

# DR. SHAHARUDIN AHMAD



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Current Position:  
Senior Lecturer  
Faculty of Mechanical Engineering  
Universiti Teknologi MARA  
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## FIELD OF SPECIALISATION

### Ship Structure and Naval Architecture

Research Interest:

- Ship Finite Element Analysis
- Ship Structures
- Marine Traffic & AIS Radar

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## CAREER OBJECTIVES

- To serve the university as a leader/manager, researcher and lecturer in order to help the university to achieve the vision/mission/gold, to satisfy multi stake-holders and to accelerate self-improvement.
  - To explore and conquer research in the area of interest and to serve society in the area of expertise
  - To continuously upgrade professional and personal career development in all areas (management, research, teaching-learning, consultancy, conference, publication expertise and social work)
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## EDUCATION BACKGROUND

<b>PhD Mechanical Engineering</b> Universiti Teknologi Malaysia UTM Ship Structure	<b>2015</b>
<b>MEng Mechanical Engineering</b> Universiti Teknologi Malaysia UTM Ship Structure	<b>2002</b>
<b>BEng (Hons.) Mechanical Engineering (Marine Technology)</b> Universiti Teknologi Malaysia UTM	<b>1994</b>

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## PROFESSIONAL AFFILIATION

The Board of Engineers Malaysia (BEM) Graduate Member (28241A)	1996 – present
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## LANGUAGE

- Bahasa Melayu
  - English
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## WORKING EXPERIENCE

### Organisation 1: Universiti Teknologi MARA (UiTM) Shah Alam Selangor Malaysia

#### **1a) University Level**

##### 1a(i) Administrative/Leadership experience:

- **Head, ICT Operation Department, Infostructure PPII** 01 Mac 2018 – 31 Dec 2018
- **Head, System Development Department, Infostructure PPII** 15 July 2017 – 28 February 2018
- **Deputy Director, Infrastructure Department, Information Technology Office** 15 July 2015 – 14 July 2017
  - Management of staff: infrastructure work load distribution; establishment of the staff KPI (key-performance-indicators); professional staff development planning, and yearly staff performance evaluation.
  - Budget preparation and management for the department and related laboratories: planning for new equipment or operations, consumables, facilities maintenance, training, new space development, and cost endorsement (purchasement of new asset or inventory item, maintenance activities, staff going for training or conference)

#### **1b) Faculty Level (Faculty of Mechanical Engineering)**

1b(i) Administrative/Leadership experience:

- **Internal Auditor ISO9001:2008** 2007
- **Chairman, ICT/e-learning Committee FKM** 2007-2008

1b(ii) Academia and researcher:

- **Senior Lecturer/ Researcher** 01 Apr 2007 - present
  - Lecture: Prepare lessons and taught of various subjects in the Bachelor of Mechanical Engineering programmes.
  - Research and consultancy work: Develop national and international industrial linkage in research, student project supervision and consultancy work; Involvement in national and international activities: paper presentation in conference and paper publication, conference proceeding and journal reviewer, professional bodies; Organisation of national and international conferences.
  - Involvement in student activities such as student academic advisor, student committee/club advisor.
  - Administrative work: Role as an academic leader in various important management teams; Guide and support young lecturers in teaching-learning, research involvement, research grant application and management activities.
  - Leading by example by developing personal strength in leadership, academics and research.
- **Lecturer** 02 Jan 1996 - 31 Mar 2007
- **PhD Thesis Examiner** 2017 - present
- **MSc Thesis Examiner** 2011 – present
- **Panel Assessor (Undergraduate: Proposals, Report and Thesis)** 1996 – present
- **Panel Assessor (MSc; Proposals and Progress Report)** 2011 - present
- **MSc Research Students' Supervision** 2009 - present
- **PhD Research Students' Supervision** 2017 - present
- **Member of Curriculum Committee** 2007 / 2009
- **Member of Vice Chancellor Quality Award Committee** 2009 / 2011
- **Member of Research Incentive Group, RIG** 2014 - 2021

**Organisation 2: EDA Industry Sdn. Bhd. Batu Pahat Johor, Malaysia**Engineering Division:

- **Test Engineer, Mechanical Engineering** 1995
  - Prepared schedules for checking and maintaining factory machines and involved in quality control activities. Took part in trouble shooting work for various problems occurred during manufacturing process.

