



## Yaseen Adnan Ahmed

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### EDUCATION

**Ph.D. in Naval Architecture & Ocean Engineering** September 2015  
**Division of Global Architecture, Osaka University** Osaka, Japan

**Thesis title:** “Automatic Berthing Control Practically Applicable under Wind Disturbances”

**Major Areas:** Autonomous vehicle, Robotics, Marine hydrodynamics, Intelligent control for dynamic system, Captive model tests, Ship manoeuvring and control

**Tools used:** Matlab, C++, C, ROS

**Master of Engineering in Naval Architecture & Ocean Engineering** September 2012  
**Division of Global Architecture, Osaka University** Osaka, Japan

**Thesis title:** “Automatic Ship Berthing Using Artificial Neural Network Based on Virtual Window Concept in Wind Condition”

**Bachelor of Science in Naval Architecture & Marine Engineering** February 2009  
**Faculty of Mechanical Engineering**  
**Bangladesh University of Engineering and Technology (BUET)** Dhaka, Bangladesh

**Merit position:** 2nd

**CGPA:** 3.94 out of 4.00

**Major Areas:** Structure and Hydrodynamics

### KNOWLEDGE OF SOFTWARE

#### Initial Design

- Maxsurf modeller
- Rhinoceros
- AutoCAD 3D
- Maxsurf stability
- Freeship
- Autohydro

#### Production Design

- Ship Constructor
- Maxsurf Structure

### **Resistance Calculation (Hydrodynamics)**

- Shipflow (full scale CFD)
- Maxsurf resistance ( based on empirical methods)

### **Seakeeping and Manoeuvring**

- ANSYS Aqwa

### **Structural Analysis**

- ANSYS CFX

### **Numerical Analysis**

- Matlab
- C++, C, Fortran

## **TEACHING EXPERIENCE IN MALAYSIA**

**Assistant Professor / Senior Lecturer  
Universiti Teknologi Malaysia (UTM)**

February 2020 – till now

Faculty of Mechanical Engineering

Johor Bahru, Malaysia

### **Currently Taught Subjects:**

- Dynamics of Offshore Structures
- Offshore structures
- Applied Numerical Methods

### **Responsibilities:**

- Innovative Teaching
- Publication of Q1 and Q2 papers, including book chapter
- Supervising PG and FYP students
- Consultancy, short courses and workshop / project
- Arranging International Fund

**Assistant Professor / Senior Lecturer  
University Kula-Lumpur**

September 2016 –February 2020  
( 3 years 5 months)

Marine Design Technology Section  
Malaysia

Perak, Malaysia

### **Currently Taught Subjects:**

- Numerical Methods
- Ship Resistance and Propulsion
- Ship Structure
- Introduction to Technical Computing / Matlab
- Naval Architecture
- Marine Engineering System

### Other Subjects Capable of Teaching:

- Fluid Mechanics
- Hydrodynamics
- Mechanics
- Physics
- Strength of Materials
- Thermodynamics
- Marine Engineering System
- Mechanical Drawing
- CFD
- FEM
- ANSYS
- C, C++, FORTRAN etc.

### Responsibilities:

- Innovative Teaching
- Publication of SCOPUS-indexed paper, including book chapter
- Supervising PG and FYP students
- Consultancy, short courses and workshop / project
- Involvement in UniKL marketing event and Staff Get Student programme
- Entrepreneurial activities / CSR events @ section, campus, university, national, regional / international
- Lead student development initiatives @ section, campus, university, national, regional / international

## TEACHING / RESEARCH EXPERIENCE IN JAPAN

### Research Associate

October 2015~July 2016  
( 10 months)

The International Maritime Research Institute (IMaRC)  
Faculty of Maritime Sciences  
Kobe University

Kobe, Japan

### Responsibilities:

- Conduct own research and do publications for good ranking Journal.
- Assist to manage research funding for the research institute.

### Visiting Researcher

February 2016~July 2016  
( 6 months)

Department of Naval Architecture & Ocean Engineering  
Osaka University

Osaka, Japan

### Collaborate With Visiting Professor from China

Sept. 2015-March 2016  
( 6 months)

Department of Naval Architecture & Ocean Engineering,  
Osaka University

Osaka, Japan

**Responsibilities:**

- Teaching program skill to make simulation program of ship Manoeuvring.
- Assist to conduct free running experiment.

