**THERMAL IMAGING AS METHOD TO STUDY EFFECT INDUCED ISCHEMIA ON VASOMOTION.**

*Annabel Bantle\*, Christian Korfitz Mortensen, Toby Steven Waterstone\**

**Group 7407**

**Introduction:** Although there have been several studies, which have dealt with the occurrences within the capillary network, this area is not completely investigated. Especially not the phenomena vasomotion. Previous studies detected that the vasomotric blood flow is quantifiable as temperature micro oscillations in the frequency range of 0,005−0,05Hz [1]. Based on this, a study of vasomotion in the peripheral circulation with infrared thermography has been conducted. The aim of this study was to investigate if there are changes in the vasomotric blood flow caused by partial occlusion of the blood supply.

**Methods and Material:** The temperature oscillations in the skin [2] of four healthy subjects are measured by Xenics Gobi 640 17µm GigE infrared camera. The measurements are done on the dominant hand under two conditions. The first measurement under normal conditions used as a control, whereas the second measurement is conducted with 50% restriction of the blood supply. In order to aid comparison, 28 regions of interest are determined. After drift corrections of the thermal data continuous wavelet transform is applied and the measurements within the subjects are compared.

**Results:** The setup was shit

**Discussion:** Set up could be better

**References**

[1] Sagaidachnyi AA, Formin AV, Usanov DA, Skripal AV. Thermography-based blood flow imaging in human skin of the hands and feet: a spectral filtering approach. IOP Publishing: Physiol. Meas. 2017; 38: 272-288.

[2] Tang YL, He Y, Shao HW, Mizeva I. Skin temperature oscillation model for assessing vasomotion of microcirculation. Acta Mechanica Sinica. 2015; 31(1): 132-138.