

# CURRICULUM VITAE

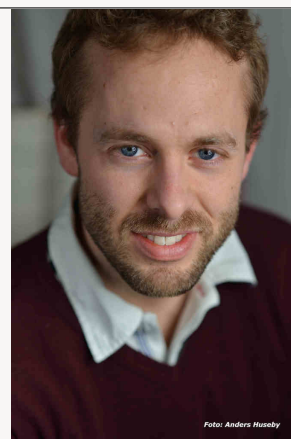
*for*

Ben David Normann

## 1 PERSONAL DATA

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BIRTH: Norway — 3 July 1989  
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EMAIL: [ben.d.normann@ntnu.no](mailto:ben.d.normann@ntnu.no) , [bdnormann@gmail.com](mailto:bdnormann@gmail.com)  
HOMEPAGES: [NTNU personal webpage](#) , [Researchgate.net](#) ,  
[Linkedin](#) , [www.bendavidnormann.com](http://www.bendavidnormann.com)  
Misc.: [SIKT alumni](#)



## 2 AWARDS & FUNDING

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AUTUMN 2018 | *National winner of 'Forskergrandprix 2018'*  
Every year the Norwegian Council of Research hosts a competition in research dissemination. I won both the regional competition of Rogaland and the national finals, and hence earned the (unofficial) title 'The best research communicator of Norway 2018.' The show was broadcasted on TV, and my contributions may be found here:  
NRK TV: [Forskergrandprix 2018](#).

SPRING 2020 | *Funding from NFFO*  
I receive funding from [NFFO](#) to write a popular-scientific book on cosmology, based on a project proposal written the Autumn of 2019.

## 3 WORK EXPERIENCE

- 2021-PRESENT | **Ass. prof. at NTNU**  
 I have taught maths (IMAA2100, 3rd year course) and now I teach preparatory physics (TRES0312) and 1st year physics (IFYA1001, IFYKJA1000, IFYKJA1001). I also teach Experts in Teamwork (village name: "Thinking outside Earth").  
 Also: [arXiv:2107.13533](#)
- 2020-2021 | **Lecturer (UiS) and planning a student conference (NKSS)**  
 I taught preparatory maths and physics (forkurs) and [Astronomy & Astrophysics](#) at UiS. I also lead the work of planning [StudentForum](#), annually gathering about 400 students.
- SPRING 2020 | **Authoring popular science**  
 Writing a popular-scientific book on cosmology, funded by NFFO.  
 Also: [arXiv:2006.09514](#)
- AUTUMN 2019  
 -Autumn 2016 | **Ph.D. in cosmology, UiS**  
[arXiv:1712.08752](#) , [arXiv:1904.04471](#) , [arXiv:1909.11962](#)  
[arXiv:1909.11965](#) , [arXiv:1910.12083](#) , [arXiv:1911.05793](#)  
 Ph.D. studies at the University of Stavanger (UiS). I did work on the Bianchi models with prof. Sigbjørn Hervik. I also did some work on gravitational lensing with Chris Clarkson at Queen Mary Univ. of London (autumn 2018).
- Spring 2019 | **Lecturer in 'Forkurs i fysikk' at UiS**  
 As a side job I also taught the course *Forkurs i fysikk* (FIN 211); a full one semester preparatory course in physics.
- SPRING 2016  
 -AUTUMN 2015 | **Authoring scientific papers**  
[arXiv:1601.04519](#) , [arXiv:1612.01794](#)  
 In collaboration with prof. I. Brevik I took a gap year after my master thesis to publish two papers based on my thesis work.  
*Teaching assistant and laboratory teacher at NTNU*  
 Meanwhile publishing papers I enjoyed being a teaching assistant in *Classical Mechanics* (TFY4345; a third year course in theoretical physics for physics students), *Gravitation and Cosmology* (FY3452; a master course in theoretical physics), *Astronomy* (FY6015; a course for high-school teachers). I also functioned as a laboratory demonstrator in *Physics* (TFY4104; a course in physics for engineers) and *Electricity and Magnetism* (TFY4155; a first year physics course).
- AUTUMN 2014 | **Teaching assistant at NTNU**  
 Beside my own studies I conducted the exercise sessions in the subject *Physics* (TFY4104; a course in physics for engineers). Additionally, I gave a couple of lectures on mechanics and on electricity and magnetism.
- AUTUMN 2013 | **Teaching assistant at NTNU**  
 Beside my own studies I conducted the exercise sessions in three subjects; *Physics* (TFY4108; mechanics, electricity and magnetism for engineers), *Wave Physics* (TFY4160; Course for 2nd year students in physics) and *Wave Propagation* (TFE4130; course in Electrodynamics, waves and radiation for 3rd year students in the electro-department).

