Categorization acoustic wideband data with LSSS-3.2.0

Institute of Marine Research and MAREC arrange a sequence of training courses in processing and categorizing acoustic wideband data (from EK80) by means of LSSS. The courses are primarily intended for scientists and technicians for survey use but are also useful to graduate students. New functionalities of LSSS forces course material to be updated every year. Total length remains 5 days.

Course 1 – Basic use of LSSS (2 first days – Monday and Tuesday):
Basic design, workflow and dataflow of LSSS will be explained. LSSS drawing-tools used during categorization and automatic drawing of bottom will be demonstrated, as well as export of data for abundance estimation, use of color-scales and use of survey-local database.

Course 2 – Advanced use of LSSS (2 next days – Wednesday and Thursday):
Introduction to wideband acoustics. Special focus this time is how to handle and analyze the enormous amounts of data from the EK80 wideband echosounder (250 times more data than EK60). The LSSS pre-processor toolbox KORONA makes categorization more objective and speeds up categorization. With the introduction of wideband data, the use of KORONA is even more important to get the full benefit out of the data. Wideband tools are demonstrated and used during exercises. Automatic categorization ("species identification") of multifrequency and wideband data is studied.

Course 3 – Interpretation workshop (final day – Friday)
Selected data will be categorized. Teams of two will use techniques and tools learned from the two first courses to categorize survey-data to get a feel for the real workflow. The discussions between team participants are crucial – the lecturer is supposed to work only as a moderator in this session.

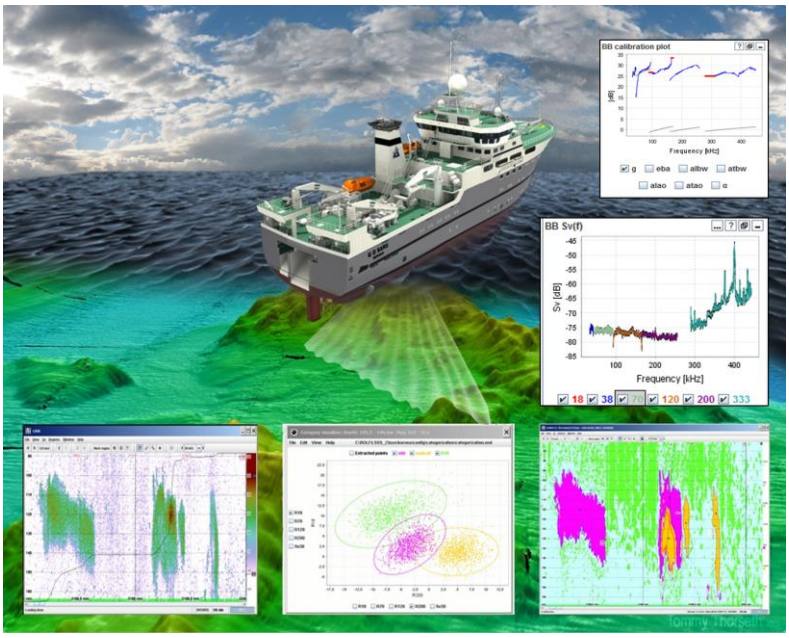
Content

Installation: LSSS, library, …

Basic use of LSSS:
- Basic design
- Setup and data organizing
- Data interpretation tools
- Analysis of survey data
- Work files
- Database
- Data export and data copying
- Wideband functionality
- Deep Vision functionality

Theory:
- Introduction to wideband
- Splitting data

Using preprocessor KORONA:
- Preprocessor design
- Wideband functionality
- The acoustic feature library
- Data improvement trough preprocessing
- Automatic categorization ("species identification")
- Training the library
- How to use (or not use) preprocessor results



Remote control:
- The LSSS API

Categorization workshop:
- Best quality of categorization in short time

Course material at ftp://lsss@ftp.imr.no ~ a week prior to course. Use ftp-client, e.g. FileZilla.

Days: Monday – Friday (5 days)

Schedule:

Monday	9:00 – 10:00	Installation help
Monday	10:00 – 15:45	Basic: first-time setup, database, basic tools
Tuesday	9:00 – 15:45	Basic: creating survey, categorize, DB-reports
Wednesday	9:00 – 15:45	Advanced: preprocessor use, broadband
Thursday	9:00 – 15:45	Advanced: preprocessor feature library, remote control, etc.
Friday	9:00 – 15:45	Categorization workshop – teams of two

Dates: Monday – Friday (5 days), January 26 – 30, 2026

Location: Institute of Marine Research, Bergen, Norway, room "Pynten - Stort"

Registration: Registration continues until registration deadline or until the course is full.
- *IMR:* Please register at Havforskningsakademiet
- *International:* Please register to: info@marec.no

Laptop: We ask you to kindly bring your own laptop computer with 64-bits operating system and preferably 32 GB RAM or more.

Lecturers: Rolf J. Korneliussen (Head of Research), Institute of Marine Research.
Inge Eliassen (Senior scientist), NORCE / MAREC (if participants outside IMR)