Tomer Chen

PROFESSIONAL EXPERIENCE

2019 – Present

Junior Consulting Engineer and Surveyor, MARTIN, OTTAWAY, van HEMMEN & DOLAN, INC. Areas of specialization include forensic engineering, offshore operations, surveys, environmental management, and project management.

2018 – 2019

Graduate Student Research Assistant, UNIVERSITY OF MICHIGAN, Ann Arbor, MI – Extracted data using Python from a 2013 voyage of the *R/V Knorr*, from a 2012 model trials of the *R/V Melville*, and from concurrent ship motion data processed using SHIPMO.BM, a two-dimensional strip theory seakeeping program, to analyze the trajectory and motions of the vessels. Comparisons of this data with numerical predictions used in the development of a digital twin framework.

2017 – 2018

Research Assistant, UNIVERSITY OF MICHIGAN, Ann Arbor, MI – Designed the experimental setup and conducted tests of regular waves in the Wind-Wave Tank for the development of a transfer function. Investigated the temporal and spatial evolution of wind-generated waves at various wind speeds and short fetch lengths to support theoretical estimations of wave growth functions and depict capabilities of modeling developing waves in a controlled laboratory environment.

2017

Engineering Intern, GIBBS & COX MARITIME SOLUTIONS, Arlington, VA – Estimated structural weights of deck plans, shell expansions, and electrical power distribution system drawings for military vessel. Modeled a vessel, performed intact stability tests, and found hydrostatics characteristics based on ABS criteria. Investigated fairing of a customized adapter for a sonar window for the *USNS Waters*. Presented recommendations to Lockheed Martin who accepted the recommendations. Implemented ASSET to model green technology on a Fast Response Frigate.

2016

Engineering Intern, SAFE BOATS INTERNATIONAL, Tacoma, WA – Compiled part weights from diagrams to accurately describe weight of the MK VI Patrol Boat. Performed inclining experiments on the MK VI to determine the hydrostatic characteristics of the boat. Edited design drawings based on comments from the U.S. Navy during performance review trials.

Education and Professional Qualification

Master of Science in Naval Architecture and Marine Engineering, University of Michigan, 2019

Thesis: “Comparison of Model Ship Motions with Numerical Predictions”

Bachelor of Science in Engineering in Naval Architecture and Marine Engineering, University of Michigan, 2018

Senior Capstone Project: “Design of the USCG Polar Icebreaker”

Notable Projects

Investigated the temporal and spatial evolution of wind-generated waves, 2018

Performed inclining experiments for the MK VI Patrol Boat, 2016

Investigated accuracy of wave motion predictions for the Environmental Ship Motion and Forecasting Project (ESMF) under the direction of Professor Bob Beck, 2015

Designed and built a Formula SAE car for competition and won first prize in the design category, 2014

Publications

“Comparison of Model Ship Motions with Numerical Predictions,” University of Michigan, Naval Architecture and Marine Engineering Master’s thesis, May 1, 2019

“Design of the USCG Polar Icebreaker,” University of Michigan senior design project, presented April 27, 2018

“Experimental Study of the Spatial and Temporal Evolution of Wind-Generated Waves,” Senior research project presented at the SNAME Maritime Convention, Providence, RI, October 29, 2018

Memberships

Associate Member of the Society of Naval Architects and Marine Engineers

Tools and Software

Python, Matlab, Latex, AutoCAD, Rhino 3D, MaxSurf, GHS, ASSET, MIG Welding

Awards

2017 Recipient of the Frank C. and Irving Pahlow Merit Scholarship, University of Michigan Department of Naval Architecture and Marine Engineering

Languages:

English, native

Hebrew, native

Spanish, elementary conversational

French, elementary conversational

Nationality:

US Citizen; Israeli Citizen

Contact

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