


**CURRICULUM VITAE
(MOHD RAZALI MAHMUD)**

NAME : MOHD RAZALI MAHMUD	AGE : 57 YRS	
CURRENT POSITION : PROFESSOR OF HYDROGRAPHY		
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ADDRESS : FACULTY OF BUILT ENVIRONMENT AND SURVEYING UNIVERSITI TEKNOLOGI MALAYSIA 81310 UTM JOHOR BAHRU MALAYSIA		

ACADEMIC QUALIFICATION

1999	Doctor of Philosophy (Surveying), University College London, United Kingdom (Title of Thesis: Precise Three-Dimensional Attitude Estimation From Independent GPS Arrays).
1992	Master of Philosophy (Surveying Science), University of Newcastle upon Tyne, United Kingdom (Title of Thesis: Stochastic Modelling for the Processing of Offshore Positioning Systems using Kalman Filter).
1986	Bachelor of Science (Honours) Surveying and Mapping Sciences, North East London Polytechnic, United Kingdom (Title of Thesis: The Development of Swathe Sounding Systems and Their Comparisons with the Conventional Echo Sounders).
1982	Diploma in Land Surveying, Universiti Teknologi Malaysia, Kuala Lumpur.

MEMBERSHIP

1994-present Member, Royal Institution of Surveyors, Malaysia.

TECHNICAL COURSES/TRAINING

International

1994	"Special Training on Hydrographic Surveying". University of New Brunswick, Fredericton, New Brunswick, Canada. 4 June - 1 August 1994.
1994	"CARIS - A User's Perspective (Training)". Universal System Limited, Fredericton, New Brunswick, Canada. 2-12 August 1994.
1994	"Hydrographic Training with Canadian Survey Ship (PENDER)". Canadian Hydrographic Service, Bella Bella, British Columbia, Canada. 13-29 August 1994.
1994	"ISAH HYDAS & CARISAH System Operator's Course". Quester Tangent Corporation, Sidney, British Columbia, Canada. 30 August - 16 September 1994.
2000	"Y2K Multibeam Sonar Training Course". United States/Canada Hydrographic Commission (Coastal Multibeam Working Group), Burlington, Ontario, Canada. 4-10 April 2000.

PROFESSIONAL AFFILIATIONS

1992-1995	Member and Secretary, Commission 4 (Hydrography), Land Surveying Section, Institution of Surveyors Malaysia.
1992-1995	Member, Technical Committee, ASEAN/AUSTRALIA Regional Ocean Dynamics Project.
1993-1995	Member, Malaysia National Hydrographic Committee.
1994-1995	Member and Secretary, and as Malaysian Counterpart Project Officer, Project Advisory Committee, Hydrographic Co-operation between Malaysia and Canada.
1999-2001	Member and Secretary, and as Malaysian Counterpart Project Officer, Project Advisory Committee, Hydrographic Co-operation between Malaysia and Canada.
2001	Chairman "2001 East Asia Hydrographic Symposium and Exhibition", The Legend Hotel, Kuala Lumpur.
2001-2003	National Delegate for Institution of Surveyors Malaysia in International Federation of Surveyors (FIG) Commission 4 (Hydrography).

**CURRICULUM VITAE
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2001-2014	Vice Chairman 1/Board Member, International Federation of Surveyors (FIG) / International Hydrographic Organisation (IHO) / International Cartographic Association (ICA) International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers.
2002-present	Editorial Advisory Board Member of Hydro International, Geomares Publishing, The Netherlands.
2005-2016	Associate Editor, Marine Geodesy Journal (An International Journal of Ocean Surveys, Mapping and Sensing, Peer Review Journal), Taylor and Francis Publishers.
2006	Session Chair on Ocean Mapping and Seafloor Characterization at The Twelfth Pacific Congress on Marine Science and Technology, PACON 2006, Yangon, Myanmar, 11-15 June 2006.
2007	Session Chair on GNSS Positioning & Moving Platform at Joint International Symposium and Exhibition on Geoinformation & International Symposium on GPS/GNSS 2007, Johor Bahru, 5-7 November 2007.
2009	Chairman "2009 East Asia Hydrographic Symposium and Exhibition", The Legend Hotel, Kuala Lumpur. Period: From 20-22 October 2009.
2009-2012	Member, Malaysia National Hydrographic Committee.
2012-2013	Member, Scientific Programme Committee of the 10 th (Jubilee) International Conference on Marine Navigation and Safety of Sea Transportation (Transnav 2013) organised by the Faculty of Navigation of the Gdynia Maritime University and the Nautical Institute from 19-21 June 2013.
2013	Member, Steering Committee, International Seminar on Hydrography: Roles of Hydrography in Marine Industry and Resources Management, Bandung Institute of Technology, 27-28 August 2013.
2016	Chairman "2016 UTM Hydrography Seminar & Exhibition", Menara Razak UTM, Kuala Lumpur. Period: From 18-19 May 2016.
2017-present	Chairman "Malaysia Steering Committee on FIG/IHO/ICA Hydrography/Cartography Programmes".
2019-2020	Member, Scientific Programme Committee of the 13 th International Conference on Marine Navigation and Safety of Sea Transportation (Transnav 2019) organised by the Faculty of Navigation of the Gdynia Maritime University and the Nautical Institute from 12-14 June 2019.
2019-2010	International Programming Council of the TransNav, the International Journal on Marine Navigation and Safety of Sea Transportation (http://www.transnav.eu).

