Academic Program Review Committee (No.2/FY2014)

25 October 2014
Hotel Grand Chancellor
Launceston, Tasmania, Australia

through the good offices of
Australian Maritime College

Agenda

Chair
Piotr Jedrzejowicz
Rector, Gdynia Maritime University

1. Welcome and Opening Address  For info

2. Research Oriented Project
   (a) Final Report of FY2013 projects  To note
   (b) Confirmation on FY2014 projects  To note
   (c) Selection of Research Proposals for FY2015  To decide

3. Progress Report on IAMU Journal  To note

4. AGA papers and presentations: LEC of AGA15  For info

5. Any other business
### IAMU 2013 Research Projects (Research Period: 1st May 2013 - 31st May 2014)

<table>
<thead>
<tr>
<th>Member Institution</th>
<th>Research Title</th>
<th>Budget</th>
<th>Progress</th>
<th>Presentation at AGA14</th>
<th>Summary Report</th>
<th>Final Report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1st Payment</td>
<td>Final Payment</td>
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<tr>
<td>Polytechnic</td>
<td>Simulation-based model course to demonstrate seafarers' competence</td>
<td>$60,000</td>
<td>$36,000</td>
<td>$24,000</td>
<td>Marcel la Castells I Sanabra</td>
<td>26 Mar 2014</td>
</tr>
<tr>
<td>University of</td>
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<td>31 May 2014</td>
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<tr>
<td>Catalonia, Faculty</td>
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<td>of Nautical Studies</td>
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<td>Barcelona (PUC-FNS)</td>
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<td>Marcel la Castells I Sanabra</td>
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<td></td>
<td>11 Jun 2013</td>
<td>10 Sep 2014</td>
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<tr>
<td>Liverpool John</td>
<td>Development of taxonomy for deck officers' non-technical skills (NTS) and</td>
<td>$54,000</td>
<td>$32,400</td>
<td>$21,600</td>
<td>Ramin Riahi</td>
<td>26 Mar 2014</td>
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<tr>
<td>Moores University</td>
<td>analysing training needs for human element, leadership and management</td>
<td></td>
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<td></td>
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<td>30 May 2014</td>
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<tr>
<td>(LJMU)</td>
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<td>Ramin Riahi</td>
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<td></td>
<td></td>
<td>28 May 2013</td>
<td>21 Aug 2014</td>
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<td>Constanta Maritime</td>
<td>MARSA - Enhancing safety Awareness of the Maritime Personnel</td>
<td>$57,000</td>
<td>$34,200</td>
<td>$22,800</td>
<td>Radu Hanzu-Pazara</td>
<td>27 Mar 2014</td>
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<td>University (CMU)</td>
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<td>30 May 2014</td>
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<td>Radu Hanzu-Pazara</td>
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<td>23 May 2013</td>
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<td>Ho Chi Min City</td>
<td>One World Classroom for Future Seafarers: A design of a new virtual E-</td>
<td>$50,000</td>
<td>$15,000</td>
<td>$35,000</td>
<td>Momoko Kilada, Johan Boimsten and May Soe Aung</td>
<td>28 Mar 2014</td>
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<tr>
<td>University of</td>
<td>learning environment for Maritime Education and Training</td>
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<td>31 May 2014</td>
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<td>Transport (HCMC-UT)</td>
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<td>Trong Hieu Pham</td>
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<td></td>
<td>03 Jun 2013</td>
<td>25 Aug 2014</td>
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Total $221,000 $117,600 $103,400 $221,000
<table>
<thead>
<tr>
<th>Member Institution</th>
<th>Research Title</th>
<th>Budget</th>
<th>1st Payment</th>
<th>Final Payment</th>
<th>Total Payment</th>
<th>Progress</th>
<th>Presentation at AGA15</th>
<th>Progress Report (March 2015)</th>
<th>Final Report (May 2015)</th>
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<tbody>
<tr>
<td>20140106 Shanghai Maritime University (SMU)</td>
<td>Model Course on Navigation in Polar Waters</td>
<td>$60,000</td>
<td>$36,000</td>
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<td>$36,000</td>
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<tr>
<td></td>
<td>Qinyou Hu</td>
<td></td>
<td></td>
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<td>Qinyou Hu</td>
<td>04 Jun 2014</td>
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<td>20140203 World Maritime University (WMU)</td>
<td>A CSR awareness program to enhance capacity building in good governance of multi-cultural employees and safe operations - Good Governance of Multi-cultural Safety (PGMS)</td>
<td>$60,000</td>
<td>$36,000</td>
<td></td>
<td>$36,000</td>
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<tr>
<td></td>
<td>Lisa Loloma Froholdt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lisa Loloma Froholdt</td>
<td>29 May 2014</td>
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<td>20140301 Istanbul Technical University, Maritime Faculty (ITUMF)</td>
<td>Improving Energy Efficiency Of Ships Through Optimisation Of Ship Operations</td>
<td>$57,000</td>
<td>$34,200</td>
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<td>$34,200</td>
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<td>Ozcun Arslan</td>
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<td>Ozcun Arslan</td>
<td>29 May 2014</td>
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<tr>
<td>20140401 Tokyo University of Marine Science and Technology (TUMSAT)</td>
<td>Evaluation of Bridge Teammates' Mental Workload for simulator-based training Using Physiological Indices</td>
<td>$60,000</td>
<td>$36,000</td>
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<td>$36,000</td>
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<td></td>
<td>Tadatsuugi Okazaki</td>
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<td><strong>Total</strong></td>
<td></td>
<td><strong>$237,000</strong></td>
<td><strong>$142,200</strong></td>
<td><strong>$0</strong></td>
<td><strong>$142,200</strong></td>
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</table>
Call for Research Proposals for FY2015 - Guideline
(Research Period: May 2015 to May 2016)

