

Underwater acoustic metrology training - Best practice for in-situ ocean acoustic measurement

Location: National Physical Laboratory, Hampton Road, Teddington, Greater London, UK

Date: Monday, 19th December 2016

COURSE SCHEDULE

Morning

- **Welcome, and Introduction to course**
- **Introduction to underwater acoustics** (quantities, metrics, basic principles)
- **Hydrophones and instrumentation** (transduction principles, hydrophones, instrumentation)
- **Performance, calibration and traceability** (basic principles, response sensitivity, directivity, environmental dependence, noise floor)
- **Underwater autonomous acoustic recorders** (principle of operation, system design)
- **State-of-the art system characterisation and calibration methodology** (methods for system sensitivity testing and performance evaluation)
- **Standardisation in underwater acoustic calibration and measurement** (international standards, updates, and new initiatives)

Afternoon

- **Techniques for *in-situ* acoustic measurements in the ocean** (choice of hydrophone and instrumentation, performance requirements, *in-situ* checks and data QA)
- **Deployment of acoustic systems** (practical considerations for mounting, types of deployments, elimination of parasitic signals)
- **Measurement of ambient noise** (requirements for measurement of ambient noise, data analysis techniques)
- **Measurement of radiated noise from specific sound sources** (requirements for measurements of radiated sound from specific sources, calculation of source level metrics)
- **Question and Answer session**
- **Tour of facilities (Optional)**

All lectures are presented by our staff. Presentation slides are provided for the lectures. Adequate time is provided at the end of each session for discussion and questions.