

Curriculum Vitae

Lim, Chai Heng

PERSONAL DETAILS AND CONTACT INFORMATION

Family name : Lim
Given name : Chai Heng
Nationality : Malaysian
Date of birth : 1979
Profession : Coastal Engineering, Physical Oceanography
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Cellular : +33 7 69 67 78 12
Languages : English, Mandarin and Malay (*Fluent*)
Indonesian and Cantonese (*Intermediate level*)



ACADEMIC QUALIFICATIONS

- Dr. rer. nat. (Physical Oceanography), Carl von Ossietzky Universität Oldenburg, Germany, 2014.
- M.Eng. (Coastal & Maritime), Universiti Teknologi Malaysia, 2006.
- B.Eng. (Hons) (Civil-Environmental), Universiti Teknologi Malaysia, 2002.

AREAS OF INTEREST AND WORK SCOPE

- Numerical modelling - waves, hydrodynamics, sediment transport and tsunami.
- Physical modelling and laboratory experiments in wave flume and basin.
- Computational fluid dynamics (CFD) modelling.
- Coastal and estuarine field measurements.
- Metocean data analysis.
- Coastal hydraulic studies.
- Laboratory and field instrumentation.
- Coastal/marine structures - floating breakwater and low-crested porous breakwater-reef systems.
- Storm/monsoon sea level surge, coastal erosion and protection, coastal evolution and longshore sediment transport, coastal and ocean processes, risk assessment and vulnerability studies.
- Professional/technical training.
- Business development and project coordination/management.
- Grants application.
- Writing of technical/scientific and budgetary proposals.
- Writing of technical reports and research manuscripts for publications.
- Postgraduate and undergraduate student supervision.
- International and national networking and collaborations.
- Presentations in conferences, workshops and other technical/scientific meetings.

PROFESSIONAL AFFILIATIONS

- Graduate member, Board of Engineers Malaysia (BEM).
- Graduate member, The Institution of Engineers, Malaysia (IEM).
- Assistant consultant for Environmental Impact Assessment (EIA) Studies, DOE Malaysia.
Areas of expertise registered: Hydraulics, Coastal Engineering and Maritime Studies.
- Graduate member, Institution of Civil Engineers (ICE), U.K.
- Member, The Malaysian Mangrove Research Alliance and Network (MyMangrove).
- Green card member, Construction Industry Development Board (CIDB), Malaysia.

EDUCATION, WORK AND RESEARCH EXPERIENCE

June 2018 - present

- *Postdoctoral Research Engineer, UFR Sciences et Techniques, Université de Rouen Normandie, Mont-Saint-Aignan, France.*

October 2016 - October 2017

- *Senior Lecturer (Research Track), Institute of Ocean and Earth Sciences (IOES), University of Malaya, Kuala Lumpur, Malaysia.*
 - ❖ *Associate Researcher, National Antarctic Research Centre (NARC)*
 - ❖ *Scientific Committee, IOES Higher Degree Program: Atmospheric & Coastal Ocean Dynamics*
 - ❖ *Scientific Committee, IOES Summer School Program*
 - ❖ *Visiting Researcher, ICBM, Universität Oldenburg, Germany (November - December 2016)*

October 2015 - September 2016

- *Senior Coastal Engineer, Angkasa Consulting Services Sdn Bhd, Selangor, Malaysia.*

June 2014 - May 2015

- *Senior Engineer, HR Wallingford Asia Sdn Bhd, Kuala Lumpur, Malaysia.*

October 2010 - January 2014

- *Carl von Ossietzky Universität Oldenburg, Germany.*
 - ❖ *Research Assistant (part-time, till Sep 2013)*
 - ❖ *Doctoral Student*
 - ❖ *Associate Researcher, IMCOAST program*

September 2009 - March 2010

- *Pre-doctoral Student, Katholieke Universiteit Leuven, Belgium.*

May 2008 - July 2009

- *Project Engineer & Manager, HR Wallingford Asia Pacific Regional Centre, Kuala Lumpur, Malaysia.*

July 2007 - November 2007

- *Lecturer (part-time), College of Science & Technology, Universiti Teknologi Malaysia (UTM).*

March 2002 - March 2008

- *Coastal & Offshore Engineering Institute (COEI), UTM.*
 - ❖ *May 2007 - Mar 2008* *Coastal Engineer & Research Officer*
 - ❖ *Oct 2005 - Oct 2006* *Research Officer*
 - ❖ *Jan 2005 - Sep 2005* *Research Engineer*
 - ❖ *Jan 2005 - Jun 2005* *Master's Student (part-time)*
 - ❖ *Nov 2003 - Dec 2004* *Master's Student (full-time)*
 - ❖ *Jun 2002 - Oct 2003* *Research Engineer*
 - ❖ *Mar 2002 - May 2002* *Research Trainee*

July 1998 - June 2002

- *Undergraduate Student in Civil-Environmental Engineering, UTM.*

COMPUTER APPLICATIONS AND SOFTWARE SKILLS

- Operating systems - Windows, Linux.
- Microsoft Office packages - MS Word, MS Excel, MS PowerPoint.
- LaTeX, Fortran, MATLAB.
- Meshing software - MIKE Zero's Mesh Generator, BlueKenue, Gmsh, Janet.
- Wave models: SWAN, MIKE 21 Spectral Waves FM.
- Hydrodynamic models: TELEMAC-2D, FVCOM, MIKE 21 Flow Model FM.
- Storm surge model: SuWAT (surge, wave and tide coupled model).
- Wave-induced seabed responses model: SWANDYNE II (HR version).
- CFD software: ANSYS CFX.
- Coastal/ocean related analysis tools: T_TIDE, DSAS, Refrac.
- Oceanographic data acquisition/logging software for field and laboratory measurements.
- Statistical analysis software: SPSS, MIKE Zero - EVA.
- 3ds max, Surfer, AutoCAD, ArcGIS.
- Adobe Photoshop, GIMP, MS Photo Editor.

RELEVANT ACHIEVEMENTS/AWARDS

- Awarded Early Career Scientist's Travel Support Grant by European Geosciences Union (2017).
- Awarded Engineering Scholarship by Katholieke Universiteit Leuven (2009 - 2010).
- Awarded UTM-PTP (Industrial Technology Development) M. Eng. Research Scholarship by MOSTI and supplementary funding by Seginiaga Rubber Industries Sdn. Bhd. (2003-2005).
- Awarded Dean's Gold Medal in conjunction with UTM's 37th Convocation, Malaysia (2002).

EXPERIENCE RECORDS

(1) Institute of Ocean and Earth Sciences, University of Malaya, Malaysia

Research Projects

1. Information on storm surges: What it means to Malaysians and how we can adapt (October 2017 - October 2019).
2. The impacts of Northeast Monsoon and sea level rise on sea level surge along the northeast coast of Peninsular Malaysia (April 2017 - August 2019).
3. Numerical study on hydrodynamics in Potter Cove, Antarctica (November 2016 - October 2018).

International Collaborative Project Coordination

1. TIO-IOES Eco-buoy deployment project (April 2017 - October 2017)
 - Project assistant coordinator, responsible for project planning and implementation, and liaising with counterparts from the Third Institute of Oceanography (TIO), Xiamen, China.
2. FIO-IOES metocean monitoring buoy deployment project (March 2017 - October 2017)
 - Project coordinator, responsible for project planning and implementation, technical and financial proposal preparation, permit application from the National Security Council, liaising with counterparts from the First Institute of Oceanography (FIO), Qingdao, China, contractor and government agencies.