Theme 1: Improving MET within the context of STCW (Max. USD 60,000)
Possible key concepts to be structured and explored within the theme:
- Implementation of STCW
- Training in environmental protection
- E-navigation
- Technology on board ship

Desirable Goals
- To collect and analyse data regarding the implementation of new STCW Convention requirements in different MET systems
- To explore methods for optimisation of seafarer training for marine environmental protection in polar areas
- To study ECDIS operating anomalies as precursors of navigational accidents
- To study the application of satellite navigation systems and performance standards for multi-system navigation receivers
- To investigate the effects of the increasing use of technology aboard ships: anticipating changes and responding with appropriate training, certification and manning

Theme 2: Marine environmental issues (Max. USD 60,000)
Possible key concepts to be structured and explored within the theme:
- Energy efficiency
- Emission reduction
- Pollution prevention

Desirable Goals
- To contribute to the development of energy efficient design and operating parameters, and reduction of ship-sourced emission
- To analyse the potential need for amendments to MARPOL and related model courses
- To explore environmental issues related to the offshore industry
- To explore environmental issues related to maritime transport in polar areas

Theme 3: Maritime safety and security issues (Max. USD 60,000)
Possible key concepts to be structured and explored within the theme:
- Emergency procedures
- Human factors
- Ship routeing for polar regions considering Formal Safety Assessment
- Security at sea

Desirable Goals
- To develop emergency procedures for ships operating in remote areas (with a special emphasis on cruise ships)
- To explore human factor issues for ships operating in extreme cold
- To apply Formal Safety Assessment in ship routing (including in polar areas)
- To study contemporary maritime security issues including illegal immigration, piracy and armed robbery at sea (considering the relevance of the ISPS Code)

**Theme 4: Optional theme**  
(Max. USD 60,000)

Applicants to this optional theme are required to describe possible key concepts to be structured and explored within the theme as well as a couple of desirable goals in their application forms (Form 1-b).

**Note:**
Each IAMU member institution can submit only one (1) proposal per theme.
Form 1-a is for Theme 1, 2 and 3
Form 1-b is only for Theme 4
### Assessment Results (RP FY2015) applications