SUMMARY OF KEY EXPERIENCE

1988-1989	Surveying Demonstrator (part-time) at the Department of Civil Engineering, Faculty of Engineering, Universiti Malaya, Kuala Lumpur.
1982-1986	Assistant Lecturer 'B', Universiti Teknologi Malaysia
1986-1992	Assistant Lecturer 'A' Universiti Teknologi Malaysia
1986-1989	On loaned to Faculty of Civil Engineering, Universiti Teknologi Malaysia, Kuala Lumpur as an academic staff and supervisor for student's training on engineering surveying.
1992-1997	Lecturer.
1997-2007	Associate Professor.
2007-present	Professor.

PROFESSIONAL RECORDS

Administrative Duties and Appointments

1991-1992	Head of Hydrographic Unit, Faculty of Geoinformation and Real Estate UTM.
1991-1993	Head of Engineering Surveying and Cadastral Laboratory, Faculty of Geoinformation and Real Estate UTM.
1992-1995	Director of Centre for Hydrographic Studies, Faculty of Geoinformation and Real Estate UTM.
1999-2003	Director of Centre for Hydrographic Studies, Faculty of Geoinformation and Real Estate UTM.
2003-2005	Head of Hydrography Group INSTEG, Faculty of Geoinformation and Real Estate UTM.
2004-2006	Chief Editor, Buletin Geoinformasi, Faculty of Geoinformation and Real Estate UTM.
2006-2008	Head of Department (Postgraduate Studies), Faculty of Geoinformation and Real Estate UTM.
2008-2012	Head of Department (Geomatic Engineering), Faculty of Geoinformation and Real Estate UTM.
2013-present	Head of GeoCoastal Research Unit GI2RG, Faculty of Geoinformation and Real Estate UTM.
2017-June 2018	Dean of Faculty of Geoinformation and Real Estate UTM.

Special Programmes and Courses

1995-2012	Programme Director and Chief Instructor for Hydrographic Surveying I or HYDRO I (FIG/IHO/ICA Category B Level, 13 programmes) and Hydrographic Surveying II (FIG/IHO/ICA
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	Category A Level, 7 programmes). Subjects' taught (a) Hydrographic Positioning, (b) Tides: Theory and Practice, (c) Hydrographic Surveys), and Law of the Sea.
2006-2008	Programme Director and Chief Instructor for "Basic Hydrographic Surveying Course" for Fugro World Wide Employees (11 courses). Subjects' taught (a) Multibeam Survey and (b) Tides and Water Level Theory.
2008	Programme Director and Chief Instructor for "International Course on Nautical Cartography for Military Survey Department of United Arab Emirates". Client: Military Survey Department of United Arab Emirates from 17 November 2008 to 12 December 2008, Johor Bahru.
2009	Programme Director and Chief Instructor for Workshop on Tides for Employees of Geokinetics from 16-19 November 2009, Johor Bahru.
2012	Programme Director and Chief Instructor for Workshop on Tidal Measurement, Analysis and Processing held for Department of Survey and Mapping Malaysia (JUPEM), and National Institute of Hydraulic Research Malaysia (NAHRIM) from 16-19 April 2012, Kuala Lumpur.
2013	Programme Director and Chief Instructor for Basic Land Surveying Workshop for Employees of Brunei Shell Petroleum Company from 2-13 December 2013, Johor Bahru..
1999-2015	Programme Director and Chief Instructor on Various Short Courses and Workshops (International): (a) Workshop on Hydrographic Surveying and AutoCAD Processing, (b) Workshop on Hydrographic Positioning & Navigation, (c) Workshop on Multibeam Surveying, and (d) Workshop on Tidal Measurement Processing & Analysis.
2016	Training Instructor for Workshop on Tidal Data Management : QA & QC. Client : Dubai Municipality, 21-25 August 2016, Dubai City, United Arab Emirates.
2017	Special Lectures on Tidal Data Theory and Processing for Employees of Department of Survey and Mapping Malaysia (JUPEM), 11-12 July 2017, Kuala Lumpur.
2017	Training Instructor for Workshop on Tidal Data Management : QA & QC. Client : Royal Navy Oman, 12-15 November 2017, Mussanah, Sultanate of Oman.
2018	Training Instructor for Workshop on Tidal Data Management for Employees of National Hydrographic Office of Oman from 29 March 2018 – 1 April 2018, Johor Bahru.

