



# **Welcome to the Master Programs at the Department of Physics:**

**Physics**

**Electronics, Informatics, and Technology**

**Nuclear Science**

**Computational Science (Physics & Materials Science)**

13.8.2024

Andreas Gørgen  
Department of Physics, UiO  
andreas.gorgen@fys.uio.no

Grete Stavik-Døvlé  
Department of Physics, UiO  
studieinfo@fys.uio.no

We are glad that you are here !!!

- A brief survey – who are you and what is your background?



# Who are we? About the Department of Physics

## 5 Bachelor programs with ~320 students:

- Physics and Astronomy
- Nuclear Science
- Electronics, Informatics, and Technology
- Renewable Energy and Nanotechnology
- Honours Program

## 4 Master programs with ~180 students:

- Physics
- Nuclear Science
- Electronics, Informatics, and Technology
- Computational Science

## 210 employees

- 43 professors
- 91 PhD candidates
- Researchers and Postocs
- Technicians
- Administration

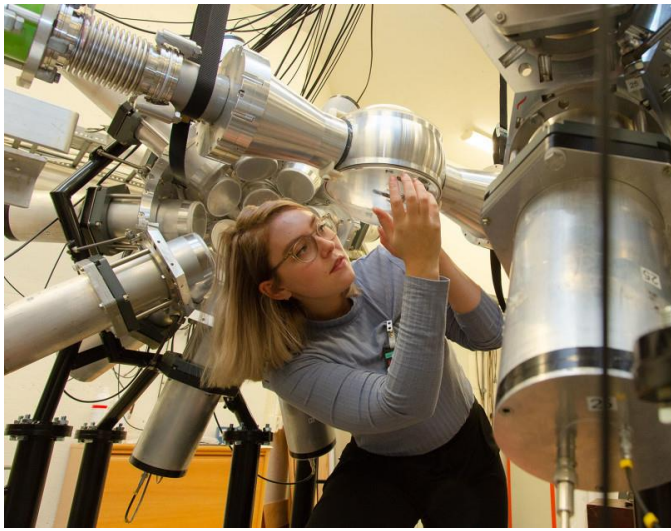
## 10 Research sections:

- Biophysics and medical physics
- Electronics
- Semiconductor physics
- High-energy physics
- Nuclear physics
- Condensed matter physics
- Plasma and space physics
- Physics education
- Structure physics
- Teoretical physics

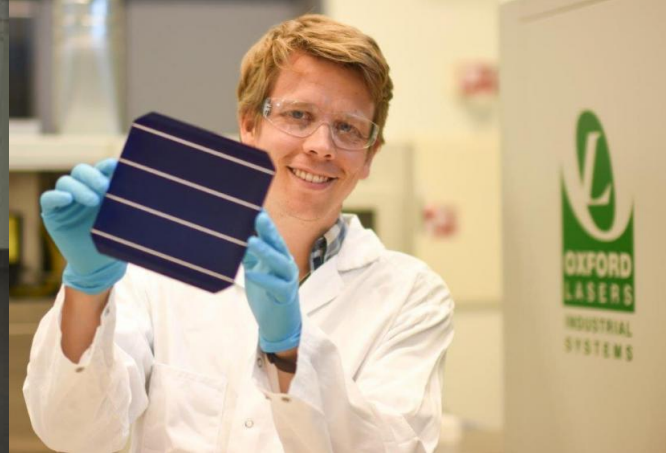
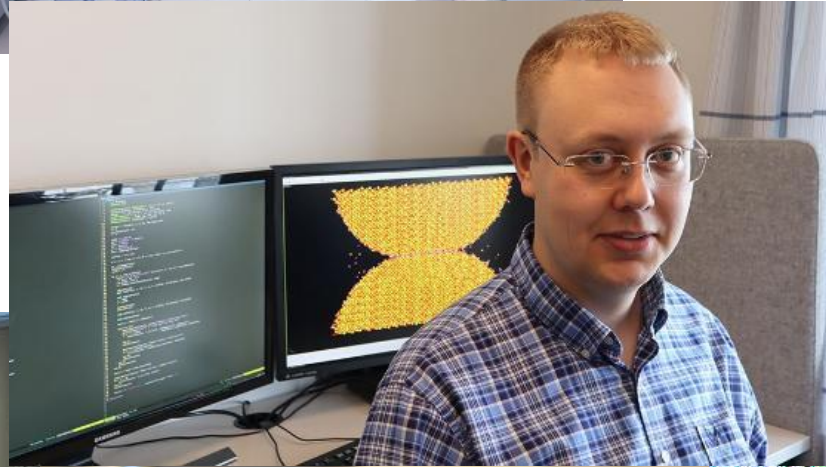
## Interdisciplinary Centers and Centers of Excellence