Field Measurements

1. TIO-IOES joint field survey (May 2017)
 - Sites: Kelantan River estuary and coastal water, Perhentian Islands.
 - Tidal observations, current velocity measurements, sediment samplings, water samplings (TSS, conductivity, salinity, temperature), side-scan sonar (submarine geomorphology), drone-assisted aerial photography (land-use data).

Technical/Scientific Proposals Preparation and Grants Application

1. A total of sixteen (16) scientific proposals, one (1) technical proposal for metocean buoy deployment and one (1) application for travel support were prepared and submitted for funding. (see [Grants](#) section, only successful applications are listed).

Student Supervision

1. Supervising MSc and PhD students (see [Student Support and Supervision](#) section).

Publications and Presentations

1. Five (5) manuscripts relevant to tides, submerged breakwaters, air-ocean interactions and biochemical interactions were submitted for publications. Two (2) manuscripts on suspended sediments and tidal energy extraction are in preparation (see [Scientific/Technical Writings and Publications](#) section).
2. Several abstracts were submitted and presented (oral and poster) in Singapore, Malaysia, Austria and China (see [Scientific/Technical Writings and Publications](#) and [Presentations](#) sections).

International and National Networking and Collaborations

1. Developing and implementing continuous research and development opportunities in fundamental and applied research through participations in conferences and scientific meetings.
2. Establishing network and collaborations with universities, research organizations and industry in Malaysia, China, Japan, Germany, Belgium and Argentina.

Professional Services and Administrative Duties

1. Providing technical and administrative contribution (as a scientific committee member, rapporteur, expert advisor, main convener, chairperson, workshop organizer and panelist), evaluation (as a judge) and establishing expert linkage (as a coordinator and visiting researcher) (see [Professional Services](#) section).

(2) Angkasa Consulting Services Sdn Bhd, Selangor, Malaysia

Consultancy Projects

1. Estuarine and coastal hydraulic modelling study for the Sungai Pahang river mouth rehabilitation project, Pekan, Pahang (May 2016 - September 2016).
 - *Team management and supervision, work progress monitoring and project delivery.*
 - *Hydraulic study, numerical modelling (MIKE 21 Flow Model FM, Spectral Waves FM, Sediment Transport), metocean data processing and analyses, impact assessments and report writing.*
2. Coastal hydraulic study for the proposed Penang undersea tunnel (October 2015 - present).
 - *Project coordination, client liaison, team supervision, work progress monitoring and delivery.*
 - *Numerical modelling (MIKE 21), data analyses, EVA, impact assessments and report writing*
3. Tsunami modelling and risk assessment (October 2015 -September 2016).
 - *Tsunami model setup and modelling using MIKE 21 Flow Model FM and result analysis.*
4. Hydraulic study for the proposed jetty and infrastructure development at Pulau Besar and Pulau Pemanggil, Johor (October 2015 - May 2016).
 - *Project coordination, client liaison, team supervision, work progress monitoring and delivery.*
 - *Numerical modelling (MIKE 21 Flow Model FM, Spectral Waves FM), meteorological and ocean data analyses, EVA, impact assessments, report writing and presentations.*

(3) HR Wallingford Asia Sdn Bhd, Kuala Lumpur, Malaysia

Business Development and Project Management

1. Developing and implementing business growth opportunities in applied research and consultancy, mainly within the coastal, ocean and maritime market sectors.
2. Creating and building up long-term value for the company from clients and relationships by establishing collaborations with universities and research organizations in Malaysia and overseas.
3. Proposal preparation and project bidding.
4. Initiating, planning, organizing and executing projects; managing and monitoring resources and procedures to meet project requirements; and delivering results.

Project

1. The development of Malaysia Regional Model (MRM) (December 2014 - May 2015).
 - *TELEMAC implementation: meshing using BlueKenue, bathymetric and coastline data processing, model setup, model simulations, result analyses and post-processing.*

Laboratory Instrumentation and Hands-on Training

1. The commissioning of Universiti Putra Malaysia (UPM)'s wave generation system and instrumentation, and laboratory hands-on training (July 2014 - August 2014).

Professional Training and Course/Workshop Organization

1. Lead organizer for Short Course on Waves and Wave-Structure Interaction, UTM, Kuala Lumpur, Malaysia (April 2015).
2. Lead organizer and assistant instructor for Workshop on TELEMAC-2D, UTM, Kuala Lumpur, Malaysia (April 2015).

(4) ICBM, Carl von Ossietzky Universität Oldenburg, Germany

Research

1. Modelling waves and currents in Potter Cove, King George Island, Antarctica (October 2010 - September 2013).
 - Hydrodynamic and wave modelling
SWAN and FVCOM implementations: model grid setup, meshing using Gmsh, bathymetric and coastline data preparation and processing, model setup, model nesting or downscaling, model simulations on multiprocessor supercomputers (parallel HPC), result analyses and post-processing.
 - Data processing and analyses
 - i. *Wave buoy data, satellite altimeter data, tide gauge data.*
 - ii. *Wave spectral analysis, wave energy flux and dissipation, tidal harmonic analysis, tidal propagation and amplification, currents, bed shear stress, residence and flushing times.*
 - Statistical analysis
Statistical assessment of modelled results.
 - Technical writings, publications and presentations
Result interpretation, technical report & paper writings, scientific journal publications, and presentations in seminars, workshops and lectures in Germany, China and Argentina.

Tutoring and Students Co-supervision

1. Assisting in tutoring undergraduates; co-supervising and supporting interns, undergraduates and postgraduates in their projects (see [Student Support and Supervision](#) section).

(5) HR Wallingford Asia Pacific Regional Centre, Kuala Lumpur, Malaysia

Projects

1. Development of a 2D numerical wave flume for wave interaction with rubble mound breakwater and other coastal structures using CFX: Stage 1 - Free surface wave simulation and wave dissipation/absorption (March 2009 - July 2009).
 - *This study aimed to correctly model the free surface wave simulation and wave dissipation or absorption within the numerical wave flume using ANSYS CFX.*
2. Numerical study on the interaction of current and wave with submerged circular cylinders (June 2008 - July 2009).
 - *This study aimed to investigate and understand the wave-current-structure interaction using ANSYS CFX.*
3. Numerical study on wave-induced liquefaction to soil around marine structures: caisson breakwater and rubble mound breakwater (May 2008 - July 2009).
 - *Wave-induced liquefaction analysis using SWANDYNE II (HR version). This study aimed to investigate the stability of marine structures and the liquefaction potential of soil around the structures on soil bed subjected to different progressive wave conditions.*

Consultancy and Laboratory Instrumentation

1. Physical modelling and laboratory techniques support and wavemakers maintenance for Universiti Teknologi PETRONAS (UTP).
 - *July 2008 - Model setup, wave basin and instrumentation setup at Offshore Engineering Laboratory.*
 - *May 2009 - Preventive maintenance service for UTP's wavemakers.*
2. The commissioning of NAHRIM's multi-element wavemakers and instrumentation (August 2008 - November 2008).
 - *The commissioning of wavemakers and instrumentation (wave probes, force transducers, ship movement system) at Hydraulic and Instrumentation Laboratory.*

- *Mechanical installation of wavemaker's modules and beach frames in the wave basin, installation of cables, control room setup, pre-commissioning wavemakers and instrumentation.*
3. Initial assessment of proposed breakwaters for Adipala Power Station, Jawa Tengah, Indonesia (May 2008)
 - *Breakwater assessment in terms of rock size and size of Tetrapod armour units.*
 4. Other responsibilities and tasks:
 - Technical writings and presentations
Result interpretation, technical report writings and presentations in meetings and workshops.
 - Business development and project management
Supporting the company in project bidding on various applied research and consultancy jobs, and managing projects.