**Teaching Assistant, Undergraduate Level**

April 2013-March 2014  
( 1 year)

Department of Naval Architecture & Ocean Engineering,  
Osaka University

Osaka, Japan

**Responsibilities:**

- Explained different components of ship's resistance.
- Described suitable method of ship's resistance calculation.
- Explained free running experiment system and speed test.
- Conducted office hours to help students understand and solve homework problems.
- Improving English speaking and writing skills.
- Collaborated with professor on course materials, improving communication skills.

**SERVICE****Professional**

Western Marine Shipyard Limited (WMSHL)  
Chittagong, Bangladesh.

March 2009 –August 2010  
(1 year 5 months)

**Designation:** Naval Architect (Design department)

**Project work:** 5200 DWT Ice-class MPC vessel.

**Major responsibilities:**

- Making production drawings from basic drawings.
- Lifting lug design for blocks.
- Hydrostatic calculation.
- Correspondence with classification society (GL).

**RESEARCH INTEREST**

- Renewable energy
- Dynamics of a moving object
- Automatic path keeping in severe environmental disturbances
- CFD analysis of Fluid-Structure Interaction
- Underwater Robotics
- Automatic Parking / Ship Berthing
- Intelligent Control

**AWARDS & FUNDING**

- Monbukagakusho scholarship by MEXT, Japan October 2010 – September 2015
- Presidential Award for excellent academic record by  
Osaka University Alumni Association September 2012
- Dean listed scholarship by BUET 2005, 2006, 2007, 2008
- Merit scholarship by BUET Every semester
- Junior scholarship by Government Republic of Bangladesh 1998

## PUBLICATIONS

### Journal publications

- **Yaseen Adnan Ahmed**, Kazuhiko Hasegawa. Automatic Ship Berthing using Artificial Neural Network Trained by Consistent Teaching Data using Nonlinear Programming Method. *Journal of Engineering Applications of Artificial Intelligence*, vol. 26, issue 10, pp.2287-2304  
Publisher: ELSEVIER  
Impact Factor: 2.176 (5-years)
- **Yaseen Adnan Ahmed**, Kazuhiko Hasegawa. Consistently Trained Artificial Neural Network for Automatic Ship Berthing Control. *TransNav, the International Journal on Marine Navigation and Safety of Sea Transportation*, vol. 9, no. 3, pp. 417-426, 2015.  
Publisher: Faculty of Navigation, Gdynia Maritime university, Poland.
- **Yaseen Adnan Ahmed**. Usage of Intelligent Control for Automatic Ship Berthing. *Marine Frontier*, vol. 7, edition. 1, pp. 60-77, 2016.  
Publisher: University Kuala-Lumpur.
- **Yaseen Adnan Ahmed**. Automatic Tug Assistance. *Engineering Applications for New Materials and Technologies*, vol. 85, pp. 491-503, 2018.  
Publisher: Springer
- **Yaseen Adnan Ahmed**. Mathematical Model of Manoeuvring Motion of ship. *Engineering Applications for New Materials and Technologies*, vol. 85, pp. 551-566, 2018.  
Publisher: Springer
- **Yaseen Adnan Ahmed**, Mohammad Abdul Hannan, Iwan Mustaffa Kamal. An Artificial Neural Network Controller for Course Changing Manoeuvring. *International Journal of Recent Technology and Engineering (IJRTE)* (accepted)
- **Yaseen Adnan Ahmed**, Mohammad Abdul Hannan, Iwan Mustaffa Kamal. Ship Manoeuvring and Intelligent Control. (Will be submitted)
- **Yaseen Adnan Ahmed**, Mohammad Abdul Hannan. Performance characteristics of Horizontal Axis Tidal Turbine (HATT) with tidal current interaction. (Will be submitted)

### Peer reviewed Symposium/Conference publications

- **Yaseen Adnan Ahmed**, Mohammed Abdul Hannan. Optimising Ship Manoeuvring in Narrow Waterways Under Wind Disturbances. *Proceedings of the ASME 2018, 37<sup>th</sup> International Conference on Ocean, Offshore and Arctic Engineering (OMAE, 2018)*, Madrid, Spain.
- **Yaseen Adnan Ahmed**, Mohammed Abdul Hannan. Ship Manoeuvring and Intelligent Control. Kazuhiko Hasegawa. Fuzzy Reasoned Waypoint Controller for Automatic Ship Guidance. *11<sup>th</sup> International Conference on Marine Technology (MARTEC, 2018)*, Kuala Lumpur, Malaysia.
- Iwan Mustaffa Kamal, Muhammad Safwan Rasahidan and **Yaseen Adnan Ahmed**. Scaling of RV Athena's Appendage Drag using CFD. *The Regional Conference on Mechanical and Marine Engineering (ReMME, 2018)*, Ipoh, Malaysia.