- Centre for Materials Science and Nanotechnology (SMN)
- Njord: Centre for Studies of the Physics of the Earth
- Centre for Computing in Science Education (CCSE)
- Center for Sustainable Solar Cell Technology (SUSOLTECH)
- Norwegian Nuclear Research Center
- Norwegian Center for CERN-related Research (NorCC)
- Porous Media Laboratory
- dScience – Center for Computational and Data Science



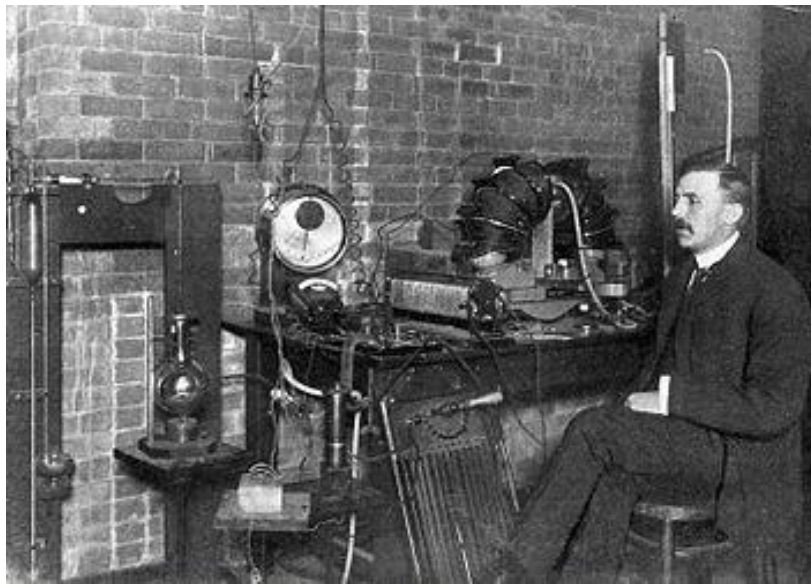


Let the adventure begin!