(6) Coastal and Offshore Engineering Institute, Universiti Teknologi Malaysia

Research and Consultancy Projects

1. Design and development of Shoaling Hollows as artificial reefs for marine habitat enhancement. The installation of prototype units of the Shoaling Hollows took place at Pulau Perhentian Besar, Terengganu, Malaysia (February - April 2008).
2. Coastal erosion assessment and hydraulic study for Tanjung Pelepas Port, Tg. Pelepas, Johor Darul Takzim (February 2008 - March 2008).
3. Tsunami modelling and impact studies for the north-western coast of Peninsular Malaysia (October 2007 - March 2008).
4. Hydraulic assessment of suspended sediment dispersion from the disposal site to the north of Penang Island (May 2007 - October 2007).
5. National Coastal Vulnerability Index (NCVI) study - Phase 1 (July 2006 - October 2006, July 2007 - October 2007).
6. Desk assessment of impacts of sand extraction in bulk, offshore Johore (March - April 2006).
7. Hydraulic study for the proposed island reclamation at Palm Springs Resort, Port Dickson, Negeri Sembilan (November 2005 - October 2006, May 2007 - February 2008).
8. Hydraulic study for the Penang waterfront city development project (July 2005 - March 2006).
9. Design, development and performance investigations of the Shoaling Hollow breakwater-reef system (low-crested porous breakwater) under wave action in marine environment for coastal restoration (June 2005 - October 2006, July 2007 - March 2008).
10. Investigations on the development and its impacts on island ecosystems in Malaysia: Pulau Langkawi, Pulau Tioman, Pulau Redang, Pulau Sibul and Pulau Tinggi (2004 - July 2006).
11. Hydraulic study for the feasibility of the proposed public marina at Sg. Melaka river mouth (2003).
12. System performance of a composite stepped-slope floating breakwater (2003 - 2005).
13. Hydraulic study for the proposed reclamation of Pulau Bunting, Yan, Kedah (2002 - 2003).
14. Hydraulic study for the design of the runway extension and Bird Island at Pulau Layang-Layang, Sabah (2002).
15. Laboratory investigations on wave energy dissipation over the edge of an oceanic atoll - Pulau Layang-Layang, Sabah, Malaysia (2002).
16. Investigations on the effectiveness of Malacca River rehabilitation (2001 - 2002).

Responsibilities and Tasks

Physical modelling

- Model construction and setting up, wave basin or wave flume and instrumentation setup, laboratory measurements, results and analysis.

Field measurements

- Deployment of oceanographic instruments in the coastal waters of South China Sea and Straits of Malacca and numerous major estuaries in Malaysia.
- Tidal observations, current velocity measurements, river flow measurements, sediment samplings, water samplings (for TSS, salinity, temperature, etc.).
- Field data collection experiences in Malaysia:
5 Jun-17 Jun 2007 Port Dickson, Negeri Sembilan

14 May-26 May 2007	Teluk Bahang-Sungai Pinang, Penang
10 May-12 May 2006	Pulau Sibul, Johor
28 Nov-11 Dec 2005	Port Dickson, Negeri Sembilan
18 Jul-24 Jul 2005	Jelutong, Penang
13 Jan-16 Jan 2005	Pulau Tioman, Pahang
10 Jan-12 Jan 2005	Pulau Langkawi, Kedah
23 Aug-27 Aug 2003	Borneo Marine Research Institute, UMS, Kota Kinabalu, Sabah
16 Mar-31 Mar 2003	Klebang-Ujong Pasir, Melaka
28 Sep-9 Oct 2002	Pulau Bunting, Yan, Kedah

Field and laboratory equipment and facilities operation, handling and maintenance

- Calibration, operation, handling, maintenance and/or purchase of laboratory wave gauges, data acquisition systems, pumps, wave generating systems in wave flumes and basin, etc.
- Assisting and supervising final year undergraduate students and young researchers on coastal engineering laboratory testing procedures and data analysis.
- Calibration, operation, handling, maintenance and/or purchase of field equipment: tide gauges, current meters, water samplers, soil grab samplers, river flow meters, surveying equipment, etc.
- Providing training to technicians and researchers/engineers on field equipment operation, setting up and handling and maintenance.

Data processing and analysis

- Primary and secondary data: waves, tides, current velocities, winds, river flows and discharges, shoreline changes, water samples, soil samples, land survey data, bathymetry, etc.

Contouring, gridding and 3D surface mapping, mesh generation and processing

- Data digitization, contouring, gridding and 3D surface mapping using Surfer.
- Mesh generation and processing using Janet for TELEMAC modelling.

Computer modelling and statistical analysis

- Shoreline change analysis using Digital Shoreline Analysis System (DSAS), to compute rate-of-change statistics from multiple historical vector shoreline positions residing in a GIS.
- Multiple linear regression analysis and diagnostics using SPSS, to model relationships among variables and to develop empirical equations for scientific research studies.
- Wave refraction analysis using REFRAC, to investigate nearshore shallow water wave conditions, to calculate wave transformation or wave rays with a given amplitude which propagate in an area of varying water depths from deep water to shallow water.

Technical writings, publications and presentations

- Result interpretation, technical report and scientific manuscript writings and presentations in meetings, seminars and conferences.

TEACHINGS

1. Numerical modelling of waves and currents with MIKE 21 application, short course for graduate scientists and engineers, Angkasa Consulting Services Sdn. Bhd., Selangor, Malaysia, 2016.
2. TELEMAC-2D application, short course and training for postgraduates, graduate scientists and engineers, UTM, Kuala Lumpur, Malaysia, 2015.
3. Laboratory measurement techniques and analysis, short course and training for technicians, postgraduates, lecturers and professors, UPM, Serdang, Malaysia, 2014.
4. Coastal and ocean hydrodynamic modelling, lecture for first degree undergraduates, Universität Oldenburg, Germany, 2012.
5. Introduction to building construction, lectures for diploma students, UTM, Kuala Lumpur, 2007.

STUDENT SUPPORT AND SUPERVISION

Supervision

1. Sya'rawi Mohd Sharoni, PhD candidate. Estimating the extreme sea level surge risks along the northeast coast of Peninsular Malaysia (2017)
2. Yim Kit Yen, MSc candidate. Development of warning systems for extreme rainstorms and flood hazards in Kelantan River Basin (2017).

3. Nur Ayeesha Qisteena Binti Muzir, MSc candidate. Ocean as a source of potential energy resources: A review of current status and future prospects in a Malaysian context, Universiti Malaya (2017)
4. Choy Cheng Kong, MSc degree. Ocean as a source of potential energy resources: An assessment of the potential of Malaysian seas, Universiti Malaya (2017).
5. Rabiatul Adawiyah Binti Zakaria, Intern and MSc candidate. The impacts of northeast monsoon and sea level rise on sea level surge along the northeast coast of Peninsular Malaysia (2017).

Co-supervision

1. Lou Kah Hou, B.Eng. candidate, Modelling of waves and tides at Kerteh Port using SuWAT, Universiti Teknologi PETRONAS (2017).
2. Lachmi Sri A/P Manoharan, Master of Civil Engineering, Design Optimization and Hydraulic Performance Characterization of a Porous Breakwater, Universiti Teknologi PETRONAS (2017).
3. Shahirah Hayati Mohd Salleh, PhD degree. The impacts of climate change and extreme river flow on sediment transport patterns in an estuary, Universiti Kebangsaan Malaysia (2016 - present).

