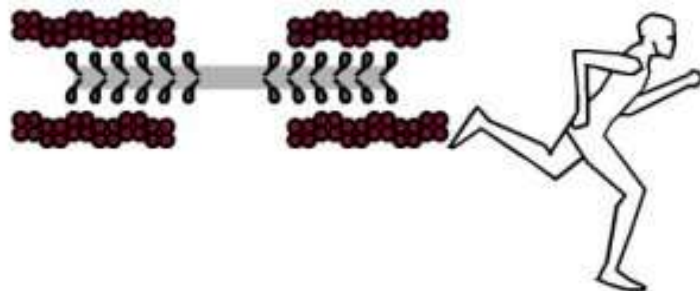


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Scientific validation of respiration rate of a new in-ear sensor

Cooperation project of the company cosinuss and Exercise Biology (TUM)

Master thesis in sports science

Start: as soon as possible

Project description

In this pilot project, the respiration rate sensor of a new in-ear PPG-sensor (Cosinuss Two°) should be validated against established reference devices under real conditions.

The first part is a literature research of respiration rate measurement methods and devices. The second part is a validation of different possible reference systems with the in-ear sensor cosinuss °Two that uses photoplethysmography to measure respiration rate.

The validation of respiration rate should be done in resting state and during mild exercise.

Main research questions:

- Is it possible to estimate breathing rate by in-ear photoplethysmography?
- Compare photoplethysmography to a reference device under real conditions?

Requirements

Interested in modern techniques.

Supervision

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