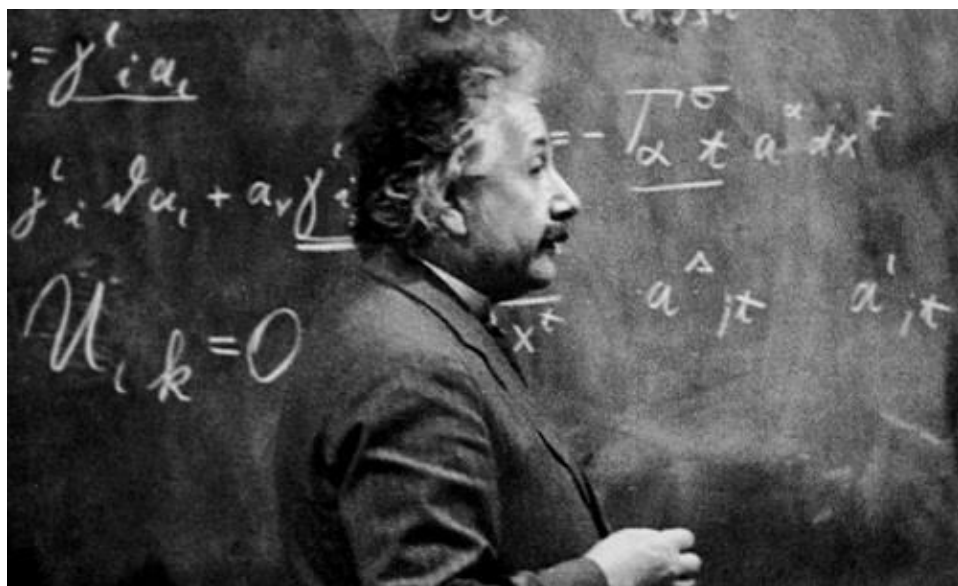


# Research has changed...

experimental physics:



theory:



# Your studies are changing, too...

## Bachelor

build the foundation

broad

courses

part of a cohort  
study with your peers

## Master

specialize

deep

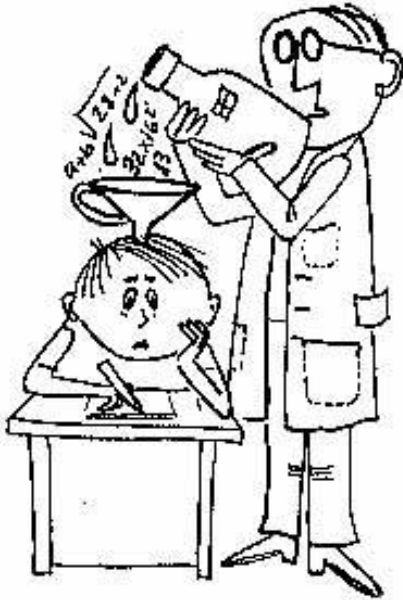
your learning:

- more choices
- more freedom
- more responsibility

50% courses and  
50% research project

part of a research group:  
work with professors, postdocs,  
technicians, Master and PhD students

We want you to succeed !



We are here to help you

- but **you** have to do the work!



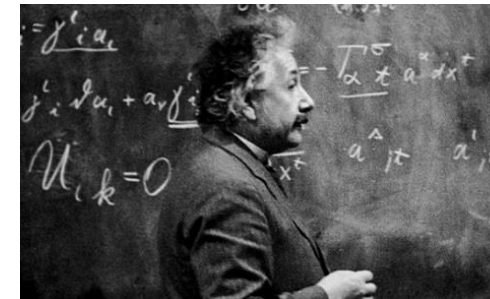
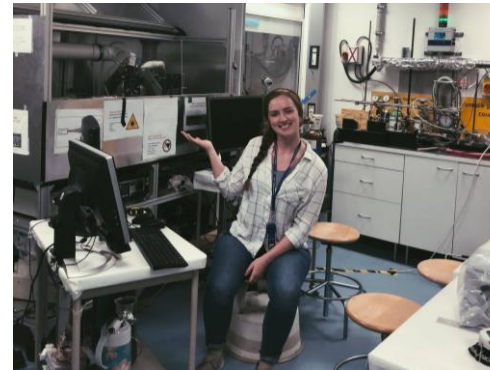
# How to choose a project and supervisor ?

Potential topics for master projects at the Department of Physics:

<https://www.mn.uio.no/fysikk/english/studies/master/master-topics/index-eng.html>

- scientific interest: choose a topic that you find fascinating
- Methods: how do you like to work?
  - Build/use equipment
  - Data analysis
  - Modelling / simulations
  - Theory
- Social environment
  - Work with these people for the next 2 years?
  - Personal chemistry with supervisor(s)
  - Talk to other students in the group

Job opportunities ?



We can tailor a project that fits for you!

Talk to possible supervisors !!!

(They all love to talk about their research.)

There are plenty of job opportunities with a Master in  
Physics / Nuclear Science / Electronics / Computational Science !