Academic or Research Support

1. Sebastian Grashorn, PhD degree. Wave-current interaction in coastal areas (2013).
2. Hendrik Schawe, Bachelor degree. High-resolution modelling (2013).
3. Julia Schloen, Bachelor degree. Modelling of dispersion of fresh- and saltwater sources in Jade Bay to assess ecological consequences (2013).
4. Lukas Halekotte, Bachelor degree. Simulation of temperature dependent growth of bacteria in the German Bight with the ocean model ROMS (2013).
5. Stefan Berg, Bachelor degree. Jade Bay (2012).
6. Christian Behnken, Bachelor degree. Turbulence in an East-Frisian tidal channel. Comparison of high-resolution model studies with observations (2012).
7. Martin Reck, Master's degree. A regional hydrodynamic model of the North Sea - Properties of residual currents and response to variations in the oceanographic conditions (2012).
8. Edna Rödig, Master's degree. Fluxes of heat and freshwater and their impact on the circulation of an inverse subtropical estuary (Hervey Bay, Australia) (2012).
9. Soeren Ahmerkamp, Bachelor degree. On wave motions at the steep slope of a coral reef (2010).

GRANTS

1. Principal Investigator, Research University Grant (RU Grant). Information on storm surges: What it means to Malaysians and how we can adapt (2017 - 2019).
2. Co-Principal Investigator, University of Malaya Research Program (UMRP). Observational and numerical study of meteorological and hydrodynamic characteristics over northern Antarctic Peninsula (2017 - 2020).
3. Principal Investigator, University of Malaya BKP Research Grant. The impacts of northeast monsoon and sea level rise on sea level surge along the northeast coast of Peninsular Malaysia (2017 - 2019).
4. Member, YUTP-FRG Grant. Hydraulic and hydrodynamic characteristics of a rapidly installed floating breakwater system for wave protection of onshore and offshore facilities (2017 - 2020).
5. Award Recipient, Early Career Scientist's Travel Support Grant by European Geosciences Union EGU (2017).
6. Principal Investigator, PADI Foundation 2017 Grant. The impacts of northeast monsoon and sea level rise on sea level surge along the northeast coast of Peninsular Malaysia (2017 - 2019).
7. Member, Newton-Ungku Omar Fund (UK-SEA-NUOF). High Density Air Quality Monitoring in the Klang Valley (Malaysia) - A New High Resolution Observational Capability (2017 - 2018).
8. Principal Investigator, University Malaya Research Programme 2016. Numerical study on hydrodynamics in Potter Cove, Antarctica (2016 - 2018).
9. Member, HR Wallingford In-House Research Grant. The development of Malaysia Regional Model (2014 - 2015).
10. Associate Researcher, EUROPOLAR ERA-NET. Impacts of climate induced glacial melting on marine coastal systems in the Western Antarctic Peninsula region (IMCOAST) (2010 - 2013).
11. Member, HR Wallingford In-House Research Grant. Development of a 2D numerical wave flume for wave interaction with coastal structures: Stage 1 - Free surface wave simulation and wave dissipation/absorption (2009 - 2009).

12. Member, HR Wallingford In-House Research Grant. Numerical study on the interaction of current and wave with submerged circular cylinders (2008 - 2009).
13. Member, HR Wallingford In-House Research Grant. Numerical study on wave-induced liquefaction to soil around marine structures: caisson breakwater and rubble mound breakwater (2008 - 2009).

PROFESSIONAL SERVICES

1. Rapporteur, Forum on Climate Change: Impact and Responses, The Everly Putrajaya, Putrajaya, Malaysia, 5 September 2017.
2. Scientific Committee, 7th Malaysia International Seminar on Antarctica (MISA), Primula Beach Hotel, Kuala Terengganu, Malaysia, 15-17 August 2017.
3. Chairperson & Lead Organizer, SuWAT modelling and application training workshop, University of Malaya, Kuala Lumpur, Malaysia, 14-18 August 2017.
4. Main Convener and Chairman, Session OS19: Estuarine and Coastal Oceanography: Modelling, Observations, Physics and Biogeochemistry, 14th Annual Meeting - Asia Oceania Geosciences Society (AOGS), SUNTEC Singapore Convention & Exhibition Centre, Singapore, 6-11 August 2017.
5. Expert Advisor, Meet the Experts Program, 14th Annual Meeting - Asia Oceania Geosciences Society (AOGS), SUNTEC Singapore Convention & Exhibition Centre, Singapore, 8 August 2017.
6. Judge, Outstanding Student Poster and PICO (OSPP) Awards, Li Y & Ellingsen SÅ (2017) Approximate dispersion relation for surface waves on current with arbitrary depth dependence. Geophysical Research Abstracts, Vol. 19, EGU2017-18112-1, European Geosciences Union (EGU) General Assembly, Vienna, Austria, 25 April 2017.
7. Chairman, IOES Scientific Seminar Series, "Complete mitochondrial genome of *Gracilaria* seaweeds by Next Generation Sequencing" by Dr. Song Sze Looi, Research Management and Monitoring Complex, University of Malaya, Kuala Lumpur, Malaysia, 15 March 2017.
8. Panel Discussant, Cooperation Opportunities between China and ASEAN countries on Marine Disaster Prevention and Mitigation, International Workshop on Marine Disaster Prevention and Mitigation, Xiamen, China, 5 November 2016.
9. Rapporteur, Round Table Session on Climate Change and its Impact on Ecosystems and Bioresources (Australia-Malaysia Research Seminar Series 3), Institute of Graduate Studies, University of Malaya, Kuala Lumpur, Malaysia, 17 October 2016.
10. Scientific Committee, IOES Higher Degree Program: Atmospheric and Coastal Ocean Dynamics, 1 January 2017 - 9 October 2017.
11. Scientific Committee, IOES Summer School Program, 1 January 2017 - 9 October 2017.
12. Visiting Researcher, Institute for Chemistry and Biology of the Marine Environment (ICBM), Carl von Ossietzky Universität Oldenburg, Germany, 28 November 2016 - 9 December 2016.
13. Associate Researcher, National Antarctic Research Centre, 10 October 2016 - 9 October 2017.

SCIENTIFIC/TECHNICAL WRITINGS AND PUBLICATIONS

Peer-Reviewed Journal Articles

1. Monien P, Lettmann KA, Monien D, Asendorf S, Wöfl A-C, **Lim CH**, Thal J, Schnetger B, Brumsack H-J (2014) Redox conditions and trace metal cycling in coastal sediments from the maritime Antarctic. *Geochimica et Cosmochimica Acta* 141: 26-44, doi: 10.1016/j.gca.2014.06.003.
2. Wöfl A-C, **Lim CH**, Hass HC, Lindhorst S, Tosonotto G, Lettmann KA, Kuhn G, Wolff J-O, Abele D (2014) Distribution and characteristics of marine habitats in a subpolar bay based on hydroacoustics and bed shear stress estimates - Potter Cove, King George Island, Antarctica. *Geo-Mar Lett* 34(5): 435-446, doi: 10.1007/s00367-014-0375-1.
3. **Lim CH**, Lettmann K, Wolff J-O (2013) Numerical study on wave dynamics and wave-induced bed erosion characteristics in Potter Cove, Antarctica. *Ocean Dyn* 63(11-12):1151-1174, doi: 10.1007/s10236-013-0651-z.