**A. SUPERVISION OF THESIS / DISSERTATION / PRACTICAL TRAINING****A.1 Postgraduate (PhD) – Main Supervisor (except when stated)**

No.	Name of Students	Thesis/ Research Title	Year
1	Masnawi Mustafa (2017666266)	Tajuk: Marine Traffic Density Over Port Klang And Strait Of Malacca Waterway Using Automatic Identification Sistem (AIS)	2017-present

**A.2 Postgraduate (Master) – Main Supervisor (except when stated)**

No.	Name of Students	Thesis/ Research Title	Year
1	Hartina Binti Ahmad (2015792779)	Design Of Session Initiation Protocol Trunking Using Static IP	2018
2	Noraazliah Mohd Zam @ Md Lazam (2015361837)	Design And Develop An Automation Web User Interface As Network Operation Centre (NOC) Operational Tools	2018
3	Mohd Fakhrollah Bin Zakaria (2015415242)	Padaye Welded Onto Structural Sub-Block Analysis During Process Lifting And Turning Activity In Shipbuilding Industry Using Finite Element Analysis	2018
4	Mohd Shafeeq Bin Mohd Tahir (2015800882)	Analysis of Spreader As A Part of Lifting Too; Component in Shipbuilding by Using Finite Element Method	2017
5	Nurul Nadiah Mohd Shamil	A Study On Implementation Management In Electrical System For Ship Design	2015
6	Rasyidah Othman	Lean Production As Efficiency Improvement Tool In Boat Building Process	2009
7.	Muhamad Salihin Bin Mohamad Nasir	Improving Concurrent Engineering In Malaysian Shipbuilding With Equivalent Russian Shipbuilding Technologies	2021

**A.3 Undergraduate (Bachelor, Final Year Project)–Main Supervisor (except when stated)**

No.	Name of Students	Thesis/ Research Title	Year
1	Asyraf Syazwan Bin Ahmad Tajuddin	Seaglider Strength Stability Due to Sea Head Wave Using SeaFEM	2021
2	Faris Hamman Bin Johari	Impact of Various Sea Waves Towards V-Shaped Structure	2021
3	Badrul Amin Bin Badrul Hisham	Stability and Power Resistance of Tourism Boat	2021
4	Ikhwan Afiq bin Huharjay	Development of Boat Hull of Treated Natural Fiber Hybrid Composite Laminate Using Vacuum Infusion	2020
5	Aiman Hakeem Bin Hanif	Second Layer Structure Analysis of Submarine	2019
6	Mohamad Adib Azizi Bin Baharuddin	Analysis Of Tanker Movement Using AIS	2019

