Max Planck Institute
for Marine Microbiology

JACOBS
UNIVERSITY

Title goes here

by

Full name

A Thesis submitted in partial fulfillment of requirements for the degree of
Doctor of Philosophy in ...

Thesis committee:

Full name1 (Chair)
Max Planck Institute for Marine Microbiology
Jacobs University Bremen

Full name2
Jacobs University Bremen

Full name3
Jacobs University Bremen

Bremen, date goes here

Statutory Declaration

I, ..., hereby declare that I have written this Ph.D. Thesis independently unless where clearly stated otherwise. I have only used the sources, data, and support clearly stated. This Ph.D. Thesis has not been submitted for a conferral degree elsewhere.

I confirm that no rights of third parties will be infringed by the publication of this Thesis.

Signed: _____

Date: _____

Abstract

Microorganisms encompass a large metabolic diversity, are key drivers of ecosystem functioning and are fundamental for maintaining all other forms of life on earth ...

Abbreviations

APE: Absolute Percentage Error
AT: Acyltransferase
BGC: Biosynthetic Gene Cluster
C: Condensation
DACC: Analysis and Coordination Center
DCM: Deep Chlorophyll Maximum

Contents

Chapter 1

Introduction

1.1 First section

Microorganisms are defined as “small living organisms not to be seen with the naked eye” (Singh and Dwivedi 2004).

1.2 Second section

More text and citations. For example Béjà et al. 2000; Rondon et al. 2000; Nesbø et al. 2005.

Figure 1.2-1: Figure title. Figure text

1.3 Research objectives

This Thesis has the objective to ...

Chapter 2

Results and Discussion

2.1 Overview

Overview section goes here.

2.2 Section name

Here goes all the text presenting the work. Here goes an example reference (Fierer, Barberán, and Laughlin 2014; Sunagawa et al. 2015). Here goes an example equation:

$$Trait_{real} = \frac{1}{total\_abund} \sum_{i=1}^{k} genome\_trait_i \times genome\_abund_i \tag{2.2-1}$$

Bibliography

Fierer, Noah, Albert Barberán, and Daniel C. Laughlin (2014). “Seeing the Forest for the Genes: Using Metagenomics to Infer the Aggregated Traits of Microbial Communities”. In: *Frontiers in Microbiology* 5, p. 614. DOI: 10.3389/fmicb.2014.00614.

Sunagawa, Shinichi et al. (2015). “Structure and Function of the Global Ocean Microbiome”. In: *Science* 348 (6237), p. 1261359. DOI: 10.1126/science.1261359.

Figures

Figure 2.2-1: Figure name 1) Figure caption

Table 2.2-1: Multi-valued traits summary variables. Details of the first principal components (PC1) obtained from the Principal Component Analysis (PCA) performed on the multi-valued traits.

Field1	Field2	Field3
sometext	somevalue	somevalue
sometext	somevalue	somevalue
sometext	somevalue	somevalue
sometext	somevalue	somevalue
sometext	somevalue	somevalue
sometext	somevalue	somevalue

Chapter 3

Final remarks and conclusion

Taken together, this Thesis shows that ...

Chapter 4

Outlook

In the future we plan to ...

Chapter 5

Additional scientific publications

1. **Publication1**

   Authors: ...

   Published in: ...

   Contribution: ...

   Relevance: ...

2. **Publication2**

   Authors: ...

   Published in: ...

   Contribution: ...

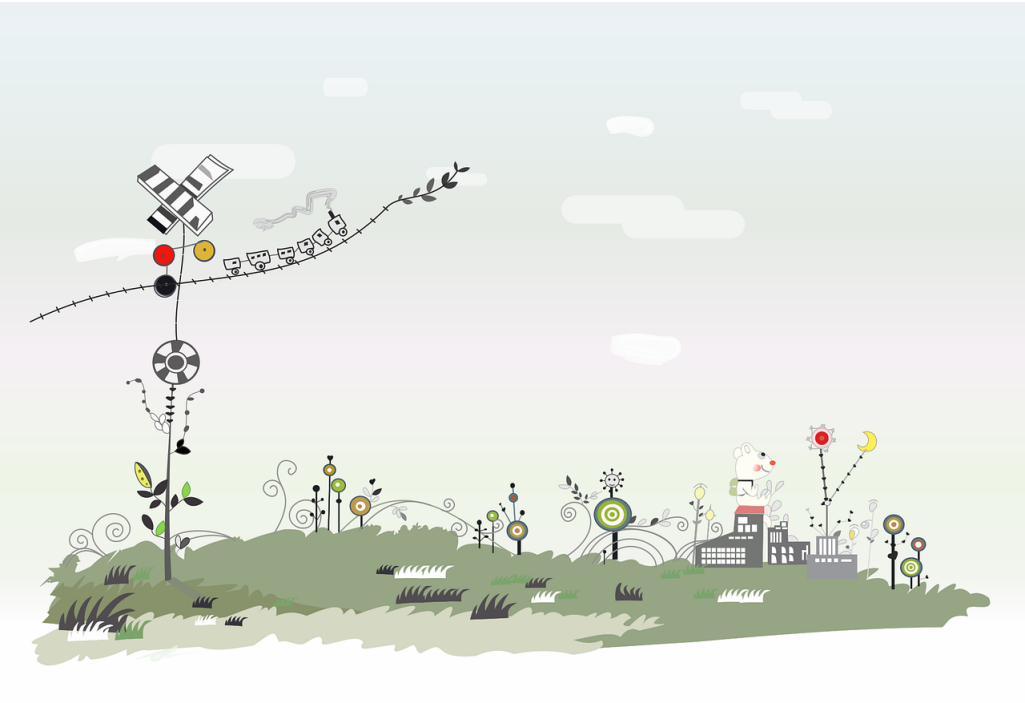
   Relevance: ...

Chapter 6

Appendix: supplementary materials

6.1 Supplementary material of the work “Section name"

6.1.1 Supplementary figures



Supplementary Figure 6.1-1: Figure name (a) Caption text

Acknowledgements

Many thanks to my supervisors.

Bibliography

Béjà, Oded et al. (2000). “Bacterial Rhodopsin: Evidence for a New Type of Phototrophy in the Sea”. In: *Science* 289 (5486), pp. 1902–6. DOI: 10.1126/science.289.5486.1902.

Nesbø, Camilla L. et al. (2005). “Lateral Gene Transfer and Phylogenetic Assignment of Environmental Fosmid Clones”. In: *Environmental Microbiology* 7 (12), pp. 2011–26. DOI: 10.1111/j.1462-2920.2005.00918.x.

Rondon, Michelle R. et al. (2000). “Cloning the Soil Metagenome: A Strategy for Accessing the Genetic and Functional Diversity of Uncultured Microorganisms”. In: *Applied and Environmental Microbiology* 66 (6), pp. 2541–7. DOI: 10.1128/AEM.66.6.2541-2547.2000.

Singh, D. P. and S. K. Dwivedi (2004). *Environmental Microbiology and Biotechnology*. New Delhi: New Age International Publishers. ISBN: 81-224-1510-5.