

# Yaolin Ge

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## PERSONAL INFORMATION

Date of Birth: October 20, 1996

Place of Birth: Shaanxi, China

Citizenship: Chinese

Gender: Male

## EDUCATION

Aug. 2019 – Present	<b>KTH Royal Institute of Technology, Stockholm, Sweden</b> <b>M.S. Maritime Engineering</b> <b>Thesis: Signal Processing of Underwater Beacons for AUVs</b>
Aug. 2018 – Jun. 2019	<b>Norwegian University of Science and Technology, Trondheim, Norway</b> <b>G.P.A. 3.93/4.00</b> <b>M.S. Marine Technology</b>
Sept. 2017 – Jan. 2018	<b>University of Strathclyde, Glasgow, United Kingdom</b> <b>G.P.A. 3.85/4.00</b> <b>B.S. Naval Architecture &amp; Ocean and Marine Engineering</b>
Sept. 2014 – Jun. 2018	<b>Jiangsu University of Science and Technology, Zhenjiang, China</b> <b>G.P.A. 3.89/4.00</b> <b>B.S. Naval Architecture &amp; Ocean Engineering</b>

## RESEARCH EXPERIENCE

Aug. 2019 – present	<b>Research on the underwater navigation system (M.S. Degree Project)</b> KTH & Swedish Maritime Robotics Centre (SMaRC), Stockholm, Sweden <ul style="list-style-type: none"><li>Reviewed the common underwater sonar systems including both active sonar and passive sonar signal processing systems</li><li>Investigated the core algorithms for the detection, classification, localisation, and tracking systems of the underwater situation awareness system</li><li>Studied the advanced estimation algorithms such as EKF, UKF, CMF &amp; QMF for active sonar detection and range estimation purposes</li><li>Planned to conduct field trips to evaluate the performance of the model</li></ul> Supervisors: Martin Ludvigsen, Professor; Peter Sigray, Professor
Jan. 2019 – Jun. 2019	<b>Research on the acoustic sensing seabed survey of a virgin wreck site</b> AURLab & Dept. of Marine Technology, NTNU, Trondheim <ul style="list-style-type: none"><li>Studied the seabed sensing survey equipment, such as LAUV Fridtjof with sensors like SSS (side-scan sonar), CTD profiler, DVL, GPS, Camera etc.</li><li>Planned the appropriate preliminary underwater survey paths considering the bathymetry &amp; topology of the seabed</li><li>Conducted the field trip on board R/V Gunnerus to collect data</li><li>Post-processed and documented the acoustic images for further research</li></ul> Supervisor: Martin Ludvigsen, Professor
Jan. 2019 – Jun. 2019	<b>Project on the design and analysis of underwater robotics</b> KTH & Swedish Maritime Robotics Centre (SMaRC), Stockholm, Sweden <ul style="list-style-type: none"><li>Designed a new generation underwater robotics based on Eelume</li><li>Simulated the operation of the designed vehicle and perception system</li><li>Conducted the manoeuvring simulation and hardware-in-the-loop testing</li></ul> Supervisor: Ivan Stenius, Associate Professor

## **PROFESSIONAL QUALIFICATIONS**

### **Personal Skills:**

Programming language with C, C++, Python & MATLAB; Embedded system programming with MPLAB X IDE; Simulation with Simlink (Simscape Electrical/ SimEvents/DSP); Computer Vision with OpenCV; Robotics development with ROS; 3D FDM printing; Microsoft Office; Latex

### **Languages:**

English (fluent)  
Chinese (native)

## **AWARDS**

2019	Intel® Edge AI Scholarship, Intel
2019	Best Popular Prize, AI + Art in Robot Dancing Competition, PKU
2017	Merit Student, MOE
2017	First Prize, Academic Competition in Mechanics Knowledge, JUST
2016 – 2017	National Scholarship, MOE
2016	Second Prize Scholarship, CSSC Huangpu Wenchong
2015 - 2016	First Prize, Renmin Scholarship, MOE
2015	National Encouragement Scholarship, MOE
2015	Second Prize, Decelerator Assembly & Disassembly Contest, JUST
2014	Honourable Mention, CMIH Simulation Model Design Contest, JUST
2014	First Prize, Diesel Engine Assembly & Disassembly Contest, SIYANG

## **PROFESSIONAL MEMBERSHIPS**

The Royal Institute of Naval Architects (RINA)  
Kongl. Skeppssällskapet

## **EXTRA-CURRICULAR**

Jan. 2020 – Present	<b>NanoDegree program in Sensor Fusion</b> Udacity, United States <ul style="list-style-type: none"><li>• Participated the distant-learning courses, seminars and discussions</li><li>• Studied common sensing systems including Lidar, Radar, Camera etc.</li><li>• Worked with simulators to merge all sensing data</li></ul>
Jul. 2019 – Aug. 2019	<b>Summer campus program in Deep Learning</b> Peking University, Beijing, China <ul style="list-style-type: none"><li>• Studied the deep learning principles and applied openpose algorithm</li><li>• Conducted the motion capture and mapped the 2D motion to 3D skeleton</li><li>• Programmed Yanshee Robot to dance following human motions</li></ul>
Oct. 2014 – Jun. 2018	<b>Team Member</b> Student Volunteer Association, Zhenjiang, China <ul style="list-style-type: none"><li>• Participated in local and on-campus volunteering activities regularly</li></ul>

## **REFEREES:**

Hedvig Kjellström Professor	Dept. of Intelligent Systems, KTH hedvig@kth.se	+46 8 790 69 06
Ivan Stenius Associate Professor	Dept. of Aeronautics and Vehicle Engineering, KTH stenius@kth.se	+46 70 288 82 63
Martin Ludvigsen Professor	Dept. of Marine Technology, NTNU martin.ludvigsen@ntnu.no	+47 91897272

## **INTERESTS**

Running, bicycling, swimming, fitness training, cross-country skiing