Manuscripts Submitted for Publication or Under Major Revision

1. Salleh SHM, Ahmad A, Mohtar WHMW, **Lim CH**, Maulud KNA (2018) The impacts of projected sea level rise on suspended sediment distribution in a tropical estuary. Manuscript is under major revision. (*Regional Studies in Marine Science*)

2. Tamahrajah J, Ladan M, **Lim CH**, Wark M, Roessner F, Basirun WJ, Ibrahim S (2017) An electrochemical insight on colloidal silica to relate biosilification and zeolite syntheses. Manuscript submitted for publication. (*The Journal of Physical Chemistry*)
3. Viswambharan N, Jayakrishnan PR, Sivaprasad P, Chenoli SN, **Lim CH** (2017) Recent trend in the cross-equatorial flow over the East Pacific in Northern Summer. Manuscript submitted for publication. (*Journal of Applied Meteorology and Climatology*)
4. Chenoli S, Jayakrishnan PR, Samah AA, Ooi SH, Mazuki MYA, **Lim CH** (2017) Southwest monsoon onset dates over Malaysia and associated climatological characteristics. Manuscript is under major revision. (*Journal of Atmospheric and Solar-Terrestrial Physics*)
5. **Lim CH**, Lettmann KA, Wolff J-O, Samah AA, Chenoli SN (2017) Numerical modelling study of tides and tidal dynamics around Bransfield Strait and the northern Antarctic Peninsula. Manuscript is under major revision. (*Polar Research*)
6. Manoharan LS, Teh HM, **Lim CH** (2017) Wave transmission of submerged breakwaters consisting multiple pipes. Manuscript submitted for publication. (*ARPJ Journal of Engineering and Applied Sciences*).

Manuscripts in Preparation

1. Goh HB, Lai SH, **Lim CH** (2017) Headland site selection for tidal energy extraction and hydrodynamic impact assessment in a mild tidal current strait.

Scientific/Technical Reports and Technical Notes

1. Angkasa Consulting Services Sdn Bhd (2016) Coastal hydraulic modelling for impact assessment: Penang-Butterworth undersea tunnel. Technical notes 1 & 2.
2. Angkasa Consulting Services Sdn Bhd (2016) Hydraulic study for the proposed development of facility, infrastructure and utility at Pulau Besar and Pulau Pemanggil islands, Johor Darul Ta'zim. Study report.
3. Brumsack H-J, Monien D, Monien P, **Lim CH**, Lettmann K, Wolff J-O, Schloss I, Busso AAS, Henkel S, Staubwasser M (2013) Geochemical characterization and fate of the dissolved and particulate load of glacial melt waters of the Potter Cove watershed, King George Island, (western Antarctic Peninsula). In: Abele D (ed) Impact of climate induced glacial melting on marine coastal systems in the Western Antarctic Peninsula region (IMCOAST). Alfred Wegener Institute for Polar and Marine Research (AWI), Bremerhaven, Germany. Research report, Ref: 06-RNP-047 (LESC).
4. Hass HC, Kuhn G, Wölfl A-C, Wittenberg N, Deregibus D, Quartino LM, Tosonotto G, Sahade R, Lindhorst S, Roberts SJ, Braun M, Monien P, Monien D, **Lim CH**, Strelin J, Fuentes V (2013) The coastal depositional environment in KGI fjord and bay systems. In: Abele D (ed) Impact of climate induced glacial melting on marine coastal systems in the Western Antarctic Peninsula region (IMCOAST). Alfred Wegener Institute for Polar and Marine Research (AWI), Bremerhaven, Germany. Research report, Ref: 06-RNP-047 (LESC).
5. **Lim CH** and Vun PL (2009) Geotechnical research: SWANDYNE - Rubble mound breakwater modelling. HR Wallingford, UK. Technical note DKD0356-02.
6. **Lim CH** and Vun PL (2009) Geotechnical research: SWANDYNE - Caisson breakwater modelling. HR Wallingford, UK. Technical note DKD0356-01.
7. **Lim CH** (2009) Literature/documents review: Jazan Economic City, Saudi Arabia - Seawater cooling system. Literature review report.
8. Wahab AKA, Ismail H, Sidek FJ, Ismail Z and **Lim CH** (2008) Hydraulic study for the proposed island reclamation at Palm Springs Resort, Port Dickson, Negeri Sembilan. Study report.
9. Universiti Teknologi Malaysia (2008) Tsunami modelling and impact studies for the north-western coast of Peninsular Malaysia. Inception report.
10. Ismail H, Wahab AKA, Sidek FJ, **Lim CH** and other authors (2007). National coastal vulnerability index study - Phase 1. Study report.
11. Wahab AKA, Sidek FJ, Ismail Z and **Lim CH** (2007) Hydraulic assessment of suspended sediment dispersion from the disposal site to the north of Penang Island. Study report.
12. Ismail H, Wahab AKA and **Lim CH** (2006) Study on the development and its impacts on island ecosystems in Malaysia: Pulau Langkawi, Pulau Tioman, Pulau Redang, Pulau Sibul and Pulau Tinggi. Study report (report in Malay language).
13. **Lim CH** and Sidek FJ (2006) Design, development and system performance investigations on Shoaling Hollows (low-crested porous breakwater~reef system). Conceptual description and preliminary findings report.

14. Ismail H, Teh HM and **Lim CH** (2002) Physical modelling study for the design of the runway extension and Bird Island at Pulau Layang-Layang, Sabah. Technical report.

Conference Proceedings Articles

1. **Lim CH** and Sidek FJ (2007) The development and performance of an innovative low-crested porous breakwater~reef system. Proceedings of the Malaysia-Japan International Symposium on Advanced Technology 2007 (MJISAT 2007), Kuala Lumpur, Malaysia, 12-15 November 2007.
2. **Lim CH** and Ismail H (2004) Performance of a composite floating breakwater system. Proceedings of the 6th Annual IEM Water Resources Colloquium, Petaling Jaya, Malaysia, 12 June 2004.
3. Ismail H, Teh HM and **Lim CH** (2003) Laboratory investigations on wave energy dissipation over the edge of an oceanic atoll. Proceedings of the Technical Seminar on Shoreline Management, Kota Kinabalu, Sabah, Malaysia, 18-19 August 2003.

Conference/Seminar/Workshop Abstracts

1. **Lim CH**, Lettmann K, Wolff J-O, Samah AA, Chenoli SN (2017) Tidal propagation and amplification in the Bransfield Strait, Antarctica: An unstructured grid ocean modelling study, 14th Annual Meeting - Asia Oceania Geosciences Society (AOGS), Singapore, 6-11 August 2017.
2. **Lim CH** (2017) Floating breakwater and breakwater~reef system for coastal protection and restoration, IOES Scientific Seminar Series, Video Conference Room, Research Management and Monitoring Complex, University of Malaya, Kuala Lumpur, Malaysia, 3 May 2017.
3. **Lim CH**, Lettmann K, Wolff J-O, Samah AA (2017) Wave dynamics and hydrodynamics in Potter Cove, King George Island, Antarctica. Geophysical Research Abstracts, Vol. 19, EGU2017-87, European Geosciences Union (EGU) General Assembly, Vienna, Austria, 23-28 April 2017. Presentation slides: http://presentations.copernicus.org/EGU2017-87_presentation.pdf
4. **Lim CH** (2016) Coastal and marine risks, hazards and disasters - A Malaysian context. Proceedings of the International Workshop on Marine Disaster Prevention and Mitigation, Xiamen, China, 5 November 2016 (Panel Discussion).

