

Seminar über Biomedizinische Photonik

Referent: Dr. Michael Jaeger, Institute of Applied Physics, University of Bern

Titel: Towards an accurate physical model for imaging speed-of-sound in pulse-echo sonography

Computed ultrasound tomography in echo mode (CUTE) generates an image of the spatial distribution of speed-of-sound (SoS) inside the human body using handheld echo-ultrasound, based on analysing the phase shift of echoes when insonifying the tissue under various different angles. This talk focuses on our new physical model of how the phase shift relates to SoS (remember 'the mysterious factor 2 uncovered'). In phantoms with mixed cylindrical and layered structure, more accurate quantitative SoS imaging is achieved than using the initial model. At the same time, the greater accuracy made it obvious that the current model is still incomplete, which may explain some of the past in vivo results. A possible extension to the model is discussed that hopefully will solve these problems.

Zeit: Mittwoch, 22.11.2017, 10:15 Uhr

Ort: **Hörsaal A97**, Gebäude exakte Wissenschaften, Sidlerstrasse 5, Bern, Schweiz