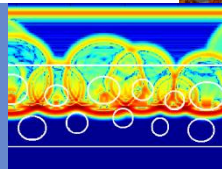
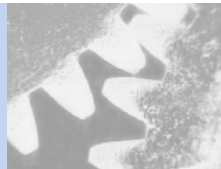




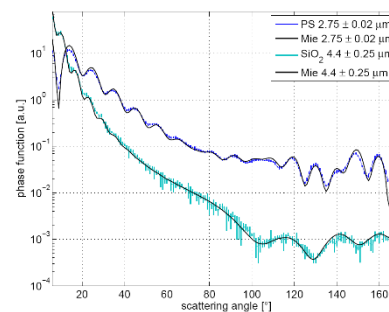
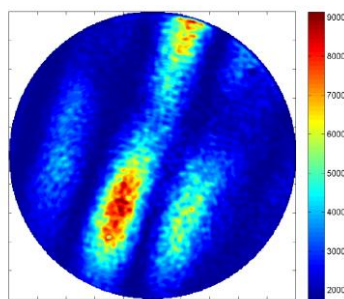
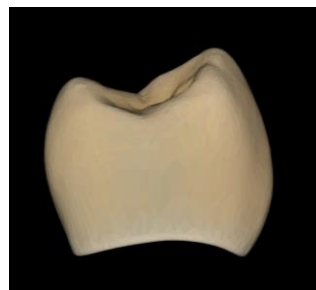
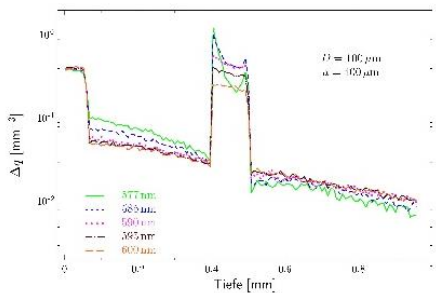
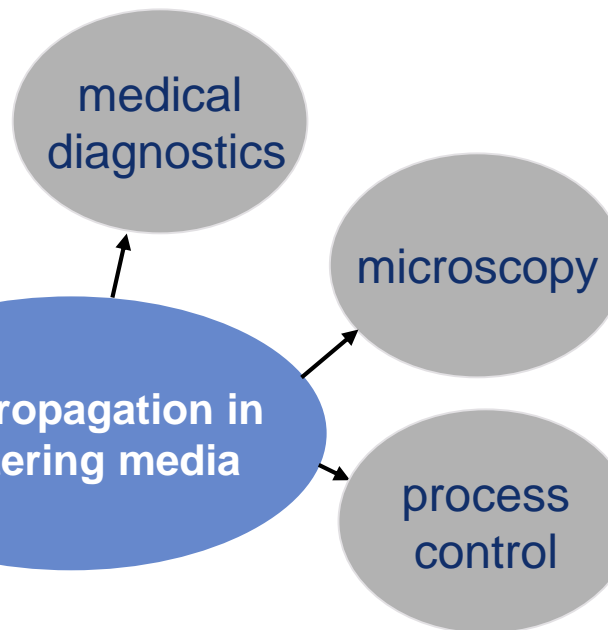
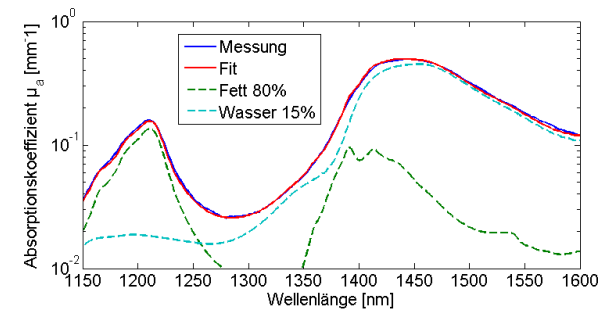
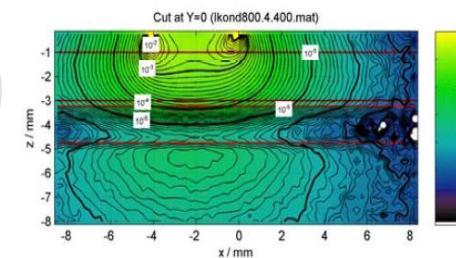
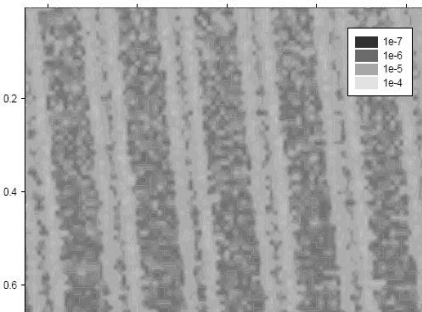
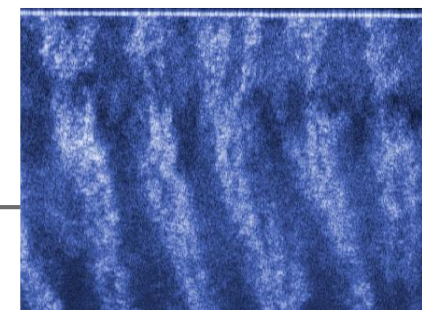
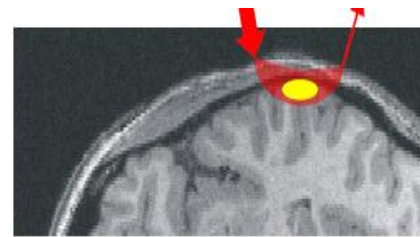
Biophotonics

Alwin Kienle



Institut für Lasertechnologien
in der Medizin und Meßtechnik
an der Universität Ulm

Department: Quantitative Imaging and Sensors



Overview

Lecture: 3 hours per week

Theory (single and multi-scattering)

Analytical and numerical solutions of

Maxwell's equations (microscopic scale)

Radiative transfer equation (mesoscopic scale)

Diffusion equation (macroscopic scale)

and

experimental applications in medicine and technics

Laboratory course

(5 topics):

Numerical solution of Maxwell's equations (FDTD)

Numerical solution of radiative transfer equation (Monte Carlo)

Single scattering by spheres and cylinders

Determination of optical properties (one-dimensional)

Determination of optical properties (two-dimensional)