7	Mohammad Farhan Bin Kamal Ariffin	Analysis Collision Risk of Cargo Movement At Port Klang Using AIS	2019
8	Muhammad Amirul Bin Zainudin	Tail Analytical Analysis On Various Submarine Class	2019
9	Amalina Farhana Binti Zakaria	Transverse Strength of a Semi-Small Water-Plane Area Twin Hull	2019
10	Abdullah Hakim Almansur Bin Mat Wajar	Marine Traffic Pattern And Density Characteristic Using Ais Daya Due To Industry Acitivity Morib/ Port Dickson	2018
11	Ahmad Tarmizi Bin Roslan	Stress Impact Platform Structure Due To Sea Wave	2018
12	Muhammad Fadhli Bin Ahmad	Stability Analysis Of Catamaran Hull Due To Side Sea Wave	2018
13	Muhammad Ilman Faiq Bin Ismail	Head Sea Wave Simulation Impact To Trimaran Body	2018
14	Muhamad Ikhwanul Hakim Bin Muhamad Hasrudin	Characterise Marine Traffic Pattern And Ship Collision Risk Off The Port Klang Coast Area Using AIS Data	2018
15	Muhamad Fazreen Syahmi Mohmad	Strengthening Bulk Carrier Stucture Due To Head Sea Wave	2017
16	Ahmad Syukrillah Sidi Ahmad	Strengthening For Heavy Cargo Structure	2017
17	Nur Nabila Mohd Nazali	Longitudinal Strength Of Hull	2017
18	Muhammad Afiq Mat Akhir	Analysis Strength Of Ro-Ro Ship Bulhead Towards Fire Protection	2017
19	Muhammad Adlan Iskandar Bin Dagang	Air Lubrication On Velocity Of Multipurpose Amphibios Vehicles	2016
20	Muhamad Azri Bin Abdullah	Analysis Stucture At 2 <sup>nd</sup> Layer Body Of Submarine	2016
21	Mohd Amirul Haqim Bin Ahmad Shafei	Design And Apply The Aplication Of Marine Transponder For Marine Vehicles	2016
22	Muhammad Iqbal Bin Ramli	Finite Elements Analysis On The Effect Of Buckling To Various Material Grade Of High Strength Steel Subsea Pipeline	2016
23	Mohamad Amrirul Shafiq Bin Muda	The Ability Of Aolar Energy To Power Marine Electrical Equipment	2016
24	Mohmad Hanif Bin Mohd Yasin	Design And Analysis Of Vibration At Azimuth Propeller	2016
25	Muttalib Bin Amat Sairin	Wave Impact Simulation On Seaglider By Using SeaFem	2016
26	Mohd Ikram Amran	Analysis Of Running River Waterheel Turbines Platform	2015
27	Ameerul Hakim Mukhtar	Design, Simulation And Analysis Swath Grillage Of Seashadow With Various Stucture	2013
28	Mohammad Azizi Ismail	Design, Fabrication And Longitudinal Analysis Of Container Ship Grillage Stucture – C Form	2013
29	Zul Husni Abdul Rais	Fabrication And Longitudinal Strength Analysis Of Tanker Marine Grillage Sturcture (V Shape)	2013
30	Barhah Bin Ismail	Design, Fabrication And Longitudinal Strength Analysis Of Marine Grillage Cargo Ship Structure (L-Shape)	2013

31	Abd. Haadi Bin Abdullah	Development of Data Acquisition System For Seaglider	2010
32	Mohamad Aliff Mohd Zauri	Strength Analysis On Submarine Bulkhead By Using Cata	2010
33	Ammar Asyraf Ahmad Azam	Response Of Dinamic Wave For Stress Impact On Semi Swath	2010
34	Mohd Hazrul Umar Abdul Rahman	Data Aquisition System Of Bulkhead Strength Measurement For Semi-Swath Vessel	2008
35	Mohd Hafiz Farhan Mohd Zulkifly	Buoyancy Stability Of Semi-Swath	2008
36	Khairunnisa Mohammad Yunus	Dnv Classification Rules (Special Craft) For Designing Of Semi-Swath Structure	2008
37	Mohd Fazly Mohd Takhrim	Finite Element Investigation On The Static Response Of An Aluminum Catamaran	2007
38	Syed Izhan Syed Jamaludin	3d Strength Analysis Of Catamaran Transverse Structure	2007
39	Malik Fadzil Sulaiman	Principle Strength Of Semi-Swath Structure On Static Condition	2007
40	Muhammad Mustaqim Mad Saad	Determination Of New Shipyard Location Bu Launching Stability Incorporate Global Positioning System (GPS) At Selangor Coast	2007
41	Kamal Rozman Mohd Kassim	Determination Of New Shipyard Location At Muar Coast Using DecmaD Program	2007
42	Muhamad Azam Raais	Shear Stress Distribution Of The Ship Compartment Due To Heat By Using Cae	2007
43	Mohd Husairi Che Ahmad	Fabrication And Fineite Element Analysis (Fea) Of Semi-Small Water Plane Area Twin Hull Transverse Crossection	2007
44	Mahmud Azrah	Stress Distribution On Ship Ballast Tank Due To Heat By Using Cae	2007
45	Nor Azli Abu Samah	Effect Of Sea Wave To Swath Hull Using CFD	2007
46	Muhammad Arif Jawahir	Wave Effect On Bulk Carrier Structure	2006
47	Fadzlan Syahidi Mohd Safar	Design, Farication And Longitudinal Strength Analysis Of Speedboat Marine Grillage Structure (T-Structure)	2006