Theses/Dissertation

1. **Lim CH** (2014) Modelling waves and currents in Potter Cove, King George Island, Antarctica. PhD thesis, Carl von Ossietzky Universität Oldenburg, Germany. <http://oops.uni-oldenburg.de/1798/>
2. **Lim CH** (2006) System performance of a composite stepped-slope floating breakwater. Master's thesis, Universiti Teknologi Malaysia, Malaysia. <http://eprints.utm.my/3705/>
3. **Lim CH** (2002) Investigations on the effectiveness of Malacca River rehabilitation. B.Eng. final year dissertation, Universiti Teknologi Malaysia, Malaysia [dissertation in Malay language].

PRESENTATIONS

1. Chenoli SN, Hai OS, Samah AA, Musiran SS, Mazuki MYA, **Lim CH**, "*Factors affecting heavy rainstorms that caused devastating flooding across the east coast of Peninsular Malaysia*", IOES HICoE Seminar: Air-Ocean-Land Interactions and Processes, University of Malaya, Kuala Lumpur, Malaysia, 12 September 2017 (oral presentation by Chenoli SN).
2. Zakaria RA, Sharoni SM, **Lim CH**, Kim S, Teh HM, Samah AA, "*Hurt by climate change: How storm surges and sea level rise make coastal life risky and how we can adapt?*", IOES HICoE Seminar: Air-Ocean-Land Interactions and Processes, University of Malaya, Kuala Lumpur, Malaysia, 12 September 2017 (poster presentation).
3. Chenoli SN, Hai OS, Samah AA, Musiran SS, Mazuki MYA, **Lim CH**, "*Factors affecting heavy rainstorms that caused devastating flooding across the east coast of Peninsular Malaysia*", IOES HICoE Seminar 2017, University of Malaya, Kuala Lumpur, Malaysia, 12 September 2017 (oral presentation by Chenoli SN).
4. Manoharan LS, Teh HM, **Lim CH**, "*Wave transmission of submerged breakwaters consisting multiple pipes*", 1st International Conference on Architecture and Civil Engineering (ICACE 2017), Kuala Lumpur, Malaysia, 8-9 May 2017 (oral presentation by Manoharan LS).
5. **Lim CH**, Lettmann K, Wolff J-O, Samah AA, Chenoli SN, "*Tidal propagation and amplification in the Bransfield Strait, Antarctica: An unstructured grid ocean modelling study*", 14th Annual Meeting - Asia Oceania Geosciences Society (AOGS), Singapore, 6-11 August 2017 (oral presentation).

6. **Lim CH**, "Floating breakwater and breakwater~reef system for coastal protection and restoration", IOES Scientific Seminar Series, Video Conference Room, Research Management and Monitoring Complex, University of Malaya, Kuala Lumpur, Malaysia, 3 May 2017.
7. **Lim CH**, Lettmann K, Wolff J-O, Samah AA, "*Wave dynamics and hydrodynamics in Potter Cove, King George Island, Antarctica*", European Geosciences Union (EGU) General Assembly, Vienna, Austria, 23-28 April 2017 (oral presentation). Presentation slides: http://presentations.copernicus.org/EGU2017-87_presentation.pdf
8. Anne-Cathrin Wöfl, **Chai Heng Lim**, H. Christian Hass, Karsten Lettmann, Gerhard Kuhn, Jörg-Olaf Wolff, "*Detection of factors that control the marine habitat distribution in a periglacial environment (Potter Cove, King George Island, Antarctica)*", 12th International Symposium on Marine Geological and Biological Habitat Mapping (GeoHab 2013), Rome, Italy, 6-10 May 2013 (oral presentation by Wöfl A-C).
9. **Chai Heng Lim**, Karsten Lettmann, Jörg-Olaf Wolff, "*Estimating the Water Mass Exchange Time Scales and Sediment Erosion Characteristics in Potter Cove*", IMCOAST Workshop, Alfred-Wegener-Institute for Polar and Marine Research (AWI), Bremerhaven, Germany, 12-14 November 2012 (oral presentation).
10. **Chai Heng Lim**, Karsten Lettmann, Jörg-Olaf Wolff, "*Numerical Modelling of Wind Waves in Potter Cove, Antarctica*", ICBM Seminar, Universität Oldenburg, Germany, 23 July 2012 (oral presentation).
11. **Chai Heng Lim**, Karsten Lettmann, Jörg-Olaf Wolff, "*Hydrodynamics and Bed Shear Stress in Potter Cove*", ICBM Lecture, Universität Oldenburg, Germany, 20 July 2012 (oral presentation).
12. **Chai Heng Lim**, Karsten Lettmann, Jörg-Olaf Wolff, "*Modelling Waves and Currents in Potter Cove, Antarctica*", 4th IMCOAST Workshop, Palacio San Martin, Buenos Aires, Argentina, 16-20 April 2012 (oral presentation).
13. **Chai Heng Lim**, Karsten Lettmann, Jörg-Olaf Wolff, "*Tidal Dynamics and Flow Pattern over Complex Bottom Topography in Potter Cove, Antarctica*", 10th International Workshop on Multiscale (Un-)structured Mesh Numerical Modelling for Coastal, Shelf and Global Ocean Dynamics (IMUM 2011), Kilmahaus, Bremerhaven, Germany, 22-25 August 2011 (poster presentation).
14. **Chai Heng Lim**, Karsten Lettmann, Jörg-Olaf Wolff, "*Modelling Tidal Dynamics and Flow Patterns over Complex Bottom Topography in Potter Cove, Antarctica, using Unstructured Grid Finite Volume Coastal Ocean Model*", 3rd International Workshop on Modeling the Ocean (IWMO-2011), The First Institute of Oceanography (FIO), Qingdao, China, 6-9 June 2011 (poster presentation).
15. **Chai Heng Lim**, Karsten Lettmann, Jörg-Olaf Wolff, "*Multi-scale Hydrodynamic Modelling of Potter Cove, Maxwell Bay, Antarctica, using an Unstructured Grid Finite Volume Coastal Ocean Model*", 3rd IMCOAST esf-EUROPOLAR Workshop, Alfred-Wegener-Institute for Polar and Marine Research (AWI), Bremerhaven, Germany, 9-13 May 2011 (oral presentation).
16. **Chai Heng Lim** and Pui Lee Vun, "*Rubble Mound Breakwater Model Construction and Demonstration on Wave Transformation over the Breakwater in a Wave Basin with Regular, Random and Oblique Waves*", Hydraulic model and wave simulation presentations during the opening ceremony of the Offshore Engineering Laboratory, 8-10 July 2008 at the Universiti Teknologi PETRONAS, Tronoh, Perak, Malaysia.
17. **Lim Chai Heng**, "*STEPFLOAT: The Stepped-Slope Floating Breakwater - An Effective Wave Energy Dissipator and Innovative System for Wave Attenuation and Coastal Shelter*", IHOCE '05, PWTC, Kuala Lumpur, Malaysia, 5-7 July 2005 (poster presentation).
18. **Lim Chai Heng**, "*Physical Modelling Study on the Proposed Airport Runway Extension Project at Pulau Layang-Layang, Sabah*", TSSM '03, Sutera Harbour Resort, Kota Kinabalu, Sabah, 18-19 August 2003 (poster presentation).