Selected Consultancy Projects

1994	Project Leader for "The Determination of Test Location for Subsurface Investigation and Testing at Johor Straits for Johor Coastal Development, Parcel C". Johor Bahru, Johor Darul Takzim.
1994	Consultant for "The Preliminary Hydrographic Surveying and Current Meter Measurements for the Development of the Proposed Independent Crude Oil Storage Terminal at Tanjung Piai". Pontian, Johor Darul Takzim.
1994	Consultant for "Hydrographic Surveying for the Application of a Floating Restaurant Site". Kukup, Johor Darul Takzim.
2004	Project Leader for "Tidal Observation and Prediction for Offshore Platform Removal Topside".
2005	Project Leader for "Bathymetry Survey for the Transportation and Floatover of BR-E CO ₂ Removal Topside".
2005	Project Leader for "Tidal Observation and Prediction for the Transportation and Floatover of BR-E CO ₂ Removal Topside".
2005	Project Leader for "Post-Dredged Hydrographic Survey for GUNTONG-E Topside".
2005	Project Leader for "Tidal Observation (Auto and Manual) and Prediction for Month of September/October/November/December 2005 and during Loadout Operation".
2008	Project Leader for "Hydrographic Survey Work at Sungai Johor and Sungai Lebam".
2008	Project Leader for "Tide Monitoring Services for BO-A CPP Topsides at SDE East Wharf", Pasir Gudang, Johor.
2008	Project Leader for "Hydrographic Survey for BO-A CPP Topsides at SDE Water Front and Approach Channel of Pasir Gudang, Johor".
2014-2015	Project Leader for "Tidal Analysis Project for PETRONAS Carigali Sdn. Bhd.".
2014-2017	External Accessor for "PETRONAS: Geomatics TPCP Assessment".

Selected Research Projects

1994	Project Leader for "The Studies on the Rate of Sedimentation at Bekok Dam using Hydrographic Technique". Research Management Centre UTM.
1995	Researcher for "The Studies on Automation in Hydrographic Surveying". Research Management Centre UTM.
1995	Researcher for "The Studies on the CARIS (Computer Aided Resource Information System) Software to Produce Hydrographic Chart". Research Management Centre UTM.
2000	Project Leader for "Multibeam Editing Technique in Producing Hydrographic Database". Research Management Centre UTM.
2000	Researcher for "Seabed Mapping from Raw Side Scan Sonar Images". Research Management Centre UTM.

- 2000 Project Leader for “Development of Hydrographic Sweeping System for Application in Ports and Protected Areas”. Intensified Research Priority Area (IRPA), Ministry of Science, Technology and Innovation.
- 2002 Project Leader for “The Development of a Low-Cost Integrated Marine Navigation System for Leisure Crafts and Small Boats”. Intensified Research Priority Area (IRPA), Ministry of Science, Technology and Innovation.
- 2002 Project Leader for “Application of Real Time Tidal Acquisition and Processing System for Hydrographic Survey and Dredging Operations”. Intensified Research Priority Area (IRPA), Ministry of Science, Technology and Innovation.
- 2012 Project Leader for “Tidal Variation During El-Nino/La-Nina Phenomenon in Malaysian Coastline”. Research University Grant.
- 2013 Researcher for “Characterisation of Benthic Communities using Acoustic Ground Discrimination”. Research University Grant.
- 2013 Project Leader for “An Approach to Improve Multibeam Snippets Data Classification for Seafloor Mapping”. Fundamental Research Grant Scheme, Ministry of Education.
- 2014 Project Leader for “Coastal Habitat Mapping using Water Column Imaging Technique”. Research University Grant.
- 2014 Researcher for “Remote Identification and Coral Reef Mapping via Acoustic Sonar and Underwater Video Observations”. Research University Grant.
- 2014 Project Leader for “Impact of Climate Change on Marine Environment of Malaysian Seas - A Remote Sensing Perspective”. Fundamental Research Grant Scheme, Ministry of Education.
- 2015 Project Leader for “Appraising Effect of Tidal Amplitude Parameter to Salt Marsh Regards to Relative Sea Level Rise (Mantee Project)”.
- 2015 Project Leader for “Impact of Climate Change on Flooding Due to Extreme Rainfall and Tidal Phenomena”. Research University Grant.
- 2016 Researcher for “Retrieving Physical Properties and Spatial Model Mapping for River Bed Sediment using Underwater Acoustic Sensor: Case Study Hulu Perak River of Royal Belum State Park”. Research University Grant.
- 2017 Project Leader “Assessing Satellite-Derived Bathymetry for Territorial Sea Baseline Delineation”, Research University Grant.

PUBLICATIONS AND PRESENTATIONS

Book

- 1996 One translation book.
- “Ukur Kejuruteraan”.
Translation to Malay from English text book entitled *Engineering Surveying : Problems and Solutions, Second edition, 1983* by F.A. Shepherd (Published by Edward Arnold Publishers Ltd., London; 370 pp).
Co-translator with Mohd Zulkifli bin Mohd Yunus.
Published by Penerbit Universiti Teknologi Malaysia.

Monograph

- 1997 “Basic Hydrography”.
Main author. Co-authors: Rusli bin Othman, Usmuni bin Din and Ahmad Shahlan bin Mardi. Faculty of Geoinformation and Real Estate UTM.
- 2005 “Tidal Theory”. Monograph, Faculty of Geoinformation and Real Estate UTM. October 2005.
- 2006 “The Development of a Low Cost Integrated Marine Navigation System for Leisure Crafts and Small Boats” Research Monograph, Penerbit Universiti Teknologi Malaysia. 195 pages.
- 2007 “Pembangunan Sistem Sapuan Hidrografi Bagi Aplikasi di Pelabuhan dan Kawasan Lindungan” Research Monograph, Penerbit Universiti Teknologi Malaysia. 220 pages.
- 2007 “Teknik Penyuntingan Berbilang Alur Bagi Menghasilkan Pangkalan Data Hidrografi” Research Monograph, Penerbit Universiti Teknologi Malaysia. 110 pages.

