



Contribution ID: 134

Type: **Oral Contribution**

## Controlling the dynamics of a laser-driven plasma wakefield accelerator.

*Thursday, 9 May 2019 09:30 (30 minutes)*

The structure of a laser plasma wakefield accelerator is intricately linked to the energy distribution of the driving laser pulse. During propagation, the spatial and temporal variations in the plasma refractive index causes modifications to the laser spectrum and spatial-temporal profile. This results in non-linear evolution of the laser pulse, which in turn affects the properties of the plasma accelerator. In this talk, I will explore how the laser pulse develops during the plasma accelerator and how this can be controlled. Through this control, it is then possible to optimise injection and acceleration in laser wakefield accelerators, thereby achieving improved electron beam properties.

### Working group

Invited plenary talk

**Primary author:** STREETER, Matthew (Imperial College London)

**Presenter:** STREETER, Matthew (Imperial College London)

**Session Classification:** Plenary session