# Lars Nørtoft Reiter

Ph.D. Fellow in Mathematical Sciences

Data Scientist with a interest in governance and strategic decision-making

See also my 3 minute video presentation (in Danish) here [link]

## Education

Abbreviations: UCPH: University of Copenhagen, GPA: Grade Point Average

2020 - 2022	MSc. Statistics General profile within statistics and machine learning. GPA: 10.1	UCPH
2016 - 2018	MSc. Physics with a minor in Mathematics. GPA: 8.4	UCPH
2015 - 2016	BSc. Physics with a minor in Mathematics. GPA: 9.2	UCPH
2012 - 2015	BSc. Natural Science and IT Interdisciplinary program combining physics, mathematics and information technology	UCPH

# Professional Experience

Abbreviations: UCPH: University of Copenhagen, GINR: Greenland Institute of Natural Resources, ITU: IT University of Copenhagen

2022 - 2025 Ph.D. Fellow

Institute of Mathematics, UCPH

Collaboration between UCPH and GINR

- Developed statistical models for high-dimensional spatiotemporal data
- Applied Bayesian inferential techniques to ecological problems
- Studied stochastic differential equations
- Collaborated interdisciplinary with marine biologists
- Published research in peer-reviewed journals
- Course responsible & Lecturer in Statistics for Biochemistry 2023/24 and 2024/25

Data Science Lab, UCPH

#### 2020 - 2022 Research Assistant

Collaboration between UCPH and GINR

- Analyzed acoustic, motion, and depth data from tags deployed on narwhals
- Developed statistical tools for biological data
- Presented findings at academic conference

#### 2019 - 2022 Assistant Lecturer

ITU & UCPH

Teaching mathematics, statistics, and computer science

- Developed exercises and educational material
- Classroom teacher
- Graded student assignments

#### **2020 - 2021** Junior Analyst

Danish Utility Regulator

Working with heating sector regulation

- Analyzed heating sector price statistics
- Prepared analytical reports for regulatory proceedings
- Supported senior analysts

#### 2018 - 2020 Lecturer

Virum & Frederiksberg Gymnasium

Teaching mathematics and physics

- Taught Mathematics on C and B level. Physics at B level
- Prepared teaching material
- Served as examiner and external censor

## 2014 - 2015 Student Developer

Cubris ApS

Working with train-advisory systems

- Maintained and improved physics-based algorithm for train drivers
- Gained experience with C and C# in startup environment

# Technical Expertise

Abbreviations: CNN: Convolutional Neural Network, RNN: Recurrent Neural Network, GAN: Generative Adversarial Network

**Programming Languages:** R (incl. tidyr, dplyr, TMB, Rstan), Python (incl. Numpy, TensorFlow, PyTorch, Pandas), MATLAB, Maple, C, C#

Data & Analytics: SQL, Power BI, Microsoft Office 365

Machine Learning & Statistics: Support Vector Machines, Random Forests, Gradient Boosting (incl. XGBoost), Neural Networks (incl. CNN, RNN, GAN), Feature Selection and Regularization, Regression Analysis (incl. Generalized and Mixed Models), Monte-Carlo Based Methods (incl. Particle Filters), Extreme-Value Theory, Survival Analysis, Stochastic Differential Equations, State-Space Models

Transferable Skills: Project Management, Analytic reasoning, Communication skills (Structured writing, teaching, public outreach), Collaboration (Team and external partners), Problem Solving, Adaptability, Interdisciplinary Thinking

Modern Skills: Vibe coding, Agent-based modeling, Prompt engineering (Exploration level), XAI (Exploration level)

## **Publications**

# Trace elements in narwhal tusks reveal life-history patterns and environmental conditions in the Arctic

First Author preprint

# 2025 Chronicles in Ivory: Estimating the age of narwhals (Monodon monoceros)

through stochastic modelling of seasonally varying trace elements

First Author

Submitted to Frontiers in Marine Science

# 2025 A time warping model for seasonal data with application to age estimation

from narwhal tusks

First Author arXiv preprint

# 2023 Using quantile regression and relative entropy to assess the period of anoma-

lous behavior of marine mammals following tagging

First Author

Ecology & Evolution

## Press & Media

#### Ongoing Towards Data Science

Author/Writer Medium Publication

#### 2025 Uhæderlig brug af regnemodeller

Writer, Reader's letter Berlingske

#### Har du egentlig læst den artikel, du danner din mening ud fra?

Writer, Reader's letter Jyllandsposten

## 2023 Talknuser regner ud, om hvaler opfører sig unaturligt

Featured Researcher, Media Coverage

KU Science News

#### 2023 Forskningen kvæles af økonomiske interesser

Writer, Reader's letter Jyllandsposten

## **Affiliations**

Danish Statistical Society (DSTS): Member

The Green Network for Researchers: Member

# Conferences & Seminars

### 2024 The 20th Danish Marine Mammal Symposium

Attendant & Presenter Kgs. Lyngby, Denmark

#### 2023 The 29th Nordic Conference in Mathematical Statistics, NORDSTAT

Attendant

Gothenburg, Sweden

#### 2022 IMS International Conference on Statistics and Data Science (ICSDS)

Attendant & Presenter Florence, Italy

# Quick facts

Languages: Danish (Native), English (Fluent - Academic & Professional)

Family: One younger brother, three older siblings. Related to danish geophysicist Inge Lehmann.

Activities outside work: Logical puzzles, Intellectual pursuits/projects, Fitness, Running, Spending time in nature, Board & Card games, Quality time with my spouse Helle

Loves the unorthodox: I love to approach problems from unconventional angles. For example, when I was standing in the voting booth during the municipal election, I got the idea of applying the logic of the electoral system to a research problem at work, which later became my first published paper.

Selected Quotes (updated: 12/07/2025)

- "Every single person who confuses correlation with causation ends up dying." Unknown
- "Ask questions and be curious. Before you know it, you are just doing what everyone else is doing." My former employer
- $\bullet$  "The greatest enemy of knowledge is not ignorance, it is the illusion of knowledge." Stephen Hawking

# References

#### Prof. Susanne Ditlevsen

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### Prof. Rasmus Ejlers Møgelberg

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