



# PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik  
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 20.04.2016, 16 Uhr c.t.  
Großer Hörsaal, Raum \_0.111,  
Max-von-Laue-Str. 1



## Dr. Felix Karbstein

Theoretisch-Physikalisches Institut  
Friedrich-Schiller-Universität Jena

### *"Optical Signatures of Quantum Vacuum Nonlinearity in Strong Electromagnetic Fields"*

The quantum vacuum in strong electromagnetic fields constitutes a highly topical subject of research.

For instance, it exhibits properties of a birefringent medium and even allows for the scattering of light by light.

In this talk, I will provide you with a thorough but at the same time easily comprehensible explanation of the theoretical concepts giving rise to these phenomena.

Moreover, I will explain and highlight how these effects -- which have not yet been observed -- could soon be verified experimentally for the first time, using state-of-the-art technology.

Die Dozenten der Physik

local host: Prof. Marc Wagner, [mwagner@th.physik.uni-frankfurt.de](mailto:mwagner@th.physik.uni-frankfurt.de)