

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

KTH Royal Institute of Technology, Stockholm, Sweden
M.S. Maritime Engineering

Aug. 2018 – Jun. 2019

Norwegian University of Science and Technology, Trondheim, Norway
G.P.A. 3.93/4.00
M.S. Marine Technology

Sept. 2017 – Jan. 2018

University of Strathclyde, Glasgow, United Kingdom
G.P.A. 3.85/4.00
B.S. Naval Architecture & Ocean and Marine Engineering

Sept. 2014 – Jun. 2018

Jiangsu University of Science and Technology, Zhenjiang, China
G.P.A. 3.89/4.00
B.S. Naval Architecture & Ocean Engineering

RESEARCH EXPERIENCE

Aug. 2019 – present

Research on the underwater navigation system (M.S. Degree Project)
KTH & Swedish Maritime Robotics Centre (SMaRC), Stockholm, Sweden

- Reviewed the common navigation system for underwater vehicles such as LBL, USBL, SBL, INS etc.
- Investigated the core components of the long-baseline system for underwater communication system as well as navigation system
- Studied the advanced estimation algorithms such as EKF, UKF, CMF & QMF for active sonar detection and range estimation purposes
- Planned to conduct field trips to evaluate the performance of the model

Supervisors: Martin Ludvigsen, Professor; Peter Sigra, Professor

Jan. 2019 – Jun. 2019

Research on the acoustic sensing seabed survey of a virgin wreck site
AURLab & Dept. of Marine Technology (NTNU), Trondheim, Norway

- Studied the seabed sensing survey equipment, such as LAUV Fridtjof with sensors like SSS (side-scan sonar), CTD profiler, DVL, GPS, Camera etc.
- Planned the appropriate preliminary underwater survey paths considering the bathymetry & topology of the seabed, and designed control schemes
- Conducted the field trip on board R/V GUNNERUS to collect data
- Post-processed and documented the acoustic images for further research

Supervisor: Martin Ludvigsen, Professor

Jan. 2019 – Jun. 2019

Project on the design and analysis of underwater robotics
KTH & Swedish Maritime Robotics Centre (SMaRC), Stockholm, Sweden

- Designed a new generation underwater robotics based on Eelume
- Investigated the MPC & LQR performance on the trajectory simulation
- Conducted the manoeuvring simulation and hardware-in-the-loop testing
- Delivered the presentation to the clients including professors & fellows

Supervisor: Ivan Stenius, Associate Professor

PROFESSIONAL QUALIFICATIONS

Personal Skills:

Programming language with C, C++, Python & MATLAB; CAD modelling with Solidworks/AutoCAD; Embedded system programming with MPLAB X IDE; Simulation with Simulink (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	Sensor Fusion NanoDegree Graduate, Udacity <ul style="list-style-type: none">• Applied Ransac and KD-Tree based Euclidean clustering algorithms for detection and tracking of autonomous vehicles using Lidar data• Studied common sensors for machine perception such as Radar/Camera etc.• Worked with simulators to merge all sensing data
Jul. 2019 – Aug. 2019	Summer campus program in Robotic Dancing, PKU, China <ul style="list-style-type: none">• Studied the deep learning principles and applied openpose algorithm• Conducted the motion capture technique for the robotics and converted the 2D motion to 3D skeletons for further mapping to robotic motion• Programmed Yanshee Robot to dance following human motions
Oct. 2014 – Jun. 2018	Team Member Student Volunteer Association, Zhenjiang, China <ul style="list-style-type: none">• Participated in local and on-campus volunteering activities regularly

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