

# Report

**(1) Name of Lecturer:** Ioan NISTOR

**(2) Position:** Associate Professor

**(3) Affiliation:** Department of Civil Engineering at the University of Ottawa, Canada

**(4) Short Biography:**

Dr. Ioan NISTOR is an Associate Professor of Hydraulic and Coastal Engineering in the Department of Civil Engineering of the University of Ottawa, Canada, and Vice-Dean Graduate Studies of Faculty of Engineering. Dr. Nistor is a coastal and hydraulic engineer researching hazards associated with extreme hydrodynamic loading on infrastructure (tsunami impact on infrastructure, extreme wave and flood forces on structures, dam failure phenomena, etc.) and he is currently the Vice-Chair of the Maritime and Coastal Division of International Association for Hydro-Environment Engineering and Research (IAHR) and a member of the Board of Directors of the Canadian Coastal Science and Engineering Association. He is also a voting member of the new ASCE7 Subcommittee for the elaboration of New Design Guidelines for Tsunami-Resistant Buildings. Dr. Nistor is also an Associate Editor of the Coastal Engineering Journal (JSCE – Japan), of the Canadian Journal of Civil Engineering (CSCE), and of the Maritime Engineering Journal (ICE – UK). He is the winner of several research and teaching awards: 2010 Award of the Tsunami International Society, 2010 Excellence in Education Award of the University of Ottawa, 2009 John V. Marsh Teaching Award of the Faculty of Engineering, 2005 Ontario Ministry for Infrastructure Renewal.

**(5) Subject and Schedule of the Lectures:**

The following lectures were offered as a part of the course "Coastal and Estuarine Processes – Advanced Environmental Coastal Engineering" offered in the Department of Civil and Environmental Engineering of Hiroshima University.

June 6, 2014, 14:35-16:05 Course Outline Presentation / Introduction / Engineering Lessons from Reconnaissance Tsunami Field Investigations from the 2011 Japan Tohoku Tsunami

June 9, 2013, 10:30-12:00 Wave Theory: Linear, Stokes and Cnoidal Waves/Coastal modelling

June 10, 2013, 10:30-12:00 Surfzone Hydrodynamics - Wave transformation and breaking

June 11, 2013, 10:30 – 12:00 and 12:50-14:20 Sediment Transport Mechanisms /Sediment Capping

June 11, 2013, 10:30 – 12:00 Coastal Morphodynamics

The first lecture contains an introduction on coastal modeling, with various examples of research projects in coastal and hydraulic engineering. The second part of the lecture dealt with an comprehensive presentation of the engineering lessons drawn from a post-tsunami forensic investigation of the impact of the 2011 Tohoku Tsunami on the built infrastructure along the Sanriku coastline in Japan.

Lecture two is dealing various basic wave theories, particularly linear wave theory. The lectures are specially designed for coastal engineers, but any regular graduate civil engineering student with a reasonable background in mathematics, fluid mechanics and hydraulics can follow the lectures.

Lecture five deals with the nearshore wave transformation (diffraction, refraction, shoaling, etc) and wave

breaking in the surfzone.

Lecture six deals with sediment transport mechanisms (cross-shore and long-shore) under the action of wave and currents.

Lecture 7 is a supplementary reading lecture dealing with the morphodynamic processes that lead to changes in the long-shore and cross-shore beach profile evolution.

**(6) Comments:**

The course was a very interesting opportunity to expose students from different specializations to basic concepts of Coastal Engineering. Some observations:

- a. I think Japanese students need to be encouraged to communicate more during the class. While I am relatively familiar with the Japanese culture having lived in Japan for 3 years as a PhD Monbusho student myself, I think University may need to introduce some classes of Communication and Professional Development to help Japanese students to get more comfortable to interact.
- b. Several students seem to be VERY tired and dosed off. I tried to speak very loud change my tone, move in class, make some additional lectures, distractions, etc, but, nothing seemed to work... Just as mentioned last year, I think that the students need to be also guided in learning work/life balance since this is important for their capacity of learning and advancing their knowledge.
- c. One very important point is that the students were very polite and courteous and seemed to take genuine interest in the course. In any case, I hope I was able to capture their attention
- d. I was able to present also some engineering/research applications of the course concepts and students seemed very receptive to this approach.

Students have been asked to prepare one simple assignment for this section of the course. Below are the results of the two assignments which I asked that they prepare:

Student name	Mark	Comments
Student A	Pass	Very good assignments, probably some of the best and one of the few students who seemed very alert during lectures and interested to learn. He did an excellent job on the tsunami assignment!
Student B	Pass	Good English skills, some minor mistakes; good translation of the required text (tsunami report of 1896)
Student C	Pass	Good report and interesting assignment n1. However, he did not translate the text I asked (I guess he simply forgot). In any case, he seemed the most interested student in the class, asked questions and seemed very keen on the subject.
Student D	Pass	Good English and very interesting (albeit challenging) idea to dampen the tsunami wave using wave interference. Also, good translation of the Japanese tsunami report
Student E	Pass	The second assignment is very short and a bit unclear – I would have hoped for better one; the translation of the Japanese tsunami text is reasonable.
Student F	Pass	Very good English. No translation of the Japanese text since she “was not able to read it” as she mentioned. The tsunami report part was interesting with three different parts.
Student G	Pass	Good English for the first assignment but did not submit the second assignment on tsunami...

Student H	Pass	Very good English and good essay; provided also a concise description of the Japanese tsunami text
Student I	Pass	He submitted the first assignment but did not submit the second assignment.
Student J	Pass	Good essay and very well prepared assignment 1! His tsunami report was also interesting and well prepared.
Student K	Pass	Very organized assignments and analytic mind! He has prepare two quite good reports. However, he forgot to translate the Japanese text which I asked for.
Student L	Pass	I was disappointed that while the first assignment was good, the second assignment was almost inexistent – almost did not pass...
Student M	Pass	Very good English and probably the best assignment on tsunami and, for sure the best translation of the old Japanese report of the 1896 Sanriku Tsunami.
Student N	Pass	Very good assignments, especially the tsunami one; he did not, however, translate the Japanese report though – probably forgot to do it.
Student O	Pass	Good English, some minor spelling mistakes. She actually translated some of the text and did a very good job on both assignments. Seemed very interested in the subject.



