as a global probe and demonstrate its sensitivity through a study of photodissociation in  $\text{CS}_2$ . Finally I will discuss the issues associated with global probes when studying systems where multiple reaction pathways complicate the measurements and make unravelling the experimental data much more difficult. This will be exemplified though model calculations of the ring opening of cyclohexadiene.