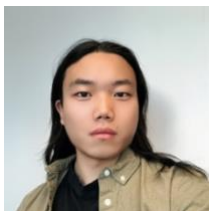


# Yaolin Ge

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## Summary

- Ph.D. candidate in the statistics group at Dept. of mathematical sciences at NTNU.
- Experience with autonomous oceanographic sampling using AUVs with CTD sensors.
- Active participant in multiple field trips in both Trondheim and the Atlantic Ocean.

## Education

### Norwegian University of Science and Technology

Trondheim, Norway

*Ph.D. candidate in the statistics group, Dept. Mathematical Sciences*

Aug. 2020 – present (expected Aug. 2023)

Thesis project: working on the MASCOT project with the objective of autonomous sampling for different ocean properties using versatile approaches including statistical modeling, AUV sampling, and satellite sensing, etc. Conducting field experiments to validate the robustness of the system.

### KTH Royal Institute of Technology

Stockholm, Sweden

*MSc, Maritime Engineering, G.P.A. 4.625/5.00*

Aug. 2019 – Jul. 2020

Thesis project: developed an embedded software system for underwater robots and participated in a two-week field trip in Askö, Sweden to test the performance.

### Norwegian University of Science and Technology

Trondheim, Norway

*MSc, Marine Technology, G.P.A. 3.93/4.00*

Aug. 2018 – Jun. 2019

Relevant project: participated in a field trip to discover a WWII wreckage and collect water quality samples in Trondheimsfjorden, Norway using LAUV-Harald, supervised by Martin Ludvigsen.

### University of Strathclyde

Glasgow, United Kingdom

*International Student Exchange Program, G.P.A. 3.85/4.00*

Sept. 2017 – Jan. 2018

Relevant project: Analyzed structural static and dynamic behavior using the finite element method.

### Jiangsu University of Science and Technology

Zhenjiang, China

*BSc, Naval Architecture and Ocean Engineering, G.P.A. 3.89/4.00, Rank: 2/230*

Sept. 2014 – Jun. 2018

Thesis project: Analyzed the results of a numerical solver to study the effect of Vortex-Induced-Vibration on slender body structures such as a steel catenary riser (SCR) in the deep sea.

Awards: National Scholarship (top 1%), First prize in Academic Competition in Mechanics knowledge,

## Experience

### Norwegian University of Science and Technology

Trondheim, Norway

*Ph.D. candidate, Dept. Mathematical Sciences*

Aug. 2020 – present

- Designed and implemented multi-scale machine learning software systems for autonomous oceanographic sampling purposes.
- Conducted plenty of field trips in Trondheimsfjorden, Norway, and the Atlantic Ocean to validate the performance of the system.
- Collaborate and communicate closely with multiple customers including SINTEF Ocean, AURLab NTNU, LSTS, MARETEC for knowledge dissemination to foster novel ideas.
- Analyze big *in-situ* CTD datasets using Python and statistical modeling techniques.
- Document and publish the results to relevant stakeholders and clients and share knowledge with the public. Two papers were accepted.

### Peking University

Beijing, China

*Summer research student at AI+Art Lab, PKU*

Jul. 2019 – Aug. 2019

- Studied machine learning and deep learning principles, particularly computer vision techniques.
- Applied and integrated motion capturing algorithms OpenPose onboard a humanoid robot. [[video](#)]
- Demonstrated the performance of the algorithms with a robot dance show. [[video](#)]

## Skills & Interests

**Programming:** Python, Git, C/C++, Bash scripting, Matlab, SQL, R, Julia

**Frameworks:** Numpy, Pandas, Scipy, Matplotlib, Plotly, CUDA

**Software:** PyCharm, VS Code, QGIS, Microsoft Office365, Anaconda, Adobe Photoshop/Illustrator

**Language:** English (full professional), Norwegian (conversational), Mandarin (native)

**Interests:** Outdoor life (camping, summitting, cross-country skiing ...), Taekwondo, Dance, Music, Travelling

## Awards & Competitions

|             |                                                                                     |
|-------------|-------------------------------------------------------------------------------------|
| 2021        | Taekwondo WT – NM 2021, 3 <sup>rd</sup> in KAMP, 4 <sup>th</sup> in Poomsae, Norway |
| 2019        | Best Popular Prize, AI + Art in Robot Dancing Competition, PKU, China               |
| 2017        | Merit Student, MOE, China                                                           |
| 2017        | First Prize, Academic Competition in Mechanics Knowledge, JUST, China               |
| 2016 – 2017 | National Scholarship, MOE, China                                                    |
| 2016        | Second Prize Scholarship, CSSC Huangpu Wenchong, China                              |
| 2015 – 2016 | First Prize, Renmin Scholarship, MOE, China                                         |
| 2015        | National Encouragement Scholarship, MOE, China                                      |

## Publication

[1] Yaolin Ge, André Julius Hovd Olaisen, Jo Eidsvik, R. Praveen Jain, and Tor Arne Johansen. Long-horizon informative path planning with obstacles and time constraints. IFAC-PapersOnLine, 55(31):124–129, 2022. 14th IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles CAMS 2022.

[2] Yaolin Ge, Jo Eidsvik, Tore Mo-Bjørkelund. 3D Adaptive AUV Sampling for the Classification of Water Masses. IEEE Journal of Oceanic Engineering, 2023. [accepted and underproduction]

## Extra-curricular

### Taekwondo instructor Trondheim, Norway

*NTNUI Taekwondo*

Jan. 2020 – present

- I am a Taekwondo instructor who plans and adapts training for all members.
- Competed in the Norwegian Championships in 2021, won 1 bronze medal in combat senior M 74+.

### Salsa line instructor Trondheim, Norway

*NTNUI Dans*

Sept. 2021 – present

- I am involved in the organization of the weekly dance classes.

## Certificates

### Deep Learning Specialization

acquired: 15<sup>th</sup>-April-2020, Coursera

*This is offered by deeplearning.ai, covers basic and advanced topics in deep learning with practical programming tasks, which enable me to build deep learning models and solve real-world problems.*

### Fundamentals of Accelerated Computing with CUDA Python

acquired: 20<sup>th</sup>-April-2022, NVIDIA

*I have learned about how to speed up the calculation using GPU programs using CUDA.*

## Reference

|                                          |                                                            |               |
|------------------------------------------|------------------------------------------------------------|---------------|
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