#### A.4 Practical Training (Bachelor)–Main Supervisor (except when stated)

No.	Name of Students	Company	Year
1	Abdul Hakim Bin Azmi (2017687194)	VTECH Communication (Malaysia) Sdn Bhd	2019/2020
2	Nuraisyah Binti Idris (2015125827)	PKL Manufacturer Sdn Bhd	2019/2020
3	Nur Syafrifa Binti Mohd Hasni (2017806438)	NS Bluescope Malaysia Sdn Bhd	2019/2020

4	Mohammad Azzim Anaqi Bin Mohamad Rizal (2017806274)	JKR Batu Pahat Johor	2019/2020
5	Ikhwan Afiq Bin Huharjay (2017806528)	Politeknik Tun Syed Nasir	2019/2020

## B. RESEARCH

1	Title: Sponsor: Role: Period/Status:	Constructing A Blueprint On Malay Traditional Boat Design Preservation MyGrants. FRGS RM 84,700 Researcher 2019-2021
2	Title: Sponsor: Role: Period/Status:	Achieving Robotic Welding Quality On Ship Panel Structure With Optimization Distortion And Minimal Defect Using FEA And Advanced NDT Project Code: 03-01-01-SF0355 . RM 200,00 MOSTI Researcher 2010-2012
3	Title: Sponsor: Role: Period/Status:	Development Principle Approach For The Transverse Strength Of A Semi-Swath Vessel. Project Code : 04-01-01-SF0041. RM 182,000 MOSTI Main Researcher 2006-2009
4	Title: Sponsor: Role: Period/Status:	Development Of High Impact Resistance Laminates Using Nanomaterial RM 32,000) UiTM Main Researcher 2012-2014

## C. PUBLICATIONS

### C.1 Thesis and Technical Report

- [1] **Shaharudin Ahmad**, 2015. *A Principle Approach For The Strength Analysis of A Semi-SWATH Vessel*, PhD Thesis, Universiti Teknologi Malaysia UTM, Malaysia.
- [2] **Shaharudin Ahmad**, 2002. *Strength of Longitudinally Framed Vessels And Their Components Using Analytical Approach*, MEng Thesis, Universiti Teknologi Malaysia UTM, Malaysia.

### C.2 Papers

1. Nur Ain Binti Abd Rahman, Mohd Azahari Bin Johan, Nik Mohd Khairuddin Bin Nik Ismail, Shaharudin Bin Ahmad. Constructing a Blueprint of a Kolek. International Conference of Emerging Challenges in Engineering and Current Technology (ICECTIII 2021). Mac 2021.
2. Asyraf Syazwan Ahmad Tajuddin, Shaharudin Bin Ahmad. Seaglider Strength Stability Due to Sea Head Wave Using SeaFEM. International Journal of Science, Engineering and Technology. Vol 9.3 1-7. May 2021