RELEVANT ATTENDANCE AT SPECIALIST LECTURES, WORKSHOPS, SEMINARS, CONFERENCES AND COURSES

1. *IOES HICoE Seminar: Air-Ocean-Land Interactions and Processes*, 12 September 2017, Auditorium, Institute of Graduate Studies Building, University of Malaya, Kuala Lumpur, Malaysia.
2. *SuWAT Modelling and Application Training Workshop*, 14-18 August 2017, Computer Laboratory, Research Management & Innovation Complex (IPPP), University of Malaya, Malaysia.
3. *14th Annual Meeting - Asia Oceania Geosciences Society (AOGS)*, 6-11 August 2017, SUNTEC Singapore Convention & Exhibition Centre, Singapore.

4. *Inaugural Workshop of the Malaysian Mangrove Research Alliance & Network (MyMangrove)* organized by Institute for Environment and Development (LESTARI), 26 July 2017, Universiti Kebangsaan Malaysia (UKM), Selangor, Malaysia.
5. *European Geosciences Union EGU 2017 General Assembly*, 23-28 April 2017, Austria Center Vienna, Vienna, Austria.
6. *Workshop on National Plan of Action - Coral Triangle Initiative (NPOA-CTI)* organized by MOSTI, 4-6 April 2017, Ramada Plaza, Melaka, Malaysia.
7. *The 24th Session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE-XXIV)*, 27-31 March 2017, Grand Ballroom, Renaissance Hotel Kuala Lumpur, Kuala Lumpur, Malaysia.
8. *Lecture on Complete mitochondrial genome of Gracilaria seaweeds by Next Generation Sequencing* by Dr. Song Sze Looi, 15 March 2017, IOES Scientific Seminar Series, Video Conference Room, Research Management and Monitoring Complex, University of Malaya, Kuala Lumpur, Malaysia.
9. *Workshop on Disaster Resilient Cities: Risk Assessment and Forecasting of Geophysical and Atmospheric Hazards*, 9-10 March 2017, Hotel Istana, Kuala Lumpur, Malaysia.
10. *Elsevier Publishing Workshop: Writing a Great Paper and Getting it Published in a Research Journal* by Valerie Teng-Broug, Journal Publisher, Elsevier & Nicholas Pak, Solutions Consultant, Elsevier, 23 February 2017, Auditorium, Level 4, Central Library, University of Malaya, Kuala Lumpur, Malaysia.
11. *International Workshop on Marine Disaster Prevention and Mitigation*, 5 November 2016, Coastal and Ocean Management Institute (COMI), Xiamen University, Xiamen, China.
12. *Course on Floodplain Modelling and Workshop on Flood Modeller Application* by Matthew Kennedy, Flood Risk Team Leader of CH2MHILL, 24-25 October 2016, Cube Room, IGS Building, Universiti Malaya, Kuala Lumpur, Malaysia.
13. *Australia-Malaysia Research Seminar Series 3 - Climate Change and Its Impact on Ecosystems and Bioresources*, 10 October 2016, Auditorium, IGS Building, Universiti Malaya, Kuala Lumpur, Malaysia.
14. *Workshop on TELEMAT-2D* by Juliette Parisi, Marine Engineer and Numerical Modeller of HR Wallingford, 15-17 April 2015, Pentium Room, Advanced Informatics School (AIS), UTM, Kuala Lumpur, Malaysia.
15. *Short Course on Waves and Wave-Structure Interaction* by Dr Giovanni Cuomo, Research Director of HR Wallingford, 13-15 April 2015, Seminar Room, Advanced Informatics School (AIS), UTM, Kuala Lumpur, Malaysia.
16. *Seminar on Physical Modelling Application and Technology (PHYMAT)*, 30 October 2014, Mini Auditorium, National Hydraulic Research Institute of Malaysia (NAHRIM), Selangor, Malaysia.
17. *Lecture on Downscaling Anthropogenic Climate Change for the Northwest European Shelf* by Dr. Uwe Mikolajewicz, Zentrum für Marine und Atmosphärische Wissenschaften (ZMAW), Max-Planck-Institut (MPI) für Meteorologie, Hamburg, Germany, 3 July 2013, ICBM Colloquium, ICBM Lecture Room W15 1-146, Oldenburg, Germany.
18. *IMCOAST Workshop on The Impact of Climate Induced Glacier Melt on Marine Coastal Systems in the West Antarctic Peninsula Region*, 12-14 November 2012, Alfred-Wegener-Institute for Polar and Marine Research (AWI), Bremerhaven, Germany.
19. *Lecture on A Suite of Userfriendly Global Circulation Models (The Planet Simulator) - Hysteresis Experiments* by Prof. Dr. Klaus Frädrich, Meteorologischen Institut der Universität Hamburg, Germany, 18 July 2012, ICBM Colloquium, ICBM Lecture Room W15 1-146, Oldenburg, Germany.
20. *4th IMCOAST Workshop on The Impact of Climate Induced Glacier Melt on Marine Coastal Systems in the West Antarctic Peninsula Region*, 16-20 April 2012, Palacio San Martin, Buenos Aires, Argentina.
21. *Lecture on The Southern Ocean's Evolving State over the Last Three Decades Inferred from Ocean Salinity, Temperature and Oxygen Changes* by Prof. Dr. Nathan Bindoff, Director for the Tasmanian Partnership for Advanced Computing (TPAC), University of Tasmania, Hobart, Tasmania, Australia, 21 December 2011, ICBM Colloquium of the University of Oldenburg at ICBM Lecture Room, Oldenburg, Germany.
22. *10th International Workshop on Multiscale (Un-)structured Mesh Numerical Modelling for Coastal, Shelf and Global Ocean Dynamics (IMUM 2011)*, 22-25 August 2011, Klimahaus, Bremerhaven, Germany.
23. *The 22nd Pacific Science Congress - Meeting the Challenges of Global Change (PSC22)*, 14-17 June 2011, Kuala Lumpur Convention Centre (KLCC), Kuala Lumpur, Malaysia.