#### 4 EDUCATION

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2021-2022 | **University pedagogy course**  
I completed the 200 hour pedagogic-basic-competence course UniPed at NTNU.

2016-2019 | **Ph.D. studies at the University of Stavanger**  
Defended June 2020.

JUNE 2015 | **Master of Science in Physics**  
*The Norwegian University of science and Technology (NTNU), Trondheim*  
Specialization: Cosmology  
Thesis: *Bulk viscosity in the cosmological context* — Supervisor: prof. Iver BREVIK  
GRADE ON THESIS: A  
GPA: B

AUGUST 2013 | **Bachelor of Science in Physics**  
*The Norwegian University of Science and Technology (NTNU), Trondheim*  
MEAN GRADE AMONG NTNU-COURSES: B  
GPA: C

SUMMER 2012 | **Medical School**  
*Bjørknes University College, (Oslo, Norway) and Pécs Medical School (Pécs, Hungary);*  
Completed 1 out of 6 years in medical school.

SPRING 2009 | **Marine Technology**  
*The Norwegian University of Science and Technology (NTNU), Trondheim*  
Completed 1 out of 5 years of the Graduate Engineering education at the Marine Technology department of NTNU.

2005-2008 | **High school**  
*Adolf Øyens Skole, Trondheim*  
Concentrated in Physics, Mathematics and Chemistry.  
Refer to Diploma for details and grades.

## 5 SCIENTIFIC DISSEMINATION

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Please find beneath my contributions towards disseminating science to peers.

- 2019 | ◇ Talk at the *theory seminar* at The department of physics, NTNU.
- 2018 | ◇ Talk at “*the 15th Marcel Grossman conference*” in Rome.  
 ◇ Seminar at the Friday colloquium at The school of physics and astronomy, Queen Mary Univ., London.
- 2017 | ◇ Talk at the workshop “*Cosmology and the quantum vacuum*” at Rhodes.

## 6 PUBLIC DISSEMINATION

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Please find beneath some of my contributions towards disseminating science to the general public (an exhaustive list is available at [CHRISTIN](#)):

- 2022 | ◇ *Mathematics – is it really that important?!* Invited speaker at Rådgiverkonferansen  
 ◇ Talk at *Vitenskapsteoretisk Forum, NTNU*
- 2021 | ◇ *Hva i all verdensrommet* Talk at *Endelig fredag, NTNU*.  
 ◇ *Om universet of virkeligheten* Invited speaker at Snakk Bryne
- 2020 | ◇ *What is reality?* Invited speaker at *TEDx Stavanger 2020*
- 2019 | ◇ *Cosmology*. Invited speaker at the Norwegian Planetarium Assoc.’s *Conference of 2019* (Sandnes).  
 ◇ *Elefanten i verdensrommet*. Stand-up science talk at The Research Days (Stavanger): *Elefanten i verdensrommet*.  
 ◇ *What the cosmos?!* Invited speaker at the government’s *Kontaktkonferansen 2019*.  
 ◇ Interview on radio *NRK Distriktsprogram Rogaland*.  
 ◇ Invited speaker and judge at *Forskergrandprix light* at Byåsen high school  
 ◇ *Forskning.no* wrote *an article* about my research.
- 2018 | ◇ *What the cosmos?!* Show at the *Validé day*.  
 ◇ Interview on radio, *NRK EKKO*.  
 ◇ *Forskergrandprix 2018, NRK TV*.

## 7 SUPERVISION EXPERIENCE

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- 2022 | 4 bachelor students. I co-supervised a group of 4 bachelor students on a project about intergalactic machine vision (gravitational lensing).

