Yaolin Ge

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Summary

He has shown his passion in ocean and technologies through his education and experience. He likes to explore new things and willing to learn from others. He is also active in his spare time hiking and skiing etc. He likes nature, not only the journal.

Education

Norwegian University of Science and Technology **Trondheim, Norway**
Ph.D. candidate, Dept. Mathematical Sciences Aug. 2020 – present (expected Aug. 2023)
Working on 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 experiment 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
Participated the two-week field trip in Askö, Sweden to test the performance of the under-communication system and analyzed in-situ data from the water column in the master project.

Norwegian University of Science and Technology **Trondheim, Norway**
MSc, Marine Technology, G.P.A. 3.93/4.00 Aug. 2018 – Jun. 2019
Participated a field trip to discover a WWII wreckage and collect water quality samples in Trondheimsfjorden, Norway using LAUV-Harald in the course *Underwater Technology* 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
Studied and conducted analysis using computational fluid dynamics (CFD) and finite element analysis (FEA) in relevant coursework. Attended local language school and social events to enhance communication skills.

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
Analyzed the results from 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%) 2016; Undergraduate IoT Research Fellowship.

Research Experience

Norwegian University of Science and Technology **Trondheim, Norway**
Ph.D. candidate, Dept. Mathematical Sciences Aug. 2020 – present

- Designed multi-scale research projects for variable objectives exploiting numerous resources including SINMOD, LAUV-Thor/Harald, Sentinel-2 etc.
- Conducted six field trips in Trondheimsfjorden, Norway, and six field trips in the Atlantic Ocean to validate the robustness and sensitivity of the system.
- Collaborate closely with multiple research institutes including SINTEF Ocean, AURLab NTNU, LSTS, MARETEC for knowledge dissemination to foster novel ideas.
- Analyze and interpret *in-situ* measurements using statistical kriging techniques and QGIS etc.
- Document and publish the results to relevant scientific communities and share knowledge with the general public. Two papers submitted (1 accepted, 1 review). Two posters presented in NORDSTAT 2021 and Geilo Winter Schoool 2023. Talks at MIT Portugal Marine Robotics Summer School 2021 and IFAC CAMS 2022 and several other internal seminars within the department.

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, QGIS, Microsoft Office365, Anaconda, VS Code, 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 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. 2021 – present

- Planed and scheduled the customized trainings for all members.
- Participated workshops and graduation seminars to update my 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. 2022 – 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.

Certificates

Fundamentals of Accelerated Computing with CUDA Python	acquired: Apr. 20, 2022, NVIDIA
Sensor Fusion	acquired: Aug. 10, 2020, Udacity
Deep Learning Specialization	acquired: Apr. 15, 2020, Coursera

Reference

Jo Eidsvik	Dept. of Mathematical Sciences, NTNU	
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