24. *3rd International Workshop on Modeling the Ocean (IWMO-2011)*, 6-9 June 2011, The First Institute of Oceanography (FIO), Qingdao, China.
25. *3rd IMCOAST esf-EUROPOLAR Workshop on The Impact of Climate Induced Glacier Melt on Marine Coastal Systems in the West Antarctic Peninsula Region*, 9-13 May 2011, Alfred Wegener Institute for Polar and Marine Research (AWI), Bremerhaven, Germany.
26. *Lecture on Numerical Problems and Solutions in Coastal Oceanography* by Prof. Dr. Hans Burchard, Leibniz Institute for Baltic Sea Research, Department for Physical Oceanography and Instrumentation, Rostock-Warnemünde, Germany, 18 November 2010, Geophysical Colloquium of the University of Hamburg at ZMAW-Building, Hamburg, Germany.
27. *Lecture on The Use of Spectral Wave Model in Practice* by Prof. Jaak Monbaliu, Professor of Coastal Engineering, Hydraulics Laboratory, Department of Civil Engineering, K.U.Leuven, Belgium, 7 October 2009, Lecture Room, Ghent University, Belgium.
28. *Lecture on Sediment Transport Modelling* by Prof. Erik Toorman, Professor of Hydraulic Engineering, Hydraulics Laboratory, Department of Civil Engineering, K.U.Leuven, Belgium, 8 September 2009, Seminar Room, Department of Civil Engineering, Leuven, Belgium.
29. *Training Course on General Principles of Environmental Impact Assessment (EIA)* by Ms. Geetha P. Kumaran, Director of Enviro Enhance Sdn Bhd, Honorary Secretary General of Environmental Management and Research Association of Malaysia (ENSEARCH), a registered EIA Consultant with the DOE Malaysia, 11 March 2009, ENSEARCH Training Centre, Dataran Sunway, Kota Damansara, Selangor, Malaysia.
30. *The Commissioning and Training of HR Wallingford Multi-Element Wavemakers and Instrumentation* by Simon Tiedeman, HR Wallingford Ltd, U.K., 28-31 October 2008, Hydraulic and Instrumentation Laboratory, National Hydraulic Research Institute of Malaysia (NAHRIM), Seri Kembangan, Selangor, Malaysia.
31. *The Malaysia-Japan International Symposium on Advanced Technology 2007 (MJISAT 2007)* organized by Malaysia Japan University Center (MJUC), 12-15 November 2007, Seri Pacific Hotel, Kuala Lumpur, Malaysia.
32. *Seminar on Eco-Engineering Technologies for Environmental Protection* by Assoc. Prof. Ir. Dr. Roslan Hashim, Department of Civil Engineering, University of Malaya and Prof. Dr. Noraini Mohd. Tamin, University of Malaya Maritime Research Centre, Institute of Research, Management and Consultancy, University of Malaya, Kuala Lumpur, Malaysia, 11 September 2007, Auditorium IPS, Universiti Malaya, Kuala Lumpur, Malaysia.
33. *Seminar on New Technologies for the Enhancement of the Coastal Environment and Marine Habitat* by Prof. Lee E. Harris, Department of Marine & Environmental Systems, Florida Institute of Technology, Melbourne, USA, 30 July 2007, Dewan Jumaah, UTM, Kuala Lumpur, Malaysia.
34. *Workshop on ArcGIS 9.2 Application*, 9-11 July 2007, Faculty of Civil Engineering, UTM, Malaysia.
35. *Workshop on Development and Impacts on Island Ecosystems* organized by Universiti Sains Malaysia and Malaysia Centre for Remote Sensing, 22-23 May 2006, Gurney Hotel, Penang, Malaysia.
36. *Short Course on Marina and Waterfront Development* by Dr. John F. Riddell (Former reader, Department of Civil Engineering, University of Strathclyde, United Kingdom), 12-14 September 2005, Awana Porto Malai, Langkawi, Malaysia.
37. *Workshop on TELEMAC-2D Modelling* by Associate Prof. Dr. Ahmad Khairi Abd. Wahab (Head of Department of Hydraulics and Hydrology, UTM, Malaysia), 24-25 August 2005, COEI, UTM, Kuala Lumpur, Malaysia.
38. *Short Course on Understanding the Generation, Propagation, Near and Far-Field Impact of "TSUNAMIS" including Modelling and Planning Strategies to Prepare for Future Events* by Prof. Dr. Ahmet Yalciner (Director, Ocean Engineering Research Centre, Middle East Technical University, Ankara, Turkey), 11-12 July 2005, Pan Pacific Hotel, Kuala Lumpur, Malaysia.
39. *2nd International Hydrographic and Oceanographic Industry 2005 Conference and Exhibition (IHOCE '05)*, 5-7 July 2005, Putra World Trade Centre, Kuala Lumpur, Malaysia.
40. *Seminar on "Guidelines for Engineers Practising in the Coastal Zone" and "State-of-the-Art Real-Time Monitoring of Beach Processes-A Case Example of the Gold Coast, Australia"* by Prof. Ronald John Cox (Director, Water Research Laboratory, School of Civil & Environmental Engineering, University of New South Wales, Australia), 10 July 2004, UTM, Kuala Lumpur, Malaysia.
41. *Colloquium on Coupling Real-Time Data Acquisition with Hybrid (Physical and Numerical) Modelling for Monitoring and Management of Environmental Systems* by Prof. Ronald John Cox (Director, Water Research Laboratory, School of Civil & Environmental Engineering, University of New South Wales, Australia), 8 July 2004, Faculty of Civil Engineering, UTM, Skudai, Malaysia.

42. *Refresher Course on Understanding Coastal Engineering for Non-Coastal Engineers* by Prof. Ronald John Cox (Director, Water Research Laboratory, School of Civil & Environmental Engineering, University of New South Wales, Australia), 6-7 July 2004, Corus Hotel, Kuala Lumpur, Malaysia.
43. *6th Annual Institution of Engineers, Malaysia (IEM) Water Resources Colloquium*, 12 June 2004, Bangunan Ingenieur, Petaling Jaya, Malaysia.
44. *Short Course on Dredging for Land Reclamation* by Dr. John F. Riddell (Former reader, Department of Civil Engineering, University of Strathclyde, United Kingdom), 20-22 August 2003, Sutera Harbour Resort, Kota Kinabalu, Sabah, Malaysia.
45. *2nd Technical Seminar on Shoreline Management (TSSM 2003)*, 18-19 August 2003, Sutera Harbour Resort, Kota Kinabalu, Sabah, Malaysia.
46. *Seminar on Applications of Hydroinformatics in Socio-Technology* by Prof. Michael Abbott, 10 August 2002, UTM, Kuala Lumpur, Malaysia.
47. *Seminar on Coastal Hydroinformatics and Applications of Decision Support System* by Dr. Vladan Babovic (Danish Hydraulic Institute), 1 April 2002, UTM, Kuala Lumpur, Malaysia.

ATTENDANCE AT OTHER LECTURES, COURSES AND EXHIBITIONS

1. *37th IAHR World Congress*, 13-18 August 2017, Putra World Trade Centre, Kuala Lumpur, Malaysia.
2. *CEO Tech Talk: Embracing Industry 4.0 - Will Universities Make the Difference for Malaysia* by Datuk Shahril Ridza Ridzuan, CEO, EPF, 12 July 2017, Auditorium, High Impact Research Building, University of Malaya, Kuala Lumpur, Malaysia.
3. *Elsevier Publishing Campus Author Workshop: Writing a Great Paper and Getting It Published in a Research Journal, Getting Your Paper Noticed* by Valeria Teng-Broug, Senior Publisher and Nicholas Pak, Solutions Consultant, Elsevier, 23 February 2017, Auditorium, Level 4, Central Library, University of Malaya, Kuala Lumpur, Malaysia.
4. *Flood Control Asia 2014*, 20-21 November 2014, MATRADE Exhibition & Convention Centre, Kuala Lumpur, Malaysia.
5. *Safety and Health Induction Course for Construction Personnel* by Koperasi Staf CIDB Berhad, 3 November 2013, CIDB Training Room, Ayer Keroh, Melaka, Malaysia.
6. *Course on Presentation Skills for Academics* by Richard Dawton, Oldenburg, Germany, 27 July 2012 and 3 August 2012, Room V01 3-322, Carl von Ossietzky Universität Oldenburg, Germany.
7. *Training course on Scientific Writing: How to Publish in Peer-Reviewed Journals* by Dr Gunther Tress, Tress & Tress GbR, Munich, Germany, 13-15 July 2011, Room W15 2-234, ICBM, Carl von Ossietzky Universität Oldenburg, Germany.
8. *Course on An Introduction to the Data Library PANGAEA* by Dr. Stefanie Schumacher & Dr. Rainer Sieger, Alfred Wegener Institute for Polar and Marine Research (AWI) Bremerhaven, Germany, organized by MARUM/GLOMAR, 2 December 2010, Seminar Room 2060, MARUM, Universität Bremen, Germany.
9. *Lecture on Good Scientific Practice* by Dr. Birte Junge, Coordinator of Integrated Research Training Group, Institute for Chemistry and Biology of the Marine Environment (ICBM), 8 November 2010, Lecture Room W15-1-146, ICBM, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany.