



**Oceanic Engineering Society (OES), Newfoundland and Labrador Chapter
Institute of Electrical and Electronics Engineers (IEEE), NL Section
Marine Technology Society (MTS), NL Chapter**

Technical Lecture Program

**Wednesday, November 20, 2013, 1900 hrs
Room EN4000 (Engineering Faculty / Staff Lounge)
S.J. Carew Building, 4th Floor
Memorial University of Newfoundland**

3D Modelling of Underwater Structures

**Dr. Richard Charron
Chief Science Officer, Whitecap Scientific Corporation, St. John's, NL**

The generation of 3D models from video, laser and/or sonar data is a very active domain in the machine vision community. The general objective is to reconstruct metrically-correct 3D models of objects directly from sensor data, preferably with minimal post-processing intervention.

The presentation will describe recent techniques and trends which, together with sensor developments, are showing good promise for generation of photo-realistic models of large environments. Results from a recent demonstration project will highlight the promise and some of the technical challenges when the task is carried out under water.

Dr. Charron is co-founder and Chief Science Officer at Whitecap Scientific Corporation since 2011, where he is engaged in developing vision-based technologies with special focus on marine applications. He received the BSc degree in Mathematics from the University of New Brunswick, MMath in Applied Mathematics from the University of Waterloo, and PhD degree in Mathematics from the University of New Brunswick. He held academic appointments at the University of New Brunswick and Memorial University of Newfoundland from 1984-2000. Dr. Charron was Director of Sonar Signal Processing at Guigne International from 2000 to 2006, and continued on as Director of Research and Development at PanGeo Subsea from 2006 to 2011.

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