

## Supervisor statements

This document describes and certifies the satisfactory compliance of Esben Høegholm Lykke to the PhD degree program as well as the role of co-supervisor.

Esben Høegholm Lykke has carried out independent work in a research project including major contribution to design, planning, performance, measurement, data analysis, statistical analysis and preparation of manuscripts for submission in scientific journals. Further, he has complied to the course program requirement of 30 ECTS including a combination of a complete set of courses and participation with own presentations at several scientific conferences and at workshops.

During the whole PhD program, Esben has performed teaching in basics and applied statistics at the Department of Sports Science and Clinical Biomechanics, as well as supervision of students' work for bachelor and master degrees.

The PhD research project concerned development of sleep pattern identification using accelerometry involving children, as well as management of relevant equipment and programming in R and Python.

Specifically, Esben's unique contribution is acceleration data analysis and processing, the creation of algorithms for sleep pattern identification that will have a major contribution to the assessment of sleep in a general population.

The PhD thesis contains three works; two published and one not yet submitted. In these works, Esben has had a major contribution as an author to content and preparation. Esben has also contributed to other works and publications in addition to the ones included in the PhD thesis. The research has been performed in collaboration with other institutions, universities both nationally and internationally.

In addition to the main supervisor Associate Professor Jan Christian Brønd, the PhD work has been performed under the guidance of the co-supervisor Professor Anders Grøntved and Associate professor Niels Christian Møller at the same department. Both Anders and Niels Christian have had a part in the supervision of the performance of the research project, writing manuscripts and thesis.

..... Odense 22/09-2023.....



Main supervisor Professor Jan Christian Brønd