**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 Trondheim, Norway**

*Ph.D. candidate, Dept. Mathematical Sciences*  Aug. 2020 – present (expected Aug. 2023)

Project [MASCOT](https://wiki.math.ntnu.no/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 Stockholm, Sweden**

*MSc, Maritime Engineering,* G.P.A. 4.625/5.00 Aug. 2019 – Jul. 2020

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

**Norwegian University of Science and Technology Trondheim, Norway**

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

*International Student Exchange Program,* G.P.A. 3.85/4.00Sept. 2017 – Jan. 2018

Achievement: Hiked Scottish Highlands.

**Jiangsu University of Science and Technology Zhenjiang, China**

*BSc, Ocean Engineering,* G.P.A. 3.89/4.00**,** Rank: 2/230Sept. 2014 – Jun. 2018

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

**Research Experience**

**Norwegian University of Science and Technology Trondheim, Norway**

*Ph.D. candidate, Dept. Mathematical Sciences*  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](https://www.hpc.ntnu.no/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 Porto, Portugal**

*Visiting researcher at LSTS, FEUP*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 Beijing, China**

*Summer research intern in AI+Art Lab, PKU*Jul. 2019 – Aug. 2019

* Studied deep learning principles, particularly computer vision techniques.
* Implemented and integrated motion capturing algorithms such as [*OpenPose*](https://cmu-perceptual-computing-lab.github.io/openpose/web/html/doc/index.html) onboard [*Yanshee*](https://www.ubtechvietnam.com/en/product/yanshee/) humanoid robot. [[video](https://www.youtube.com/watch?v=kmty0bGUTb8)]
* Demonstrated the performance of the algorithms with a human-robot dance show. [[video](https://www.youtube.com/watch?v=LG3HtLOEfPs)]

**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 8th, Norway

2021 Taekwondo WT – [NM](https://www.sportdata.org/kampsport/set-online/popup_main.php?popup_action=results&vernr=557&active_menu=calendar) 2021, 3rd in KAMP, 4th 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 Trondheim, Norway**

*NTNUI Taekwondo*Jan. 2020 – present

* Planed and scheduled the customized trainings for all members.
* Participated workshops and graduations to update the knowledge.
* Competed in the Norgesmesterskap in 2021, won1 bronze medal in kamp senior M 74+.
* Organized social activities to build bonds with members.

**Salsa line instructor Trondheim, Norway**

*NTNUI Dans* Sept. 2021 – present

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

**DNT Member Trondheim, Norway**

*DNT ung Trøndelag* Sept. 2021 – present

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

**Reference is available upon request**