

EINLADUNG

zum Vortrag
von

Prof. Dr. Christoph K. Hitzenberger

Medizinische Universität Wien
Zentrum für Medizinische Physik und Biomedizinische Technik

Optical Coherence Tomography

am

Dienstag, 24. November 2015, um 17:30 Uhr

Ort: Lise-Meitner-Hörsaal, Fakultät für Physik, Universität Wien,
1090 Wien, Strudlhofgasse 4 / Boltzmannngasse 5, 1. Stock

Barrierefreier Zugang: Boltzmannngasse 5, Lift, 1. Stock rechts über den Gang zum Hintereingang des Hörsaals

Abstract

Optical coherence tomography (OCT) has been introduced in the early 1990s as a new imaging modality to record two- and three-dimensional cross sectional images and data sets of transparent and translucent samples and tissues. OCT has analogies to ultrasound B-mode imaging, however, uses optical (near infrared) radiation and a detection scheme based on low coherence interferometry. This provides exceptional depth resolution in the μm range and, in combination with advanced Fourier domain detection, very high sensitivity and imaging speed. While the main application field of OCT is medical imaging (ophthalmology, dermatology, endoscopic applications), non-medical applications like non-destructive testing are gaining increasing importance.

This talk presents the physical basics of OCT and functional extensions like Doppler OCT and polarization sensitive OCT, as well as some major biomedical and non-medical applications.

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