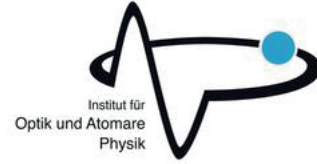
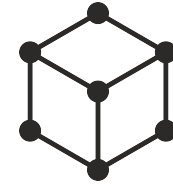


Physikalisches Kolloquium



Dr. Benjamin Lingnau

Department of Physics , University College Cork, Ireland,

“Nonlinear Laser Dynamics in Modern Technology”

Laser dynamics describes the state of operation where a laser's output intensity is varying in time. Initially thought of as a nuisance, laser dynamics nowadays attracts a lot of attention as an enabling technology for future applications. Whether it's ultra-high-bandwidth telecommunications, highly sensitive measurement setups, or self-driving cars, laser dynamics has found its way into modern technology. In this talk, I will give an introduction to laser dynamics, illuminating the theoretical backgrounds and fundamentals. Being a nonlinear system, lasers not only are integral parts of optoelectronic technology, but furthermore constitute testbeds for the study of nonlinear dynamics, including deterministic chaos. I will give a selection of modern applications based on laser dynamics and also give a glimpse into the mathematical beauty of nonlinear dynamics.

Moderation: Prof. Dr. Kathy Lüdge

Thursday, 23.01.20 · 16:15h · EW 202

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