**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. Kuttenkeuler)**

**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 Kuttenkeuler, 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 Fridtjøf 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

**PROFESSINOAL MEMBERSHIPS**

The Royal Institute of Naval Architects (RINA)

Kongl. Skeppssällskapet

**EXTRA-CURRICULAR**

Jul. 2019 – Aug. 2019 **Summer campus student**

Peking University, Beijing, China

* 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

* 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

* Participated in local and on-campus volunteering activities regularly

**REFEREES:**

Martin Ludvigsen (Ph.D.) Applied Underwater Robotics Laboratory (AUR-Lab), NTNU

Professor [martin.ludvigsen@ntnu.no](mailto:martin.ludvigsen@ntnu.no) +47 91897272

Mehdi Zadeh (Ph.D.) Hybrid Power Systems Laboratory (HPS), NTNU

Associate Professor [mehdi.zadeh@ntnu.no](mailto:mehdi.zadeh@ntnu.no) +47 73413202

ZHOU Hong (Ph.D.) Dept. of NAOE, Jiangsu University of Science and Technology

Professor [zjcyzh@163.com](mailto:zjcyzh@163.com)

**INTERESTS**

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