<table>
<thead>
<tr>
<th>Theme</th>
<th>No</th>
<th>Title</th>
<th>by APRC</th>
<th>Criteria</th>
<th>Evaluation Results</th>
<th>Budget Requirement to The NF (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>Optimization of future seafarers' training in the process of English and cross-cultural communication learning</td>
<td>Average</td>
<td>3.0 3.8 2.8 3.3 2.5 4.0</td>
<td>19.5</td>
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<td></td>
<td>2</td>
<td>Simulators of radar system and radio navigation system for improving MET</td>
<td>Average</td>
<td>3.5 3.5 2.5 2.8 2.3 2.5</td>
<td>16.5</td>
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<tr>
<td></td>
<td>3</td>
<td>Enhancing the international applicability of STCW - a cross-cultural comparison of methods for the development and assessment of non-technical competence</td>
<td>Average</td>
<td>3.5 3.5 2.8 3.3 3.8 3.3</td>
<td>19.0</td>
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<td></td>
<td>4</td>
<td>VTS-Bot: Analysis and implementation of a student-centred learning approach by using a ChatBot computer programme to provide for an outcome-based maritime communication training (JUAS)</td>
<td>Average</td>
<td>4.0 4.5 4.5 4.5 3.0 4.5</td>
<td>25.0</td>
<td>Select 60,000</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Enhancing qualifications via Performance Assessment Schemes through practical courses comply with occupational competencies in STCW'2010: &quot;PASSTCW'2010&quot;</td>
<td>Average</td>
<td>3.8 3.5 2.8 3.0 2.5 2.8</td>
<td>17.5</td>
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<td></td>
<td>6</td>
<td>Simulation-based model course to demonstrate seafarers' competence for marine engineer and electrotechnical officer disciplines. Design of complete revalidation model courses. (5-year research proposal)</td>
<td>Average</td>
<td>3.5 3.5 2.5 3.0 3.0 3.0</td>
<td>18.0</td>
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<tr>
<td></td>
<td>7</td>
<td>Improving the procedure of updating academic curriculum of Maritime Education and Training institutions within the context of new STCW requirements, through common work in collaborative partnerships</td>
<td>Average</td>
<td>3.8 4.3 3.3 3.8 3.8 4.3</td>
<td>23.5</td>
<td>Back Up</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>STCW and the Shortage of Qualified Marine Engineers</td>
<td>Average</td>
<td>3.8 3.5 3.3 3.0 3.8 2.5</td>
<td>19.0</td>
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<tr>
<td></td>
<td>9</td>
<td>Assessing the Use of the Internet for Delivery of Maritime Training</td>
<td>Average</td>
<td>4.3 4.0 3.0 3.5 4.0 4.8</td>
<td>23.5</td>
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<tr>
<td></td>
<td>10</td>
<td>Ship energy efficiency determination by exhaust gas emission measurements on board ships</td>
<td>Average</td>
<td>3.5 3.8 2.8 2.8 2.8 3.5</td>
<td>19.0</td>
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<td></td>
<td>11</td>
<td>Development of Methodology to Measure and Assess Ship Emissions (AMC)</td>
<td>Average</td>
<td>4.8 4.8 4.0 4.5 3.8 4.3</td>
<td>26.5</td>
<td>Select 60,000</td>
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<tr>
<td>Theme No</td>
<td>Title</td>
<td>by APRC</td>
<td>Criteria</td>
<td>Evaluation Results</td>
<td>Budget Requirement to The NF (USD)</td>
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<tr>
<td>20150301</td>
<td>The analysis and assessment of landing conditions of vessels on the ground in the limited space.</td>
<td>Average 3.0 2.8 2.5 2.3 2.3 1.5</td>
<td>14.5</td>
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<tr>
<td>20150302</td>
<td>A Critical Evaluation of the International Regulations for Preventing Ship Collisions with Offshore Platforms (abbreviated as S/O collisions)</td>
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<tr>
<td>20150303</td>
<td>Developing measuring methods, safety prevention of electric accumulation on tankers and training model course.</td>
<td>Average 3.5 3.0 3.3 3.0 3.0</td>
<td>17.5</td>
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<tr>
<td>20150304</td>
<td>Formal Safety Assessment in Polar Maritime Transportation : As Applied to Routing, Emergency Procedures and Human Factors (FORSASS.POMARTRA) (FMIMUN)</td>
<td>Average 4.8 4.3 4.0 4.0 3.8</td>
<td>25.5</td>
<td>Select 60,000</td>
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<tr>
<td>20150305</td>
<td>Formal Safety Assessment for the voyage through the Arctic Northeast passage including the consideration of satellite-based shiprouting services (FSA Arctic Shipping)</td>
<td>Average 4.0 4.0 4.3 4.0 3.5</td>
<td>23.5</td>
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<tr>
<td>20150306</td>
<td>Electro Magnetic Fields (EMFs) Pollution Prevention on Potential Seafarer Activities (Acronym : EMF-PP)</td>
<td>Average 2.8 2.8 3.0 3.0 2.8</td>
<td>17.0</td>
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<td>20150401</td>
<td>An analysis and development of overt behavioural markers for the objective assessment of deck officers’ competence in a bridge simulator</td>
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<td>20150402</td>
<td>Graph Theoretical Modeling of Optimal Ship Navigation in Ice Covered Waters</td>
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<td>16.5</td>
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<td>20150403</td>
<td>Virtual Training Ship for Global Seafares - Developing a course concept for STCW's Communicative Competence Training in the Multi-Users Virtual Environment (phase II)</td>
<td>Average 4.3 3.8 3.5 3.3 3.0</td>
<td>23.0</td>
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<tr>
<td>20150404</td>
<td>Development of Curricula Model on CSR Management for Shipping Companies and License Marine Officers</td>
<td>Average 4.3 4.0 3.8 3.8 4.0</td>
<td>22.0</td>
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<tr>
<td>20150405</td>
<td>E-Maritime Medicine for seafarers students and seamanship physicians (CMU)</td>
<td>Average 4.0 4.0 3.5 3.5 4.3</td>
<td>23.0</td>
<td>Select 58,320</td>
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<tr>
<td>20150406</td>
<td>Creating a Maritime International Exchange (MIX) program</td>
<td>Average 4.0 4.0 3.8 3.5 2.8</td>
<td>20.5</td>
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2nd October 2014