For examples, see e.g. <https://www.uio.no/studier/program/fysikk-master/karriereintervjuer/>  
(in Norwegian)

It is difficult to plan/predict what your future job will be.

It is likely that you have interesting job offers before you finish your Master.  
(so relax...)



Jørgen is modelling infectious diseases  
at the Norwegian Institute of Public Health



Vilde is working in finance at DNB Markets

Some of you will get hooked so much on your research that you continue with a PhD.

# Planning

... even more important now than during your BSc studies

plan your **course work / curriculum**

- lots of choices even within your specialization
- discuss your choices with your supervisor
- get advice from older MSc and PhD students in the group

plan your **research work**

- **YOU** are the **project manager** of your research work
- make a detailed plan of the different tasks
- coordinate the research work with course work / exams / assignments
- get help from your supervisor and the people around you
- don't underestimate the time it takes to write your thesis

Remember: a Master project is innovative and original research:  
nobody knows the answer or solution to the problem – you have to find it!

## Communicate

- talk to your supervisor
- talk to PhD students, researchers, other professors in your group
- talk to your fellow students
- talk to the student administration
- explain your research to your non-physicist friends

**communication is a very important skill –  
in science and in general**

... also written communication...

## Writing

**keep a lab journal !!!**

(also if you are a theorist  
or do computational work!)

will you remember what you did today a month from now?

six months from now?

a year from now?

**⇒ document your work or it will get lost eventually**

why not start writing about a task once you have finished it?

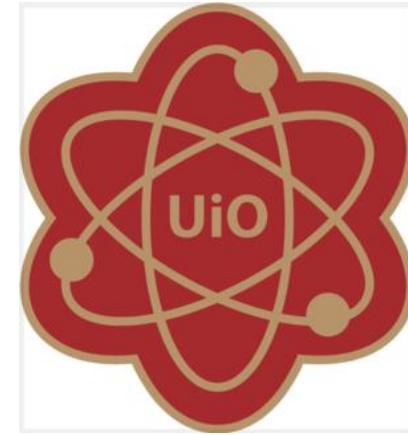
It will make writing your thesis much easier.

Start with a blank page – don't use the work of others as a template.

**This is your original work !**

# Master Seminars in collaboration with the Science Library

- following your progression in your Master project
- half a day per semester



## Seminar 1

- How to write a good project description
- How to read scientific papers
- How to plan your Master project

## Seminar 3

- How to structure your thesis
- Write – write – write (tips and motivation)
- Copyright! What can I use?
- How to cite correctly
- Public outreach – possibilities

## Seminar 2

- How to search scientific literature
- How to use reference management
- How to get started writing your thesis

## Seminar 4

- How to decide on your grade
- More writing tips
- The ultimate checklist for delivering the thesis
- How to give a great Master presentation

## Being part of a research environment

your group is like a **family!**

it is also a fantastic **resource** – use it!      Be inspired !

be **active!**

be **social!**

be part of the research environment

it is up to you to make it even better!

support others – and others will support you

talk about your research with others

keep yourself updated about your field of research:

- go to seminars
- go to MSc and PhD presentations
- read relevant articles
- journal clubs

You often learn more in a lunch conversation  
than in a week of studying at home alone.

You have learned basic physics,  
math, programming... during your BSc

now you get to the fun part : **research** !

There will be setbacks:

- experiments will fail
- computer codes will crash
- Theories/models will fail to explain

Don't let this demotivate you –  
it's part of the game.

