



TECHNISCHE
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INSTITUT FÜR
ANGEWANDTE PHYSIK
Institute of Applied Physics
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IAP-SEMINAR

ANNOUNCEMENT

- Date: **Tuesday, 9.12.2014**
Time: **16:00 p.m.**
Location: **Technische Universität Wien, Institut für Angewandte Physik, E134**
yellow tower „B“, 5th floor, Seminarraum 134A (room number DB05L03)
1040 Wien, Wiedner Hauptstraße 8-10
- Lecturer: **Dipl.-Ing. Martin Vietauer**
TU Wien, IAP and Center for Medical Physics and Biomedical
Engineering, Medical University of Vienna
- Subject: **Assessment of ocular microcirculation in rodents using optical
coherence tomography**
- Abstract: Numerous ocular diseases, such as diabetic retinopathy, glaucoma, and macula degeneration, are related to changes in retinal blood flow. Animal models allow the study of various ocular diseases under controlled conditions and, hence, are required to gain a deeper understanding of the correlation between the dysfunction in perfusion and the pathological mechanisms underlying these diseases. Recently, a lot of research has been done in the field of Optical Coherence Tomography, to allow the non-invasive measurement of changes in retinal perfusion. This presentation illustrates the basic physical principles as well as the setup of a Doppler Fourier-Domain Optical Coherence Tomograph combined with a commercial Retinal Vessel Analyzer. Special techniques are introduced to detect velocity changes in small capillaries with diameters in the range of 10 μm . Results achieved by this novel measurement system are presented and discussed.

*All interested colleagues are welcome to this seminar lecture
(45 minutes presentation followed by discussion).*

*M. Gröschl e.h.
(Seminar-Chairperson)*

*H. Störi e.h.
(LVA-Leiter)*