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Seminar über Biomedizinische Photonik

Referent: Louis Wyss, Institute of Applied Physics, University of Bern

Titel: Speed of Sound reconstruction combining transmission and echo mode

Conventional through-transmission tomography reconstructs the spatial distribution of speed of sound (SoS) based on the arrival time of ultrasound outside the tissue after having propagated through the tissue from various different angles. This technique suffers from artefacts associated with refraction and total internal reflection of ultrasound that propagates parallel to the skin surface. Computed Ultrasound Tomography in Echo mode (CUTE), on the other hand, is based on the phase shift of internal echoes measured under reflection mode perpendicular to the skin surface. My research is focused on investigating whether a combination of these two complementing techniques results in an over-all improved SoS image. In my seminar I will explain the experimental setup, show some preliminary results, and elaborate on how a SoS reconstruction combining the two data types can be implemented.

Zeit: Mittwoch, 06.12.2017, 10:15 Uhr

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