**Enjoy this experience !**



# Get your personal schedule, messages, and useful tools all in one place.

- Your personal schedule: Teaching, exams, and Canvas assignments
- Receive messages from your courses and study programme
- Personal shortcuts to frequently used services
- Get notifications when your schedule changes

[Log in to My Studies](#)

Keep me logged in



# Schedule 12 – 16 Aug (week 33)



Select week



## Masteruka - studiestart for nye masterstudenter

	Monday, 12/08	Tuesday, 13/08	Wednesday, 14/08	Thursday, 15/08	Friday, 16/08
08:00					
09:00					
10:00		<b>Obligatorisk info</b> 09:30 - 11:00 Vestibyen, Fysikkbygningen	<b>Masteruka - studiestart</b> Fysikkbygningen		
11:00		<b>Masterseminar</b> 11:00 - 13:00 Store Fysiske auditorium, Fysikkbygningen			
12:00		<a href="#">Resources</a>	<b>Emneregistrering</b> 12:00 - 14:00	<b>RealStart - Lynf</b>	
13:00		<b>Frederikketeltet</b> 13:00 - 14:30 Frederikkeklassen	<b>Frederikketeltet: Lobbyen fra Ra</b> <a href="#">Resources</a>	<b>Frederikketeltet</b> 13:00 - 14:00 <a href="#">Resources</a>	
14:00			<b>Møte med studie</b> 13:15 - 15:00 Store Fysiske les		
15:00	<b>Velkomstseremonien</b>			<b>Frederikketeltet: Baklengs inn i</b>	
16:00		<b>Frederikketeltet: Impro-duell me</b> 15:30 - 17:00 Frederikkeklassen		<b>RealStart - Felles sosialt</b> 16:00 - 22:00 Ole-Johan Dahls hus <a href="#">Resources</a>	
17:00					
18:00		<b>Frederikketeltet: Stand-up</b> 18:00 - 19:30 Frederikkeklassen			
19:00				<b>Frederikketeltet: Quiz</b> 19:00 - 21:30 Frederikkeklassen <a href="#">Resources</a>	
20:00	<b>Frederikketeltet: Honningbarna</b> 20:00 - 22:30 Frederikkeklassen <a href="#">Resources</a>	<b>Frederikketeltet: Maria Stavang</b> 20:30 - 21:30	<b>Frederikketeltet: DJ fra Bra Tron</b> 20:00 - 23:00 Frederikkeklassen <a href="#">Resources</a>		
21:00					
22:00					<b>Masteruka - studiestart for nye r</b> Fysikkbygningen
23:00					
24:00					

Subscribe to schedule

○ Study start

# Programme web pages

- [www.mn.uio.no/fysikk/studier/master/](http://www.mn.uio.no/fysikk/studier/master/)
- [www.mn.uio.no/fysikk/english/studies/master/](http://www.mn.uio.no/fysikk/english/studies/master/)
- Learning outcomes
- Program structure
- Deadlines
- Semester abroad
- Career prospects

# Structure of Master Programme

- Two years study, 120 ECTS credits
- 60 credits theoretical curriculum
  - Most options have mandatory courses, but not all
- 60 credits master thesis
  - Normal deadline 15th of May 2026

# Structure of Master Programme

4. semester	Master's thesis	Master's thesis	Master's thesis
3. semester	Master's thesis	Master's thesis	Master's thesis
2. semester	Mandatory course	Elective course	Elective course
1. semester	Mandatory course + HSE courses	Elective course	Elective course
	10 ECTS credits	10 ECTS credits	10 ECTS credits

4. semester	Master's thesis	Master's thesis	Master's thesis
3. semester	Elective course	Master's thesis	Master's thesis
2. semester	Mandatory course	Elective course	Master's thesis
1. semester	Mandatory course + HSE courses	Elective course	Elective course
	10 ECTS credits	10 ECTS credits	10 ECTS credits

# Courses 1st and 2nd semester

- Check for structure on the programme web-page and on the programme options regarding information on compulsory courses
- See full list of other courses to chose optional courses:  
<https://www.uio.no/english/studies/courses/matnat/>
- Discuss options with your contact person:  
<https://www.mn.uio.no/fysikk/english/studies/master/contact-persons/index.html>

# Study plan

- Registration studentweb
  - Theoretical curriculum 1st semester
  - Apply for admission to courses by Thursday 15th of August
  - Pay semester fee no later than 1st of September
- Application to have courses and project approved must be handed in by the 1st of December this year
  - Project description, final selection of theoretical curriculum.
  - Include form describing special syllabus if this is a part of your theoretical curriculum.
  - Students who have finished more than 20 ECTS of curricula must hand in their application within 1st of September.