3. Akim Ramim, Masnawi Bin Mustafa, Shaharudin Bin Ahmad. Prediction of Marine Traffic Density Using Different Time Series Model From AIS data of Port Klang and Straits of Malacca. Transactions on Maritime (TOMS). Vol. 9-2, 217-223. Oktober 2020.
4. Masnawi Bin Mustafa, Muhd Ikhwanul Hakim B. Muhd Nasrudin, Shaharudin Bin Ahmad, Khairunnadim Bin Ahmad Sekak. Nazli Bin Ahmad Aini. Ab Malik Marwan Bin Ali. Mohamad Fariz Bin Mohamad Taib, Muhd Zu Azhan Yahya, Oskar Hasdinor Bin Hassan, Aidid Khuhairi Bin Razali, Mohamad Hamidi Bin Mohd Jais. Data Mining Analysis on Ships Collision Risk and Marine Traffic Characteristic of Port Klang Malaysia Waterways from Automatic Identification System (AIS) Data. International MultiConference of Engineers and Computer Scientists (IMECS 2019). Mac 2019.
5. Masnawi Mustafa, M Mustafa, Shaharudin Bin Ahmad, Nur Hidayah Binti Zahari, Radhiah Mohd Nor. Preliminary Study On Air Traffic Density Over Peninsular Malaysia Using Visual Flight Path Trajectories From Automatic Dependent Surveillancebroadcast (ADSB) Data. International Journal Of Engineering & Technology, 7,25,1-4. 2018
6. Masnawi Mustafa, Munawwarah Abas, Shaharudin Ahmad, Nazli Ahmad Aini, Wan Faezah Abbas, Syarul Afzal, Nur Idora, Muhamad Yusof Darus. Marine Traffic Density Over Port Klang, Malaysia Using Statistical Analysis of AIS Data : A Preliminary Study. Journal of ETA Maritime Sciences. DOI 10.555. 2016
7. Masnawi Mustafa, Noor Hasnita Ahmad, Shaharudin Ahmad, "Mapping Vessel Path of Marine Traffic Density of Port Klang Using Automatic Identification System (AIS) Data", International Journal of Science and Research, volume 4, Issue 11, November 2015
8. Adi Maimun Abd Malik, Shaharudin Ahmad & Amir Radzi Ab Ghani. "Structure Strength of Semi\_SWATH: Real Time Measurement". Canadian Journal on Computing in Mathematics, Natural Sciences, engineering and Medicine. Vol 4 No. 2 April 2013. Canada.
9. Mohd Shahneel Saharudin, Aidah Jumahat, Amir Z A Kahar & Shaharudin Ahmad. "The Influence of Alumina Filler on Impact Properties of Short Glass Fiber Reinforced Epoxy". Applied Mechanics and Materials. Vol 393(2013) pp 88-93. Trans Tech Publications Switzerland.
10. Norhidayah, Yupiter, Roseleena, Shaharudin Ahmad & Erry Y.A. "Development of Virtual Assembly Layout with Modeling Languages Approach And Simulation Using Delmia Quest". IIUM Engineering Journal Vol 12. No 6. 2011. Special Issue in Science and Ethics
11. Shaharudin Ahmad, Adi Maimun Abd Malik, Yupiter HP Manurung, Junaidah Rahmad, Rizal Effendy, Mohd Nasir, Hamzah A. Bakar and Rohani Omar: "Finite Element Analysis of A Semi-Small Water-Plane Area Twin Hull (SWATH) Structure", Conference on Scientific and Social Research CSSR 2008 '09, 14-15 March 2009, Port Dickson, Malaysia
12. Shaharudin Ahmad, Adi Maimun Abd Malik, Yupiter HP Manurung, Junaidah Rahmad, Rizal Effendy Mohd Nasir, Hamzah A. Bakar and Rohani Omar: "Transverse Strength of a SEMI-SWATH Vessel", 2<sup>nd</sup> Regional Conference on Vehicle Engineering and Technology (RIVET 2008), July 15-16, 2008, Kuala Lumpur, Malaysia
13. Shaharudin Ahmad, Junaidah Rahmad, Adi Maimun Abdul Malik, Yupiter HP Manurung And Hamzah A. Bakar, "An Intergration Method Of Launching Stability For New Shipyard Location" Marine Science and Technology Seminar (MARSTEC) 2007, Kuala Lumpur, Malaysia.
14. Wan Mohd Fairus Wan Mamat, Yupiter HP Manurung, Shaharudin Ahmad, "Development Of Reliable Local Exhaust Ventilation System Using Reconditioned Part, Minimizing Hazardous Gases The Welding Environmental, World Engineering Congress 2007, August 5-9 2007 Penang, Malaysia



15. Yupiter HP Manurung, Shaharudin Ahmad, Rosleena Jaafar, Mohd Azam Yahaya, Athirah Mustamir, Hauke Büttner, Jan Schulte, Stefan Haller, "Development of An Intelligent and Low-Cost Optical Calibration System for Robot Manipulator", Conference on Applications and Design in Mechanical Engineering, October 25-26 2007, Kangar, Perlis

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## REFERENCES

**Professor Adi Maimun Abdul Malik**

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**Professor Ahmad Kamal Ariffin Mohd Ihsan**

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