

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 (Adviser Prof. Kutteneuler)
Thesis: Signal Processing of Underwater Beacons for AUVs

Aug. 2018 – Jun. 2019

Norwegian University of Science and Technology, Trondheim, Norway
G.P.A. 3.93/4.00
M.S. Marine Technology (Co-adviser Prof. Ludvigsen)

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. 3.81/4.00
B.S. Naval Architecture & Ocean Engineering

RESEARCH EXPERIENCE

Aug. 2019 – present

Research on the Signal Processing of Underwater Beacons for AUVs
KTH & Swedish Maritime Robotics Centre (SMaRC), Stockholm, Sweden

- Upgraded the firmware of the sonar microcontroller
- Commissioning the sonar hardware setup environment
- Prepared to do site tests in both open air and underwater environments
- To Signal process returned echoes and set proper noise filter
- To implement on large projects such as LoLo

Supervisors: Jakob Kutteneuler, Professor; Martin Ludvigsen, Professor

Jan. 2019 – Jun. 2019

Research on the acoustic sensing seabed survey of a virgin wreck site
The Applied Underwater Robotics Laboratory, Trondheim, Norway

- Prepared the seabed sensing survey equipment, such as LAUV Fridtjof with sensors like SSS, CTD profiler, DVL, GPS, Camera etc.
- Planned the appropriate preliminary underwater survey paths considering the bathymetry & topology of the seabed
- 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

Research on the power management system of a hybrid vessel
Hybrid Power Systems Laboratory, Trondheim, Norway

- Investigated the application of power electronics to this system such as IGBT, BJT, MOSFET etc.
- Designed a bi-directional DC-DC power converter using IGBT components
- Modelled PWM (pulse-width modulation) signals for the DC-DC converter
- Simulated both droop control as well as isochronous control schemes

Supervisor: Mehdi Zadeh, Associate Professor

PROFESSIONAL QUALIFICATIONS

Personal Skills:

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

Languages:

English (fluent)
Chinese (native)

AWARDS

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	Honourable Mention, Xuediao Innovative Design Contest, JUST
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

Jul. 2019 – Aug. 2019	Summer campus student Peking University, Beijing, China <ul style="list-style-type: none">• Applied OpenPose algorithm to achieve the motion capture activities• Applied the motion mapping tool to convert 2D motions to 3D skeleton ones• Programmed Yanshee Robot to dance following human motions
Mar. 2017 – Apr. 2017	Interpreter Intern IDP Education Ltd., Nanjing, China <ul style="list-style-type: none">• Organised the introduction events for university's admission committee and expected applicants• Interpreted and assisted applicants with communications with admission committees' representatives
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:

Martin Ludvigsen (Ph.D.) Professor	Applied Underwater Robotics Laboratory (AUR-Lab), NTNU martin.ludvigsen@ntnu.no +47 91897272
Mehdi Zadeh (Ph.D.) Associate Professor	Hybrid Power Systems Laboratory (HPS), NTNU mehdi.zadeh@ntnu.no +47 73413202
ZHOU Hong (Ph.D.) Professor	Dept. of NAOE, Jiangsu University of Science and Technology zjcyzh@163.com

INTERESTS

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