Journal

Selected Articles

- 2002 “Hydrography within Oceanology International”. Interview, published in Hydro International, March 2002, Volume 6, Number 2. Published by GITC bv, The Netherlands.
- 2002 “International Co-operation in Hydrographic Training”. Hydro International, Volume 6, Number 10, December 2002, GITC bv., The Netherlands

- 2003 "Hydrographic Training: Why Continuity Paramount". Hydro International, Volume 7, Number 10, December 2003, GITC bv., The Netherlands
- 2003 "We Visited for You: International Hydrographic & Oceanographic Industry 2003". Hydro International, Volume 7, Number 8, December 2003, GITC bv., The Netherlands
- 2004 "Web-Based GIS for Nautical Charts". Hydro International, Volume 8, Number 9, November 2004, GITC bv., The Netherlands
- 2004 "GIS Application for Safe Vessel Navigation (Based on Water Level)". Co-author with Norkhair Ibrahim and Chai Beng Chung. The Malaysian Surveyor, Volume 39.1, September 2004. Published by the Institution of Surveyors Malaysia.
- 2005 "Hydrography in the Far East". Interview, Hydro International, Volume 9, Number 4, May 2005, GITC bv., The Netherlands.
- 2005 "Cat A Hydro or Cat A Carto". Hydro International, Volume 9, Number 8, October 2005, GITC bv., The Netherlands.
- 2005 "International Hydrographic & Oceanographic Industry 2005". Hydro International, Volume 9, Number 8, October 2005, GITC bv., The Netherlands.
- 2006 "Keeping Up With Hydrographic Technology". Hydro International, Volume 10, Number 9, November 2006, GITC bv., The Netherlands.
- 2006 "Data Thinning for Multibeam Echo Sounding Data: Is There an Ideal Algorithm?" Voice of The Pacific Newsletter, Volume 22, No. 4, 2006, The Pacific Congress on Marine Science and Technology.
- 2007 "Hydrographic Information Databases" Hydro International, Volume 11, Number 7, July/August 2007, Reed Business, The Netherlands.
- 2009 "Turning Hydrographic Graduates into Competent Surveyors". Hydro International, Volume 13, Number 3, April 2009, Reed Business, The Netherlands.
- 2010 "In Pursuit of Marine Geospatial Data Infrastructure". Hydro International, Volume 13, Number 2, March/April 2009, Reed Business, The Netherlands.
- 2012 "Ensuring Competencies in Hydrography and Cartography". Hydro International, Volume 16, Number 5, July/August 2012, Geomares Publishing, The Netherlands.
- 2013 "Establishment of a National Hydrographic Committee". Hydro International, Volume 17, Number 1, January/February 2013, Geomares Publishing, The Netherlands.
- 2014 "Mean and Seasonal Circulation of the South Indian Ocean Estimated by Combining Satellite Altimetry and Surface Drifter Observations". Terrestrial Atmospheric and Oceanic Sciences, Vol. 25, No. 1, 91-106, February 2014 (Co-author with N. Peter Benny, Daisuke Ambe, K. Rayaroth Mridula, Sahrum Ses and Kamaludin Mohd Omar).
- 2014 "Sustainable Marine Environmental and Habitat: Whose Responsibilities?" Hydro International, Volume 18, Number 2, March 2014, Geomares Publishing, The Netherlands.
- 2014 "On the Issues of Overlapping Maritime Claims in the Far East". Hydro International, Volume 18, Number 6, September 2014.
- 2015 "Variations of Sea Level and Tidal Behaviour during El-Nino/La-Nina : An Example of Malaysian Coastline". Co-author with Mohd Hilmi Abdullah and Nor'ainat Amat. Jurnal Teknologi.
- 2015 "Northern South China Sea Surface Circulation and its Variability Derived by Combining Satellite Altimetry and Surface Drifter Data". Co-Author with Kamaludin Mohd Omar, Sahrum Ses, Mridula Kuttyattu Rayaroth and Benny Neettumkkara Peter. Terrestrial Atmospheric And Oceanic Sciences.
- 2015 "Mesoscale Surface Circulation and Variability of Southern Indian Ocean Derived by Combining Satellite Altimetry and Drifter Observations". Co-Author with Mohd Nadzri Md Reba, Mazlan Hashim, Shenbakavalli Ranjan and Benny Neettumkkara Peter. Acta Oceanologica Sinica.
- 2016 "An Application of Fuzzy Inference System to Marine Fish Landings for West Coast of Malaysia". Co-author with A. I. Hamid-Mosaku and M.S. Mohd. International Journal of Information and Decision Sciences.
- 2016 "Hulu Sungai Perak Bed Sediment Mapping using Underwater Acoustic Sonar". Co-author with Othman Zainon, Usmuni Din, Abd Wahid Rasib, Ahmad Shahlan Mardi, Zulkarnaini Mat Amin, Rusli Othman, Nurfadhilah Arriafdi and Nazam Sulaiman. Proceeding of 2016 International Conference on Geomatic and Geospatial Technology, The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences.
- 2016 "Togetherness towards the Challenging Phase", Hydro International, Volume 20, Number 2, March 2016, Geomares Publishing, The Netherlands.
- 2016 "An Evaluation of Marine Geospatial Data Infrastructure (MGDI) by Delphi-Analytic Hierarchy Process (AHP) Approach". Co-author with A. I. Hamid-Mosaku and M.S. Mohd. Jurnal Teknologi.
- 2016 "High-resolution Surface Circulation of the Bay of Bengal derived from Satellite Observation Data". Co-author with Mridula Kuttyattu Rayaroth and Benny Neettumkkara Peter. Journal of Marine Science and Technology.
- 2016 "The Potential of Mangrove Forest as a Bioshield in Malaysia". Co-Author with Noorzalinee Ghazali, Khairulazhar Zainuddin, Mohd Zainee Zainal, Hamlussalam Md Dali and Abdul Manan Samad. Proceeding of 2016 IEEE 12th International Colloquium.
- 2017 "The Unmanned System: A New Menace to the Hydrographic Surveyor Profession". Hydro International, Volume 21, Number 4, July/August 2017, Geomares Publishing, The Netherlands.

