

UNIVERSITY OF ZAGREB
FACULTY OF ELECTRICAL ENGINEERING AND COMPUTING
and
UNIVERSITY OF APPLIED SCIENCES KONSTANZ

MASTER THESIS No. 1536

**Enhancement of sensor mesh functionality
with application on sleep tracking**

Bruno Vunderl

Konstanz, June 2017

Master thesis

Conclusion of Master Degree

Master of Science in Computing (M. Sc.)

at the

University of Zagreb
Faculty of Electrical Engineering and Computing

and

Hochschule Konstanz
Technik, Wirtschaft und Gestaltung

Theme: **Enhancement of sensor mesh functionality with
application on sleep tracking**

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sor:

Issue date: DD.MM.YYYY
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MASTER THESIS ASSIGNMENT No. 1536

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Study: Computing
Profile: Computer Engineering

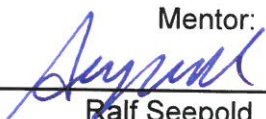
Title: **Enhancement of Sensor Mesh Functionality with Application on Sleep Tracking**

Description:

The focus of this project is enhancement of functionality, reliability and sensor accuracy of an intelligent bed that monitors human sleep. The scope of the project includes the implementation of an application layer protocol and network communication between the embedded system in the bed and remote server. Furthermore, the implementation possibilities of data preprocessing, filtering, and automatic sleep analysis are explored and tested. The system is tested and evaluated in the Ubiquitous Computing Laboratory at the Hochschule Konstanz University of Applied Sciences.

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Submission date: 29 June 2017

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Authors Declaration

Unless otherwise indicated in the text, references are acknowledged below. This report:

**Enhancement of sensor mesh functionality with application on sleep tracking
by Bruno Vunderl on DD.MM.YYYY**

is entirely the product of my own scholarly work. This report has not been submitted
with in whole or part for a degree at this or any other university or institution. This
is to certify that the printed version is equivalent to the submitted electronic one.

Konstanz, DD.MM.YYYY

Bruno Vunderl

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Bibliography

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