- Zulzamri Salled, Muhammad Zulkarnein and **Yaseen Adnan Ahmed**. Flexural Analysis for Syntactic Foam Sandwich Panels. *The Regional Conference on Mechanical and Marine Engineering (ReMME, 2018)*, Ipoh, Malaysia.
- **Yaseen Adnan Ahmed**, Kazuhiko Hasegawa. Fuzzy Reasoned Waypoint Controller for Automatic Ship Guidance. *The 10<sup>th</sup> IFAC Conference on Control Applications in Marine Systems (CAMS'16)*. Trondheim, Norway.
- **Yaseen Adnan Ahmed**, Kazuhiko Hasegawa. Artificial Neural Network based Automatic Ship Berthing Combining PD Controller Side Thrusters. *The 13<sup>th</sup> International Conference on Control, Automation, Robotics and Vision (ICARCV'14)*, pp.1304-1309. Singapore, 2014.
- **Yaseen Adnan Ahmed**, Kazuhiko Hasegawa. Experiment Results for Automatic Ship berthing using Artificial Neural Network Based Controller. *The 19<sup>th</sup> World Congress of International Federation of Automatic Control (IFAC'14)*, pp. 2658-2663. Cape Town, South Africa, 2014.
- **Yaseen Adnan Ahmed**, Kazuhiko Hasegawa. Implementation of Automatic Ship Berthing using Artificial Neural Network for Free Running Experiment. *The 9<sup>th</sup> IFAC Conference on Control Applications in Marine Systems (CAMS'13)*, pp. 25-30. Osaka, Japan, 2013.
- Kazuhiko Hasegawa, K G Oh, **Yaseen Adnan Ahmed**. Ship Manoeuvring Behaviour in Crossing Current. *3<sup>rd</sup> International Conference on Ship Manoeuvring in Shallow and Confined Water (ICSMSCW)*, pp.301-307. Ghent, Belgium, 2013.
- **Yaseen Adnan Ahmed**, Kazuhiko Hasegawa. Automatic Ship Berthing using Artificial Neural Network Based on Virtual Window Concept. *Proceedings of the 13th IFAC Symposium on Control in Transportation Systems (CTS'12)*, pp.359-364. Sofia, Bulgaria, 2012.

### Seminar

- **Yaseen Adnan Ahmed**, Kazuhiko Hasegawa. Automatic Ship Berthing Experiment using Artificial Neural Network Based on Virtual Window Concept. *The 16<sup>th</sup> Academic Exchange Seminar between Osaka University and Shanghai Jiao Tong University*, 2013.

### EXTRA C0-CURRICULAR ACTIVITIES

- Acted as a part of organiser for International Technology and Innovation Symposium, 2018, Malaysia
- Played an active role at Maritime ROBOTX challenge held in Singapore
- Acted as volunteer at 9<sup>th</sup> IFAC Conference on Control Applications in Marine Systems (CAMS), Osaka, Japan, 2013.
- Acted as volunteer at 16<sup>th</sup> Academic Exchange Seminar between Osaka University and Shanghai Jiao Tong University, 2013

### PROFESSIONAL MEMBERSHIPS

- Japan Society of Naval architects and Ocean engineers (JASNAOE)      January 2011- Present

### SELF APPRAISAL

- Ability to cope up with different situation.

- Very good temperament and like to take challenges.
- Can learn quickly
- Dedication and sincerity
- Organizing & leadership competence.
- Good communication skills.
- Co-operative & innovative
- Excellent troubleshooting and analytical skills.

## REFERENCES

### **Prof. Kazuhiko Hasegawa**

Osaka University  
6-2, Shimo-ooichi Nishimachi  
Nishinomiya, Hyogo  
Japan  
hasegawa@naoe.eng.osaka-u.ac.jp  
Relationship: Course supervisor

### **Prof. Sahajada Tarafder**

Department of Naval Architecture & Marine Engineering  
Bangladesh University of Engineering and Technology  
Polasi, BUET  
BANGLADESH  
shahjada68@yahoo.com  
Relationship: Mentor

### **Dr. Mohammad Abdul Hannan**

Faculty of Marine Science and Technology  
Newcastle University in Singapore  
537 Clementi Road #06-01  
Singapore 599493  
abdul.hannan@ncl.ac.uk