Rounak Saha Niloy

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EDUCATION

University of New South Wales **Ongoing**
Master of Engineering (Research) in Mechanical Engineering *Canberra, ACT, Australia*
Thesis under examination (Submitted on 11 February 2024)

Bangladesh University of Engineering & Technology (BUET) **Jul. 2014 – Oct. 2018**
Bachelor of Science in Naval Architecture & Marine Engineering *Dhaka, Bangladesh*
CGPA: **3.78**/4.00 | Merit Position: **6** | Number of Students: **61**

POSTGRADUATE THESIS

Investigation of test problems and algorithmic strategies for multi-objective multi-concept optimization **Feb. 2022 – Feb. 2024**

UNDERGRADUATE THESIS

Hydrodynamic performance analysis of a hydrofoil supported high-speed vessel using computational fluid dynamics **Jul. 2017 – Oct. 2018**

TRAINING

Graduate Teaching Training Program **Jun. 2023 – Oct. 2023**
University of New South Wales *Canberra, ACT, Australia*

Personalized English Language Enhancement **Sep. 2022 – Nov. 2022**
University of New South Wales *Canberra, ACT, Australia*

TECHNICAL SKILLS

Simulation :	ANSYS	Abaqus	Maxsurf
CAD/CAM :	AutoCAD	Rhinoceros	Fusion 360
Programming Language :	MATLAB	Python	VBA

TEACHING EXPERIENCE

Research Methodology **Feb. 2024 – Mar. 2024**
CRP Nursing College *Dhaka, Bangladesh*

Short Course on Ship Design Software (Rhinoceros & Maxsurf) **Feb. 2020 – Mar. 2020**
Department of Naval Architecture & Offshore Engineering *Dhaka, Bangladesh*
Bangabandhu Sheikh Mujibur Rahman Maritime University

Short Course on Ship Design Software **Feb. 2020 – Feb. 2020**
Department of Naval Architecture & Marine Engineering *Dhaka, Bangladesh*
Military Institute of Science & Technology

WORK EXPERIENCE

ShipDyn Ltd. **Jan. 2020 – Jan. 2022**
Naval Architect (Full time) *Dhaka, Bangladesh*

- Managed daily project activities, supervising dredging production on and off-site for operational efficiency and timeline adherence.
- Managed technical aspects, overseeing dredging equipment repair and maintenance, promptly addressing issues to minimize downtime
- Supervised assembly, commissioning, ensuring adherence to specifications and quality standards while maintaining effective communication with suppliers for timely spare parts procurement.
- Generated comprehensive reports documenting project progress, milestones, and outcomes for transparent tracking of all project activities

ShipDyn Ltd. **Jan. 2019 – Dec. 2019**
Assistant Naval Architect (Full time) *Dhaka, Bangladesh*

- Developed a 3D model for the patented **Y-Hull**©, showcasing advanced design skills
- Conducted detailed hydrodynamic performance analyses on designed vessels, contributing to the optimization of their operational efficiency
- Supervised construction of vessel, ensuring alignment with design specifications and project timelines
- Played a key role in preparing production drawings for upcoming vessel construction projects
- Ensured drawing accuracy and clarity for seamless communication between design and production teams

PUBLICATION

R. S. Niloy, H. K. Singh, and T. Ray, "A benchmark test suite for evolutionary multi-objective multi-concept optimization," *Swarm and Evolutionary Computation*, vol. 84, pp. 101429, Feb. 2024, doi:10.1016/j.swevo.2023.101429. [**Q1, IF: 10**]

R. S. Niloy, H. K. Singh and T. Ray, "A brief review of multi-concept multi-objective optimization problems," in *2023 IEEE Symposium Series on Computational Intelligence (SSCI)*, Mexico City, Mexico, pp. 1511–1517, doi:10.1109/SSCI52147.2023.10371911.

R. S. Niloy, M. J. Dipto and M. M. M. Hassan, "Hydrodynamic performance analysis of a hydrofoil supported high-speed vessel using computational fluid dynamics," in *International Conference on Marine Technology*, Dhaka, Bangladesh, 2022, pp. 29-1–29-5, doi:10.2139/ssrn.4451487.

PRESENTATION

R. S. Niloy, "Multi-Concept Optimization: Challenges and Opportunities," presented at the *2023 Workshop on AI-based Optimisation (AI-OPT 2023)*, Melbourne, Australia, December 2023.

UNDERGRADUATE PROJECT

Design of a 1200 DWT Inland General Cargo **Jul. 2016 – Sep. 2017**

MEMBERSHIP

- **Student Member**, *Engineers Australia* (EA Member ID: 9942598)
- **Student Member**, *Institute of Electrical and Electronics Engineers* (IEEE Member ID: 98859993)
- **Student Member**, *Royal Institution of Naval Architects* (RINA Member ID: 00186350)

GRADUATE AWARDS AND SCHOLARSHIP

Australian Research Council Support Grant (Discovery Project DP220101649): AUD 1,000 for attending the *2023 Workshop on AI-based Optimisation (AI-OPT 2023)* at Melbourne, Australia **Dec. 2023**

IEEE CIS Student Travel Grant: USD 1,000 for attending the *2023 IEEE Symposium Series on Computational Intelligence (SSCI)* at Mexico City, Mexico **Dec. 2023**

Tuition Fee Scholarship, UNSW: Waiver of tuition fees along with a living allowance of AUD 35,000 p.a. for *Master of Engineering (research)* **Feb. 2022 – Feb. 2024**

REFERENCE

Dr. Hemant Kumar Singh
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University of New South Wales
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Dr. Tapabrata Ray
Professor
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