- 2017 "Satellite-Derived Bathymetry: Accuracy Assessment on Depths Derivation Algorithm for Shallow Water Area". Co-author with Najhan Md Said and Rozaimi Che Hasan. Proceeding of 2017 International Conference on Geomatic and Geospatial Technology, The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, XLII-4/W5, 159-164. Available online: <https://doi.org/10.5194/isprs-archives-XLII-4-W5-159-2017> (Scopus indexed).
- 2017 "Variation of Chart Datum towards Maritime Delimitation due to Rising Sea Level". Co-author with Mohd Faizuddin Rahman. Proceeding of 2017 International Conference on Geomatic and Geospatial Technology, The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences (Scopus indexed).
- 2017 "Effect of Long Term Tidal Constituents on Mean Sea Level Trend During El-Nino and La-Nina Phenomena". Co-author with Nur Hidayah Md Yusof. Proceeding of 2017 International Conference on Geomatic and Geospatial Technology, The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences (Scopus indexed).
- 2017 "An Application of Fuzzy Inference System to Marine Fish Landings for West Coast of Malaysia". Co-author with A. I. Hamid-Mosaku and M.S. Mohd. International Journal of Information and Decision Sciences (Scopus indexed).
- 2017 "Fuzzy Evaluation of Marine Geospatial Data Infrastructure (MGDI) and MGDI Decisions' Criteria". Co-author with A. I. Hamid-Mosaku, M.S. Mohd, A.L Balogun and K. A. Raheem. Journal of Engineering Research, Volume 22, Number 1, June 2017.
- 2018 "Evaluating Satellite-Derived Bathymetry Accuracy from Sentinel-2A High-Resolution Multispectral Imageries for Shallow Water Hydrographic Mapping". Co-Author with Najhan Md Said and Rozaimi Che Hasan. IGRSM 2018 IOP Publishing. IOP Conference Series: Earth and Environmental Science 169. Available online: <https://doi:10.1088/1755-1315/169/1/012069> (Scopus indexed).
- 2018 "Water Column Features and Seafloor Characteristics using Simultaneous Multibeam Water Column Detection". Co-Author with K.N.A. Aziz, M.D.E.K Gunathilaka, B.N. Peter, J. Tajam, M.A. Roslani and S.A. Kamaruddin. Paper submitted to Journal of Advanced Manufacturing Technology.

Selected Papers

- 1997 "Benchmarking of Commercial Offshore GPS-Based Attitude Determination Systems". Co-author with Paul Cross and Simon Corbett. Presented at the International Symposium on Kinematic Systems in Geodesy, Geomatics and Navigation (KIS97), Banff, Canada. 3-6 June 1997.
- 1998 "Multi-Receiver GPS Attitude Determination". Presented at the GEOSCIENCE 98: Geodesy Workshop, Keele University, United Kingdom. 14-18 April 1998..
- 1999 "GPS Based Attitude Determination for Airborne Remote Sensing". Co-author with Paul Cross and Kevin Sheridan. Presented at the International Union of Geodesy and Geophysics (IUGG) Symposium, Birmingham, United Kingdom. 18-30 July 1999.
- 2001 "GPS and Mean Sea Level in Peninsular Malaysia". Co-author with Azhari Mohamed, Shahrum Ses and Abd Majid Kadir. Presented at the 2001 East Asia Hydrographic Symposium and Exhibition, Kuala Lumpur. 12-14 June 2001.
- 2002 "Optimization of Hydrographic Survey in Ports and Protected Areas using Multi-transducer System". Co-author with Muhammad Ariff Abdul Jalil. Presented at the International Symposium and Exhibition on Geoinformation 2002 (ISG02), Kuala Lumpur. 22-24 October 2002.
- 2003 "The Needs for Precision in Mapping the Seabed". Co-author with Chai Beng Chung. Presented at the International Hydrographic & Oceanographic Industry 2003: Conference & Exhibition (IHOCE'03), Kuala Lumpur. 8-10 July 2003.
- 2003 "The Benefit of GIS for the Offshore Engineering". Co-author with Chai Beng Chung. Presented at the International Symposium and Exhibition on Geoinformation 2003 (ISG03), Shah Alam, Selangor, 13-14 Oktober 2003.
- 2003 "Solving Uncertainty in the Calibration of Multibeam Echo Sounder System". Co-author with Najhan Md. Said. Presented at the International Symposium and Exhibition on Geoinformation 2003 (ISG03), Shah Alam, Selangor, 13-14 Oktober 2003.
- 2004 "Development of a Calibration Processing Tools for a Multibeam Echo Sounding System". Co-author with Najhan Md. Said. Presented at the International Symposium and Exhibition on Geoinformation 2004 (ISG04), Kuala Lumpur, 21-23 September 2004.
- 2004 "Integrated Web-Based GIS for Electronic Charts". Co-author with Cham Tau Chia. Presented at the International Symposium and Exhibition on Geoinformation 2004 (ISG04), Kuala Lumpur, 21-23 September 2004.
- 2004 "The Determination of Tidal Constituents and Prediction Based on Short Observation Period". Co-author with Hery Purwanto. Presented at the International Symposium and Exhibition on Geoinformation 2004 (ISG04), Kuala Lumpur, 21-23 September 2004.
- 2004 "General Workflow for Outliers Detection and Removal in Multibeam Echo Sounding Data". Co-author with Othman Mohd Yusof. Presented at the International Symposium and Exhibition on Geoinformation 2004 (ISG04), Kuala Lumpur, 21-23 September 2004.