# Study plan

- Find a supervisor!  
Deadline is December 1, which is at the same time as your exams.  
So start to look this week!

We recommend that you prioritize time over the next three weeks to find a supervisor.

- Find topics and research on the web:
  - <https://www.mn.uio.no/fysikk/english/studies/master/master-topics/index-eng.html>
  - <https://www.mn.uio.no/fysikk/english/research/groups/>
  - <https://www.mn.uio.no/ifi/english/about/organisation/mls/index.html>
  - [Earlier thesis'](#)



# Change of plan (once approved)

- Please contact the programme coordinators
- Examples of applications which needs to be approved in due time:
  - New supervisor
  - New theoretical curriculum
  - Part-time study
  - Leave
  - Postponed deadline for handing in the master thesis (prolongation)
  
  - They all require documentation
  - The three last applications must be handed in before the semester starts, or as soon as there is a change.

# Part-time studies

- Reasons to apply for part-time studies
  - Work
  - Maternity-/paternity-leave
  - Chronic condition
  - Athlete at national level
  - Cultural or political activities at national level

You must work at least 50 % on your master

# Leave

- Reasons to apply for leave
  - Maternity-/paternity-leave
  - Illness
  - Athlete at national level
  - Cultural or political activities at national level

# Prolongation

## - due to unforeseen reasons

- Reasons to apply for a prolongation
  - Delay in experiments due to late delivery of equipment
  - Delay in experiments in general
  - Short-term acute illness

# Compulsory HSE-courses (Health, Safety and Environment)

- See your programme web-pages for details
- See also your course plan in StudentWeb.
- Students with previous HSE-courses from UiO are exempt from requirement

# Practical information regarding HSE

- HSE-training consists of:
  - 1) HMS0501 Safety and Physical Environment
  - 2) HMS0502 Positive Learning Environment
  - 3) HMS0505 Electricity Safety
- The courses are e-based with a multiple-choice test.

# Master students:

## Short summary

- Are responsible for their own study progression.
- Should talk to the contact person for the programme option as soon as possible.
- Find a supervisor as soon as possible.
- Must pay attention to:
  - their **UiO** e-mail
  - [minestudier.no](http://minestudier.no)
  - Studentweb
  - to the programme web page.

# The study administration at the Department of Physics

There is a lot of useful information on UiO's website.

But we are happy to have a chat with you. Send us an email: [studieinfo@fys.uio.no](mailto:studieinfo@fys.uio.no).

We are located on the ground floor - right across the hall from Origo





# Need someone to talk to?



Faculty of Mathematics and  
Natural Sciences

## ForVei

- Personal, preparatory guidance session.
- The topic of the conversation is student life at UiO. You can discuss whatever is on your mind.



## The Ombud for Students

- Advice and guidance related to challenges with your study situation.
- You do not need a referral, and the service is free.



## Speak up!

- What you appreciate and want UiO to do more of.
- Negative aspects of your physical or social learning environment.
- Harmful, dangerous, unethical, or criminal incidents.
- Bullying or sexual harassment.

They all have confidentiality obligations.



## Housing

See our student accommodations and apply. Read about the everyday life.



## Health

Change to GP at SiO. Book appointment with a dentist. Join our free courses.



## Sports

Become a member at SiO Athletica, see our training offer, PT and clubs.



## Food and beverage

See our eateries and coffeeshops, and see today's menu.



## Kindergarten

See our kindergartens and apply for kindergarten placement. See prices.



## Associations

See all of Oslos student associations, join one or start your own.