



Acoustic Seabed Classification Workshop

Friday 13th April 2012

Centro regionale per lo Studio della Dinamica dei Litorali (CreStDiL)

Polo Tecnologico di Magona

Cecina (LI)

Agenda

08:30 – 09:00	Install software and datasets
09:00 – 09:15	Introduction and acknowledgements
09:15 – 10:15	Introduction to acoustic theory
10:15 – 10:30	Coffee break
10:30 – 12:00	QTC SWATHVIEW - Acoustic classification of multibeam data: <ul style="list-style-type: none">Load multibeam dataQuality control – clean dataGenerate rectanglesCompensate for survey geometryGenerate features
13:00 – 14:30	QTC SWATHVIEW - Continue data classification workflow: <ul style="list-style-type: none">ClusterClassifyUsing ground truth to label acoustic classes
14:30 – 15:00	QTC CLAMS - Applications and Visualization
15:00 – 15:15	Coffee Break
15:15 – 16:00	QTC SWATHVIEW – Acoustic classification of sidescan images
16:00 – 16:30	Summary and discussion

Jointly hosted by CreStDiL, GNRAC, F.A.R.O. and Quester Tangent Corp

Host - Prof. Enzo Pranzini - Florence University, on behalf of GNRAC and CreStDiL

Host - Claudio Badin, F.A.R.O., 39 329 057 8650, info@faromarine.com

Instructor - Dr. Jon Preston, Chief Scientist, Quester Tangent, 1 250-654 3316, jpreston@questertangent.com

Pre-registration is requested (epranzini@unifi.it). Max number of participants is 25.

Jon Preston has twelve years experience as a research scientist with the Department of National Defence, Canada. At Defence Research Establishment Pacific (DREP), Victoria, BC, he developed mine countermeasures technology, particularly processing of high-frequency imagery, and towfish altitude and position measurement and control. Much of the work done by the DREP mine countermeasures group can be seen in the route survey payload of the 12 Maritime Coastal Defence Vessels operated by the Canadian Navy.

Starting about 1995, his research interests broadened to include both acoustic and invasive sensing of sediments, and he led several multi-faceted research cruises focusing on sediments. During his years at DREP he published over 20 internal reports and 10 papers in conference proceedings. He was technical chairman of the IEEE OCEANS 93 conference. He joined Quester Tangent Corporation (QTC) in late 1998. There he leads the research and development into acoustic seabed classification for which QTC is known around the world. This work is the basis of tutorials that he has presented at Ocean conferences since 2004. He led the development of the swath classification software QTC SWATHVIEW (a merger of QTC MULTIVIEW and QTC SIDEVIEW) for multibeam and sidescan processing. These software suites and QTC's products for single-beam classification are widely used.

Dr. Preston's BSc is from McMaster University, 1970. His PhD work, in the plasma physics group at the University of British Columbia (UBC), dealt mostly with sensors, diagnostic equipment, and signal processing. Between graduation from UBC in 1974 and moving to DREP in 1987, he was responsible for Canada's research and development program in automatic detection of chemical warfare compounds. This work led to a family of new detectors used in many NATO armies, 25 internal reports, 4 journal papers, and 2 patents. He is an adjunct professor at the School of Earth and Ocean Sciences, University of Victoria.