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(MOHD RAZALI MAHMUD)**

- 2005 "Determination of Tidal Characteristics in Peninsular Malaysia using μ -TAPS Software". Co-author with Hery Purwanto. Presented at the International Symposium and Exhibition on Geoinformation 2005 (ISG05), Penang, 27-29 September 2005. (Invited Speaker)
- 2005 "Automatic Filtering of Far Outliers in Multibeam Echo Sounding Dataset using Robust Detection Algorithms". Co-author with Othman Mohd Yusof. Presented at the International Symposium and Exhibition on Geoinformation 2005 (ISG05), Penang, 27-29 September 2005.
- 2006 "GIS: The Key to Success in Submarine Pipeline Routing". Co-author with Chai Beng Chung. Presented at the International Symposium and Exhibition on Geoinformation 2006 (ISG06), Subang Jaya, 19-21 September 2006.
- 2006 "The Implementation of Post-Processing Data Thinning for Multibeam Echo Sounding Data". Co-author with Othman Mohd Yusof. Presented at the International Symposium and Exhibition on Geoinformation 2006 (ISG06), Subang Jaya, 19-21 September 2006.
- 2006 "GIS Application in Oil and Gas Exploration & Production Activities Based on Past Experience". Co-author with Mohd. Zukhairi bin Abd. Latef. Presented at the International Symposium and Exhibition on Geoinformation 2006 (ISG06), Subang Jaya, 19-21 September 2006.
- 2007 "Patch Test Calibration for Multibeam Echosounder System". Co-author with Kelvin Tang Kang Wee. Presented at The 13th Pacific Congress on Marine Science and Technology (PACON 2007), Hawaii, USA, 24-27 June 2007.
- 2007 "An Appraisal of Multibeam Echosounder Calibration". Co-author with M.D.E.K. Gunathilaka. Presented at the Joint International Symposium and Exhibition on Geoinformation & International Symposium on GPS/GNSS 2007 (ISG-GNSS 2007), Johor Bahru, 5-7 November 2007.
- 2007 "Effects of Inadequate Surface Sound Speed Measurements in Multibeam Echosounder System". Co-author with M.D.E.K. Gunathilaka. Presented at the Joint International Symposium and Exhibition on Geoinformation & International Symposium on GPS/GNSS 2007 (ISG-GNSS 2007), Johor Bahru, 5-7 November 2007.
- 2007 "Navigational Challenges in Limited Sea Areas". Co-author with Noorzalinee Ghazali. Presented at the Joint International Symposium and Exhibition on Geoinformation & International Symposium on GPS/GNSS 2007 (ISG-GNSS 2007), Johor Bahru, 5-7 November 2007.
- 2008 "Hydrographic Training, Research and Education at Universiti Teknologi Malaysia". Presented at the "Advance Technology in Offshore Survey Seminar and Exhibition (ATOSSE 2008)", Institution of Surveyors Malaysia, Kuala Lumpur, 18-20 February 2008.
- 2008 "Hydrographic Database for Coastal Zone – The Needs". Co-author with Masmi Mardin. Presented at the "7th International Annual Symposium on Sustainability Science and Management", Universiti Putra Malaysia, Kuala Terengganu, 8-10 June 2008.
- 2008 "Development of Interactive Nautical Chart using Geographical Information System". Co-author with Masmi Mardin. Presented at the "7th International Annual Symposium on Sustainability Science and Management", Universiti Putra Malaysia, Kuala Terengganu, 8-10 June 2008.
- 2008 "Classification of Seafloor Habitats using Acoustic Backscattering of Multibeam Echosounder Systems". Co-author with Mohamad Kelana Juwit. Presented at the 7th International Symposium and Exhibition on Geoinformation (ISG 2008), Kuala Infrastructure University College, Kuala Lumpur, 13-15 October 2008.
- 2009 "Tides and River Basin Flooding". Co-author with M.D.E.K. Gunathilaka". Presented at the 2009 East Asia Hydrographic Symposium and Exhibition (EAHSE), Kuala Lumpur, 20-22 October 2009.
- 2009 "Common Issues in the Implementation of the Marine Geospatial Data Infrastructure for Malaysia". Co-author with A.I. Hamid-Mosaku. Presented at the 2009 East Asia Hydrographic Symposium and Exhibition (EAHSE), Kuala Lumpur, 20-22 October 2009.
- 2011 "LAT and ISLW for Vertical Datum Level of Malaysian Waters". Presented at the 17th National Hydrographic Committee Meeting, Kuala Terengganu, 24-25 September 2011.
- 2012 "Modelling the Tidal Datum Variability at the Straits of Malacca". Co-author with M.D.E.K. Gunathilaka". Presented at the 11th International Symposium and Exhibition on Geoinformation 2012 (ISG2012), Kuala Lumpur, 25-26 September 2012.
- 2012 "Marine Geospatial Data Infrastructure (MGDI) Decisions: A Sine Qua Non to Ubiquitous Geospatial Solutions to Marine Applications". Co-author with A.I. Hamid-Mosaku. Presented at the 11th International Symposium and Exhibition on Geoinformation 2012 (ISG2012), Kuala Lumpur, 25-26 September 2012.
- 2012 "Latest Technologies in the Training of Hydrographic Surveyors". Presented at the RESON Asia Pacific (APAC) User Conference 2012, Singapore, 26 November 2012.
- 2013 "Hydrographic Training, Standards and the Latest Technologies". Presented at the International Seminar and Workshop on Hydrography (ISWH): Roles of Hydrography in Marine Industry and Resources Management, Batam, Indonesia, 27-28 August 2013.
- 2014 "Intelligent GIS Modelling and Implementation to Ships Calling at Malaysian Ports". Co-author with Isa Adekunle Hamid-Mosaku and Mohd Safie Mohd. Paper presented at the 9th National GIS Symposium in Saudi Arabia, under the Patronage of His Royal Highness; Governor of the Eastern Province, The High Committee of Geographic Information Systems (GIS) in the

- Eastern Province, at Sheraton Dammam Hotel & Towers, Eastern Province, Saudi Arabia, 28-30 April 2014.
- 2014 "Ceaseless Tidal Zoning for Straits of Malacca using Spatial Interpolation". Co-author with M.D.E.K. Gunathilaka. Peer Review Paper. Presented at the XXV FIG Congress, Kuala Lumpur, 16-21 June 2014.
- 2014 "Marine Activities and Delineation Zones: In the Context of Marine Geospatial Data Infrastructure (MGDI) Decision". Co-author with Isa Adekunle Hamid-Mosaku. Peer Review Paper. Presented at the XXV FIG Congress, Kuala Lumpur, 16-21 June 2014.
- 2015 "Fuzzy Analysis of Marine Fish Landings for West Coast of Malaysia". Co-author with A. I. Hamid-Mosaku and M.S. Mohd. Paper presented at 1st ICRIL-International Conference on Innovation in Science and Technology (IICIST 2015), 20 April 2015.
- 2016 "Marine Geospatial and Cartography Programme". Paper presented at the FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers, Brest, France, 5 April 2016.
- 2016 "Principle and Challenges in Settling Disputes on Maritime Boundary Delimitation". Keynote Speaker at the 9th International Research Conference, General Sir John Kotelawala Defence University, 8 September 2016, Sri Lanka.
- 2016 "Sediment Classification from Multibeam Backscatter Images using Simple Histogram Analysis". Co-author with Rozaimi Che Hasan and Shahrin Amizul Shamsudin. Paper presented at the Hydro 2016 at Rostock Warnemunde, Germany, November 2016.
- 2017 "Implication of South China Sea Arbitration to Malaysia (Case Study: Philippine Versus China)". Co-author with Mohd Faizuddin Rahman and Mohd Hilmi Abdullah. Paper presented at The 2017 6th ICT International Student Project Conference (ICT-ISPC 2017), 23-24 May 2017.
- 2017 "Satellite-Derived Bathymetry: Optimising New Promising Technology for Low-Water Line (Baselines) Delineation". Co-author with Najhan Md Said and Rozaimi Che Hasan. Paper presented at the 9th ABLOS Conference (UNCLOS: Pushing the Limits of UNCLOS), Monaco, 9-11 October 2017.
- 2017 "Addressing the Challenges in Producing Competent Professional in Geomatic Surveying Industry". Keynote Speaker at the 15th Conference on Science and Technology, Ho Chi Minh City University of Technology, 20 October 2017, Ho Chi Minh City, Vietnam.
- 2018 "Imagery-Derived Bathymetry in Strait of Johor's Turbid Waters using Multispectral Images". Co-author with Kelvin Kang Wee Tang. To be presented at the International Conference on Geomatics and Geospatial Technology 2018, 3-5 September 2018, Kuala Lumpur.

SUPERVISION AND EXTERNAL EXAMINER

Foreign Supervision

- 2004 "POGO-IOC-SCOR Fellowship for Training on Data Management using CARIS".
Guest Lecturer : Dr. Haryono Joyosentono from Universiti Gadjah Mada, Indonesia.
Period : From 26 August 2004 – 8 November 2004.

Supervision at PhD Level

(Graduated : 4 students, On-going : 5 students)

- 2007 (graduated) "Development of Automated Data Screening and Optimal Data Thinning in Post Processed MBES Data Set". Student: Othman Mohd Yusof.
- 2014 (graduated) "Intelligent Geospatial Decision Support System for Marine Geospatial Data Infrastructure for Malaysia". Student: Hamid Mosaku Adekumle Isa.
- 2014 (graduated) "Modelling the Tidal Phenomenon at the Strait of Malacca by Spatial Interpolation". Student: Malavige Don Eranda Kanchana Gunathilaka.
- 2014 (graduated) "Mesoscale Circulation of the Bay of Bengal and Its Influence on Marine Productivity", Student: Mridula Kuttyattu Rayaroth.
- 2014 (on-going) "Strategies in the Processing and Analysis of Continuous Tidal Data Set". Student: Mohd Hilmi Abdullah.
- 2015 (on-going) "Optimisation of Satellite-Derived Bathymetry's Empirical Method for Shallow Water Hydrographic Mapping". Student: Najhan Md Said.
- 2018 (on-going) "Coastal and Shallow Water Seabed Topography Modelling using Satellite-Derived Bathymetric Approach". Student: Kelvin Tang Kang Wee.
- 2018 (on-going) "Feasibility Study and Performance of Kalman Filter Approach for Tidal Analysis and Prediction". Student: Auwal Garba Abubakar.
- 2018 (on-going) "Modelling of Shoreline Fluctuation using Geospatial Techniques in Lake Chad". Student: Alhaji Hussaini.

Selected Supervision at MSc Level

Graduated : 35 students, On-going : 4 students)

- 2005 (graduated) "Tidal Analysis from Harmonic Method using Least Squares Estimation". Student: Hery Purwanto.
- 2006 (graduated) "Effect of Monsoon Rain on Tides in Peninsular Malaysia". Student: Tan Tai Hung.
- 2011 (graduated) "Comparative Study Between Flat and Uniform Bottom Assumptions for Snippet Imageries in Hydrographic Applications". Student: Rubasingam Ragulan.
- 2012 (graduated) "Pengaruh Fenomena El-Nino dan La-Nina Terhadap Corak Pasang Surut di Malaysia". Student: Mohd Hilmi Abdullah.
- 2012 (graduated) "Development of Maritime Rescue Application System using Geographic Information System Approach". Student: Norfariza Zainal.
- 2013 (graduated) "Pitch, Roll and Yaw Estimation Based on Global Positioning System and Inertial Motion Unit". Student: Jimmy Ng Kah Ban.
- 2014 (graduated) "Comparison of Three Multibeam Acoustic Wave Path Refraction Compensation Techniques". Student: Loh Khai Xian.
- 2016 (graduated) "Penentuan Pembatasan Sempadan Maritim Berdasarkan kepada Konvensyen Undang-undang Laut 1982 (KUUL 1982): Kajian Kes Melaka dan Negeri Sembilan". Student : Zakaria Abdullah.
- 2016 (graduated) "Simultaneous Water Column Detection and Seafloor Characteristics using Multibeam Echo Sounder System". Student: Khairul Naim Abd Aziz.
- 2016 (graduated) "Variability of Surface Circulation and Biological Productivity in Southern Indian Ocean – in a Remote Sensing Perspective". Student: Shenbakavalli a/p Ranjan.
- 2016 (graduated) "Integrated Marine Mapping System using Advanced Multibeam and Mobile Laser Scanner". Student: Khairul Hazwan Hussin.
- 2018 (on-going) "Variation of Chart Datum towards Maritime Delimitation due to Rising Sea Level". Student: Mohd Faizuddin Abd Rahman.
- 2018 (on-going) "GIS Modelling of Flood in Kelantan due to Extreme Rainfall and Tidal Phenomenon". Student: Nur Hidayah Md Yusof.
- 2018 (on-going) "Optimal Technologies for Determination of Deformation in Offshore Environments". Student: Noor Safaruddin Kamaruddin.
- 2018 (on-going) "Offshore Structure Modelling and Dimensional Control Survey by Unmanned Aerial Vehicle (UAV) Photogrammetry". Student: Tham Siew Kee.

Supervision at BSc Level

Graduated : 120 students

External Examiner

- 2007 "Study of Chart Datum and its Impact Towards National Baseline Point". Student (MSc in Civil Engineering) : Zaaim Hasan (Universiti Kebangsaan Malaysia).
- 2014 "Spatial Multicriteria for Land Suitability of Sustainability Hillside Development: A Case Study of Penang Island". Student (PhD in Civil Engineering): Imtiaz Ahmed (Universiti Teknologi PETRONAS).
- 2014 "A Spatial Decision Support System (SDSS) for Sustainable Tourism Planning in Cameron Highland". Student (PhD in Civil Engineering): Mansir Aminu (Universiti Teknologi PETRONAS).

PhD student under International Mobility Programme : Najhan Md Said

International Mobility (inbound), programme under the sponsorship of LabexMER, Université De Bretagne Occidentale (UBO) at the Institute Universites European De La Mer (IUEM), Brest, France from 25 August to 24 December 2017. Supervised by Dr. France Floch (IUEM) and Dr. Sophie Loyer (SHOM).