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

PROJECT EXPERIENCE

Aug. 2019 – Present
Maribot Vane 2.0 Design Project
KTH & SMaRC (Swedish Maritime and Robotic Center), Stockholm, Sweden

- Designed and built the Maribot Vane 2.0, an autonomous sailing vessel
- Engineered and manufactured the glass fibre-made rudder
- Evaluated the mechanical behaviour under certain load contions for most of 3D printed parts as well as parts made from composite materials
- Studied and assessed the performance of the components made from composite materials in terms of weight and strength

Jan. 2019 – Jun. 2019
Project on numerical analysis of a Wageningen B-screw series propeller
TMR4220 Naval Hydrodynamics, NTNU, Trondheim

- Analysed the propeller with induction-factor-enhanced lifting line method
- Investigated rake, skew and hub effects on the propeller blade
- Conducted an experimental testing in the towing tank at MARINTEK

Supervisors: Kourosh Koushan, Professor

Sept. 2018 – Dec. 2018
Project on simulation-based design of the cruise ship balcony
TMR4320 Simulation-Based Design, NTNU, Trondheim

- Developed an initial design concept and assessed the principle dimensions, stress distribution & deflection
- Conducted the FEA analysis under multiple loading conditions and simulated the
- Established a parametric model and optimised the model using PSO codes out of minimum weight

Supervisor: Ekaterina Kim, Associate Professor

Aug. 2018 – Dec. 2018 **Project on dynamic & static analysis of marine structures**

TMR4305 Advanced Analysis of Marine Structures, NTNU, Trondheim

- Developed the dynamic response model for a marine riser subjected to waves by use of mode superposition method and analysed the drag forces in both time and frequency domain
- Applied static condensation (concentrated mass) & master-slave (consistent mass) for reduction of number of degrees of freedoms and evaluated the riser performance using frequency response method
- Conducted ABAQUS analysis for an elastic-plastic jacket structure and a stiffened plate and studied the linear buckling analysis and nonlinear ultimate strength analysis

Supervisor: Svein Sævik, Professor; Erin Bachynski, Associate Professor

Jan. 2018 – Jun. 2018 **Research on the added mass effect of VIV for flexible risers**

Bachelor's thesis, Jiangsu University of Science and Technology, Zhenjiang

- Studied the VIV phenomenon and physics behind VIV and summarised the current research model and developed the time-domain VIV model for low mass ratio system considering added mass effect
- Conducted the sensitivity analysis for different top tension force, current velocity as well as mass ratio working conditions

Supervisor: ZHOU Hong, Professor; WANG Kunpeng, Aassociate Professor

Aug. 2017 – Jan. 2018 **Project on the investigation of flow pattern on a circular cylinder**

NM402 Theory and Practice of Marine CFD, Univ. of Strathclyde, Glasgow

- Studied the vortex shedding phenomenon and physics behind VIV and applied the time-domain VIV model for low mass ratio system
- Reviewed analysis methods such as finite volume method and finite difference method for necessary analysis of computational fluid dynamics
- Simulated the behaviour of the flow pattern for a rigid body circular cylinder under steady flow condition using Star-CCM+

Supervisor: Qing Xiao, Reader; Wendi Liu, Research Associate

PROFESSIONAL QUALIFICATIONS

Personal Skills:

Programming language with C/C++, Python & MATLAB; FEA analysis using Abaqus & ANSYS APDL; Foil analysis using XFoil; CFD analysis using Star-CCM+; CAD modelling with Solidworks/AutoCAD; Simulation with Simlink (Simevents); 3D FDM printing; Microsoft Office; Latex

Languages:

English (fluent)
Chinese (native)
Swedish (conversational)

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	National Encouragement Scholarship, MOE
2015	Honourable Mention, Xuediao Structural Innovative Design 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 **Project on computer vision for robotic perception**
Peking University, Beijing, China
- Applied OpenPose algorithm to achieve the motion capture activities
- Employed the motion mapping tool to convert 2D motions to 3D skeleton ones
- Programmed Yanshee Robot to dance following human motions

Oct. 2014 – Jun. 2018 **Team Leader**
Student Volunteer Association, Zhenjiang, China
- Organised local and on-campus volunteering activities regularly

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

REFEREES:

Ivan Stenius Associate Professor	Dept. of Aeronautics and Vehicle Engineering, KTH stenius@kth.se	 +46 70 288 82 63
Hedvig Kjellström Professor	Dept. of Intelligent Systems, KTH hedvig@kth.se	 +46 8 790 69 06
Kourosh Koushan Professor	Department of Marine Technology, NTNU kourosh.koushan@ntnu.no	 +47 41105297
Tahsin Tezdogan (Ph.D.) Senior Lecturer	Dept. of NAOME, University of Strathclyde tahsin.tezdogan@strath.ac.uk	 +44 (0)141 548 4532
ZHOU Hong Professor	Department of Naval Architecture and Ocean Engineering, JUST zjcyzh@163.com	 +86 1365 6136 398

INTERESTS

Sailing, running, bicycling, swimming, Taekwondo, cross-country skiing