## 8 SCIENTIFIC PROPOSALS

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- 2019 | *Gravitational lensing*. Application to the research council in Norway for a personal grant (postdoc) to go to QMUL (London) and continue my work with Chris Clarkson on gravitaitonal lensing. Unsuccessfull application with an overall score of 5 out of 7.
- 2022 | *Dark Matter Investigation Tools (DAM-IT)*. Application to the research council of Norway for a project hiring a phd and a postdoc (~ 12MNOK) to continue my work on gravitational lensing and machine learning. Awaiting reply.

## 9 COMMISSIONS OF TRUST

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- 2022 - pres. | *Member of the committee* (arbeidsgruppe) responsible for implementing FUI's<sup>a</sup> directives for the new, cross-campus engineering programs at NTNU. Our mandate is to investigate and suggest how the principles behind FTS<sup>b</sup> may best be implemented in the cross-campus, common introductory course in physics.
- 2021 - pres. | *Member of advisorial board* (Programrådskomité) for the physics study program (Department of physics, NTNU). Our mandate is to evaluate and suggest the path forward for the bachelor's and master's study programs.
- 2020 - pres. | I am frequently used as an *examiner*. For the University of Stavanger I have been external examiner on numerous written exams, oral exams (1 time), bachelor thesis (3 times) and master's thesis (2 times). I have also functioned as an internal examiner at NTNU.

<sup>a</sup> (Forvaltningsutvalget for ingeniørutdanningen). This is the administrative unit responsible for quality assurance of the engineering bachelor programs at NTNU.

<sup>b</sup> The future's techonological programs of study (Framtidens teknologistudier).

## 10 REFEREE COMMISSIONS

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- 2020-present | *Referee for Mathematical Reviews.*  
 | *Referee for Symmetry.*
- 2019 | *Referee for New astronomy.*
- 2017 | *Referee for Astrophysics and Space Science.*

## 11 CONFERENCES AND WORKSHOPS ATTENDED

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- 2019 | ◇ Norwegian Planetarium Assoc.'s *Conference of 2019*, Sandnes.  
 ◇ 22nd international *conference* on general relativity and gravitation, Valencia.
- 2018 | ◇ 15th Marcel Grossman *meeting*, Rome.  
 ◇ Casimir *Summer School / Workshop* at NTNU, Trondheim.
- 2017 | ◇ "Cosmology and the quantum vacuum"– *workshop*, Rhodes.  
 ◇ N-pact *workshop*, UiS.
- 2016 | ◇ "Cosmology and the quantum vacuum"–*workshop*, Benasque.

## 12 RESEARCH VISITS

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- 2018 | Visiting Dr. Chris Clarkson at *Queen Mary University of London* for 2.5 months.

## 13 REFERENCES

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|--------------------------------|---|
| Prof. Sigbjørn Hervik, UiS     | Ph.D. thesis supervisor. Tlf.:+47 41581800, e-mail: sigbjorn.hervik(at)uis.no   |
| Dr. Rune Volden, NTNU          | Head of department. Tlf.:+47 928 877 53, e-mail:rune.volden@ntnu.no.            |
| Prof. em. Iver H. Brevik, NTNU | Master's thesis supervisor. Tlf.:+47 99501795, e-mail:iver.h.brevik(at)ntnu.no. |
| Prof. Jens O. Andersen, NTNU   | I was his TA. Tlf.:+47 73 59 31 31, e-mail:jens.andersen(at)ntnu.no.            |

## 14 LANGUAGES

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|------------|--------------------------|
| English:   | Overall IELTS result 8.0 |
| Norwegian: | Mother tongue            |
| German:    | Basic Knowledge          |

## 15 COMPUTER SKILLS

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|------------------|--|
| Basic Knowledge: | C++, PYTHON,HTML/CSS   |
| Good Knowledge:  | MATHEMATICA,MATLAB, L <sup>A</sup> T <sub>E</sub> X, Microsoft Office. |

## 16 PERSONALITY, INTERESTS AND ACTIVITIES

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| Personality: | Systematic, curios and creative. Introvert but social.   |
| Interests:   | As can be seen from my studies, I am a person of many interests; science in particular, but also communication and teaching. Adjacent areas of interest include the big questions of life, inventive thinking, philosophy and writing. Short novels and poems are my favourites. |
| Activities:  | Additional interests I hold dear include exercising and creative roaming on a real acoustic piano.   |