Dr. Takeshi Nakazawa  
Secretary, International Association of Maritime Universities  
Toranomon 35 Mori Building 7F,  
3-4-10 Toranomon,  
Minato-ku, Tokyo 105-0001, Japan  
nakazawa@iamu-edu.org

Dear Takeshi,

Re: APRC's Recommendation for Research Proposal Funding in FY2015

After completion of a thorough and transparent review process, the Working Group of the Academic Program Review Committee (APRC) has selected four winning proposals listed in the table below and is recommending that they be funded in FY2015.

Table: Recommended research proposals for FY2015

<table>
<thead>
<tr>
<th>Research Project Title</th>
<th>Coordinator</th>
<th>Member</th>
<th>Budget(USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTS-BoF: Analysis and implementation of a student-centred learning approach by using a ChatBot computer programme to provide for an outcome-based maritime communication training</td>
<td>Peter John, Senior Lecturer of Maritime English</td>
<td>JUAS</td>
<td>60,000</td>
</tr>
<tr>
<td>Development of Methodology to Measure and Assess Ship Emissions</td>
<td>Vikram Garaniya, Course Coordinator, BE (Marine &amp; Offshore Engineering)</td>
<td>AMC</td>
<td>60,000</td>
</tr>
<tr>
<td>Formal Safety Assessment in Polar Maritime Transportation: As Applied to Routing, Emergency Procedures and Human Factors (FORSASS POMARTRA)</td>
<td>James R. Parsons, Academic Director – Master Maritime Management</td>
<td>FMIMUN</td>
<td>60,000</td>
</tr>
<tr>
<td>E-Maritime Medicine for seafarers students and seafarers physicians</td>
<td>Cornel Panait, Vice Rector</td>
<td>CMU</td>
<td>58,320</td>
</tr>
</tbody>
</table>

Table: A runner-up in case of withdrawal

<table>
<thead>
<tr>
<th>Research Project Title</th>
<th>Coordinator</th>
<th>Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving the procedure of updating academic curriculum of Maritimes Education and Training institutions within the context of new STCW requirements, through common work in collaborative partnerships</td>
<td>Nicoleta Acomi, Ph. D. Lecturer, Navigation Department</td>
<td>CMU</td>
</tr>
</tbody>
</table>

In accordance with the established procedure for the final acceptance, please, in your capacity as Secretary of IAMU, forward the APRC recommendation to the International Executive Board for approval?

Sincerely yours,

Professor Piotr Jedrzejowicz  
President of Gdynia Maritime University  
Head of APRC