

Yaolin Ge

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Summary

He is currently devoting his effort to testing the intelligent ocean sampling system he has designed and implemented in his Ph.D. study. He keeps writing his papers and software during working hours and jumps into the snow right after dinner.

Education

Norwegian University of Science and Technology

Ph.D. candidate, Dept. Mathematical Sciences

Trondheim, Norway

Aug. 2020 – present (expected Aug. 2023)

Project MASCOT: Developing an intelligent ocean sampling system consisted of AI, underwater robot and statistics with an application to the classification of the river plume front.

KTH Royal Institute of Technology

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

Stockholm, Sweden

Aug. 2019 – Jul. 2020

Thesis project: Developed an embedded DSP software system for an underwater beacon.

Norwegian University of Science and Technology

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

Trondheim, Norway

Aug. 2018 – Jun. 2019

Relevant coursework: Conducted field trips with AUVs in Trondheimsfjorden to capture seabed acoustic images. Applied computer vision techniques such as TVG and photo-mosaic algorithms for extraction and patching.

University of Strathclyde

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

Glasgow, United Kingdom

Sept. 2017 – Jan. 2018

Achievement: Hiked Scottish Highlands.

Jiangsu University of Science and Technology

BSc, Ocean Engineering, G.P.A. 3.89/4.00, Rank: 2/230

Zhenjiang, China

Sept. 2014 – Jun. 2018

Awards: National Scholarship (Top 1%) 2016; Undergraduate IoT Research Fellowship.

Research Experience

Norwegian University of Science and Technology

Ph.D. candidate, Dept. Mathematical Sciences

Trondheim, Norway

Aug. 2020 – present (expected Aug. 2023)

- Design and implement state-of-the-art AI algorithms and RL software.
- Test and validate algorithms using cloud computing such as NTNU IDUN, AWS and Google Colab etc.
- Launch Hardware-In-The-Loop test in various virtual environments.
- Integrate and deploy the mission onboard the robot in the sea (Trondheimsfjorden/North Atlantic Ocean).
- Analyze and visualize *in-situ* measurements and share with other researchers.
- Document and publish the results to relevant scientific communities.

University of Porto

Visiting researcher at LSTS, FEUP

Porto, Portugal

Apr. 2021 – Nov. 2022

- Conducted multiple on-site field trips with a fleet of autonomous robots including UAVs, AUVs etc.
- Demonstrated the scalability and robustness of our system with two successful field trials.
- Collaborated efficiently with colleagues from Porto remotely.

Peking University

Summer research intern in AI+Art Lab, PKU

Beijing, China

Jul. 2019 – Aug. 2019

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

Skills & Interests

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

Frameworks: Tensorflow, OpenCV, PyTorch, DUNE, Neptus, ROS, IMC

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

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

Interests: Friluftsliv (camping, topptur, langrenn og dykking ...), Taekwondo, Dance, Music, Travelling

Awards & Competitions

2022	Undervannsrugby NS1, NTNUI DG 8 th , Norway
2021	Taekwondo WT – NM 2021, 3 rd in KAMP, 4 th 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.

Extra-curricular

Taekwondo instructor

NTNUI Taekwondo

Trondheim, Norway

Jan. 2020 – present

- Planned and scheduled the customized trainings for all members.
- Participated workshops and graduations to update the knowledge.
- Competed in the Norgesmesterskap in 2021, won 1 bronze medal in kamp senior M 74+.
- Organized social activities to build bonds with members.

Salsa line instructor

NTNUI Dans

Trondheim, Norway

Sept. 2021 – present

- Organized dance practices weekly.
- Communicated and adjusted the programs according to feedback.
- Organized dance parties and festivals.

DNT Member

DNT ung Trøndelag

Trondheim, Norway

Sept. 2021 – present

- Participated hiking and skiing trips actively.
- Attended first-aid and avalanche courses to gain necessary knowledge.
- Practicing turlleder courses to gain essential skills to become a turlleder one day.

Reference is available upon request