

KLEIN MARINE SYSTEMS

2019 SIDE SCAN SONAR TRAINING

THE DIFFERENCE IS IN THE IMAGE!!



Klein Marine Systems, the world leading manufacturer of high-quality side scan sonars, will be hosting a three (3) day side scan sonar training at the Seacoast Science Center in Rye Beach, NH. Practical sessions on UNH Gulf Challenger, based in Newcastle, NH.

Participants will develop a thorough understanding of sonar image analysis as well as obtain hands-on experience with single beam sonars such as the dual-frequency Klein 4900 and the high-speed, high-resolution Multi-Beam Klein 5000 V2.

Dates: June 11-13, 2019 8:00 am —6:00 pm

Who should attend:

Hydrographers, First Responders, Police and Fire Fighters, Marine Construction Surveyors, UXO SAR & Salvage Operators, Geologist and Habitat Mapping Specialists and Archeologists. The training will be held in English.

Training Topics

Principles of underwater acoustics (Sonar Record Analysis, Targets & Shadows, reflectivity of underwater materials, detailed target and shadow analysis, targets in the Water Column Under the Towfish) **Noise and Interference** (Surface Return, Acoustic Noise, Electronic Noise, Refraction and Biological Noise) **Anomalies** (Second Sweep Returns, Cross Talk, Multi-Path, Ringing, Hyperbolas and Flaring) **General Sonar Imagery** (Shipwrecks, Hazardous Drums, Aircrafts, Automobiles, Fishing Gear, Marine Structures, Debris Fields) **Navigation** (Layback and Target Positioning, Search Patterns, Range/Overlap, Shallow Water Operations, Small Target Search, Crime Scene/Accident Mapping, Artificial Reef Surveys, Drowning Victims, Operating Sonar & MAG Simultaneously, Deep Tows)

Guest Speakers

Keith Cormican ~ President / Owner Search & Recovery, LLC has been a Certified Public Safety Diving expert since 1990, maintains 5 Dive Rescue International Certifications and Instructor Trainer for Emergency Response Diving International. Keith also formed Bruce's Legacy which is a volunteer organization providing emergency assistance, education, public safety awareness and search and recovery operations for drowned victims to provide resolution for families in North America.

Ron Coit ~ Manager, Sonar Operations ~ Canadian Armed Forces ~ Royal Canadian Navy has over 17 years in the Royal Canadian Navy with an expertise in passive acoustics and Sonar operations and is a subject matter expert in CMS 330 Operating Systems in regard to Sonar operations. Ron was responsible for the coordination of NATO exercises and training with 3-6 NATO units organizing integrated scenarios to accomplish common training and missions.

Training Costs:

\$800 USD per participant

\$700 USD for Law Enforcement, Military and University students

* Price includes training materials, training certificate and lunch each day.

Training Space is Limited ~ Make sure you register early!

For reservations contact Sales@KleinMarineSystems.com or call Carol Morrissey at +1 (603) 893-6131 Ext. 272



Image of the Italian Submarine Scire located near Haifa (Israel).
Image acquired at 8 knots with Klein Sonar. Courtesy of Elbit Systems Inc.