

Jophiel Wiis

M.Sc. Physics

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Nygårdsvej 49A, 5.th 2100 Copenhagen Ø Denmark

+45 3119 9442

linkedin.com/in/jophiel-wiis/

jophiel@gmail.com

As a physicist I am trained in the application of the scientific method to complex and abstract problems, making penetrating analyses of the tasks set before me before executing a solution. During my studies I have acquired skills in programming, math, statistics, and experimental design, as well as data processing, and interpretation. I am adventurous by nature, but recognize the importance of responsibility and respect for others on the path to success. I have solid experience with project work and management, as well as group dynamics and communication.

Skills —— Danish

English

Concurrent Engineering

Problemsolving and Analysis

Electronics and wiring

Programming (python, MatLab)

Data management

Teaching and Communication

Teamwork and cooperation

Education

- 2018-2019 Software Developer Ticra Responsible for 3D modelling output of waveguides.
- 2014-2017 M.Sc in Physics (Astrophysics) University of Copenhagen (UCPH) Standardization of Super Luminous Supernova events. Thesis evaluation: 12 (top grade). GPA: 10.4
- 2010-2014 B.Sc. of Physics UCPH and University of Queensland Effects of Local Under-densities on Observed Cosmological Parameters Thesis evaluation: 12 (top grade) GPA: 7.9

Space Project and Research Experience

- 2014 Simulation of Extraterrestrial Field Work UCPH MARS group Robotics outreach project simulating Mars Rover remote operations. I was in charge of robot build, code documentation, and design of simulated missions. - http://tinyurl.com/h38r5rg
- 2017 Space Mission Design Summerschool FSΔ Four teams of students compete to design ambitious space missions, from choosing science goals, to the detailed design of payload and spacecraft. Won awards for 'best technical case' and 'best presentation'. I learned efficient, cross-disciplinary techniques for spacecraft design, and a host of knowledge and skills related to spacecraft production and flight. - https://tinyurl.com/y843e693 - https: //tinyurl.com/y843e693
- 2015 Mars colonisation with SpaceMoss - International competition iGEM As part of team SpaceMoss, I designed a new type of moss made to survive the hostile environment of Mars. The project was part of the international iGEM competition for where we were awarded gold. and two nominations for special categories. I was responsible for project management, data collection, outreach, and setting up Martian growth conditions. - http://tinyurl.com/zyw8hvs

Experimental and Analytical Skills

Basic Hardware Training Courses, projects Through projects and collaborations such as ROVSIM and ALPBACH (see below), I have gained a strong working understanding of mechanics and electronic systems, both from design and production perspectives.

Experimental Science

Courses, projects I have attended and co-taught several courses on experimental methods in physics, giving me a good understanding of the subtleties in experiment design, and care in gathering of measurements. My teaching engagement in these courses led to the Jens Martin award for excellence in teaching (see below).

Data management

My bachelor's and my master's thesis required substantial amounts of data to be managed in an efficient and easily reviewable manner.

Programming Thesis, courses, projects Proficiency in several programming languages with solid experience in simulation, data analysis, and abstract problem solving.

Math and Statistics

Courses My education has given me strong competences in math as an analytical tool, and I have good proficiency with statistical analysis of datasets and physical systems.

Courses

Demonstrated Project Management Skills

Pragmatism and efficiency

My numerous projects, and in particular the Alpbach summer school and the IGEM competition (see above) have taught me pragmatism towards efficient project completion, as well as good organizational skills, both on a project level and personal time management.

Project management and grace under pressure

I have directed and organized both the student revue (60 students, 1000 audience) and the annual NBI ball (350 students and faculty) several years in a row. This, combined with performance, has taught me valuable experience in leadership, management, confidence in public speaking, how to make quick decisions in a crisis, as well as good interpersonal communication and a level head under pressure.

Teaching and Outreach Highlights

Shared responsibility for the redesign of the Niels Bohr Institute's introductory laboratory course. Awarded the Jens Martin Award for Excellence in Teaching for our efforts, marking the first time the award was awarded to students. - http://tinyurl.com/j2gygd4

Participation in the board overseeing the full restructuring of the Bachelor courses to facilitate better programming skills in graduates.

Scientific outreach via public talks, radio- and tv-appearances, as well as science consulting for tv and theatre productions. In addition, I have written, hosted, and produced several videos on science topics for the Niels Bohr Institute, as well as for the general public.

Publications

2015

Local gravitational redshifts can bias cosmological measurements Based on my Bachelor's thesis and published in JCAP. - https://arxiv.org/pdf/1504.00718.pdf