

Plenary Talk

PV IX Thu 9:00 e415

Structured light - structured atoms — ●SONJA FRANKE-ARNOLD
— Physics and Astronomy, University of Glasgow, UK

Complex vector light is recently receiving increased attention, both from a fundamental and applied view point. It formally shares proper-

ties of quantum entanglement, it can be focused below the conventional diffraction limit, and it allows us to explore and employ the full mode space available for light-matter interactions. In this talk I will present a simple and efficient method to generate arbitrary vector fields, introduce concurrence as a useful tool to analyse their 'vectorness', and demonstrate their interaction with cold atomic gasses.