Measurement System for Early Stage Skin Cancer Detection

The goal of this Bachelor Thesis was to develop an innovative diagnostic tool for the early-stage detection of skin cancer. The device is based on an active thermography method where the skin surface is periodically heated while its thermal emission is recorded by a high sensitive infrared camera. The setup is composed of a compact measurement head comprising the IR camera and the thermal stimulation system, and of a mobile terminal which analyse and display the data. First measurements on non-biological samples and on benign cutaneous lesions were achieved as a proof of principle of the method.