

Categorization acoustic wideband data with LSSS-2.12.0

Institute of Marine Research and MAREC arrange a training course in processing and scrutinizing acoustic wideband data (from EK80). The training course is intended for scientists and technicians.

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. LSSS is being continually developed, so new functionality is added continuously. 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.

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 through preprocessing
- Automatic categorization (“species identification”)
- Training the library
- How to use (or not use) preprocessor results

Remote control:

- The LSSS API

Workshop – scrutinize one day:

- Best quality of scrutiny in short time

Course material: Course material available ~ a week prior to the course at <ftp://lss@ftp.imr.no>.

Material from last course is already available. Please use an ftp-client to download, e.g. FileZilla.

Dates: Monday – Friday (5 days), January 24 – 28, 2022

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, scrutinize, DB-reports

Wednesday 9:00 – 15:45 Advanced: preprocessor use, broadband, MS70

Thursday 9:00 – 15:45 Advanced: preprocessor feature library, remote control, etc.

Friday 9:00 – 15:45 Workshop – scrutinize one day of data

Location: Institute of Marine Research, Nordnes, Bergen, Norway, room “Pynten”

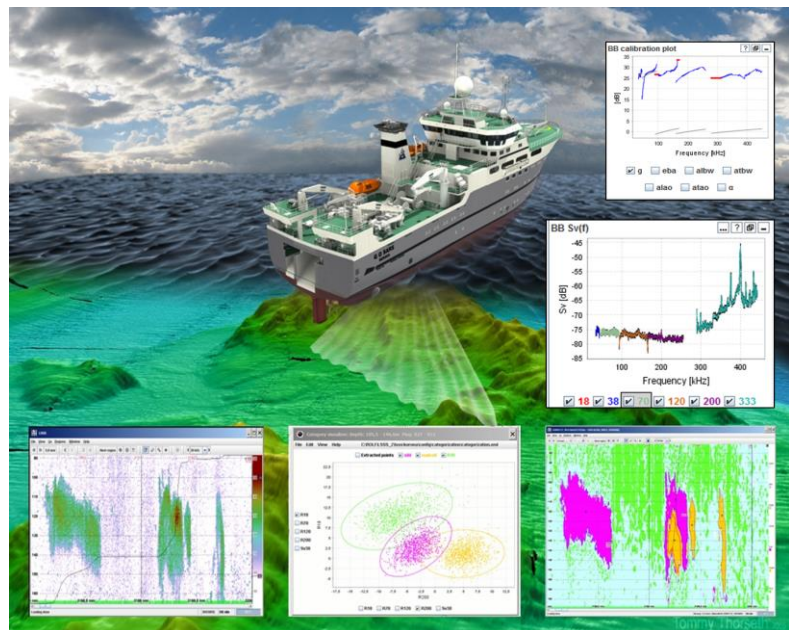
Registration: Registration continues until the course is full.

- *IMR:* Please register at [Havforskningssakademiet](http://havforskningssakademiet.no)

- *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



LSSS-2.11.0 release notes - August 2021

- Survey configuration / Data files:
 - Functionality for converting EK80 xyz-files to bot-files.
 - Creating idx-files can optionally ignore vessel distance in raw-files.
 - Remove unused directory TowfishDataDir.
- Interpretation module:
 - Fixed lost table input when selecting a new region in the echogram without typing enter first.
- TS distribution module:
 - Optionally use TS detections from new KORONA module.
 - Detector type 'Narrowband' renamed to 'Peak'.
- Frequency response module:
 - Configuration of KORONA categories to plot.
- Scatter plot module:
 - Configuration of KORONA categories to plot.
- KORONA experimentation module:
 - Configuration of HTTP port of scripting server in secondary LSSS.
- Support new ref log data files in json-format.

KORONA:

- When starting processing, KORONA relay copies all configuration files to subdirectory 'copiedConfigFiles' in destination directory.
- New module: Depth dependent resampling.
- New module: TS detection.
- Tracking module:
 - Detection types 'Broadband' and 'Narrowband' are combined to type 'Peak'.
- Combination remover module and Remove single channel module are deprecated and will be deleted in a future release. Use instead the Channel removal module.

PROFOS: • School export: Add export file including pings with no schools.

LSSS-2.10.0 release notes - January 2021

Important note: • This version contains changes to survey (.lss) and work files. Older versions of LSSS cannot read work files written by LSSS 2.10.0. An important change is that work-files now contain database storing settings. Please see help pages for more details.

LSSS:

- Work files:
 - Work files contain settings for what should be stored to the database.
 - Snap files are obsolete. They are read if they exist, but are deleted when the survey is saved.
 - Database comments are now also saved in the work files.
 - Faster reading and writing of work files.
- Interpretation module:
 - The parameter 'StoreRawDataSpecies' is moved to the 'Acoustic categories section of the config. dialog.
 - The 'Store' and 'Delete' buttons are also used for saving and deleting database storing settings in the work files. See help for details.
 - Selected frequencies are remembered.
 - Grid is stored with adaptive horizontal distance next to excluded areas.
 - Grid configuration has only one horizontal distance.
- Echogram:
 - Read-only for areas that are stored to the database.
 - Striped green for areas that are not stored to the database, but where work files contain DB storing settings.
 - Option for showing database storing settings in tooltip.
 - Colorbar indicates range of different upper and lower thresholds.
 - Option for not rendering layer connectors (yellow squares).
- Echogram plot module:
 - Added "Time between pings".
- TS distribution module:
 - Option for changing the histogram bin size.
- BB Sv(f) and BB TS(f) modules:
 - Option for also showing frequencies with narrowband data.
 - Option for changing mapping of frequency on the x-axis.
- CTD module:
 - Index of depth/pressure column in cnv-files is no longer fixed to 1.
 - Option for viewing CTD measurements in a visualizer dialog.
- Trawl module:
 - Support for IMR biotic XML-files (in addition to .spd).

- Option for viewing trawl catch individuals in a visualizer dialog.
- Toolbar:
 - Added button for starting KORONA preprocessing.
- Regions menu:
 - Added item for merging layers with same interpretation.
- Visualizer dialog:
 - Added button "Keep selected".
 - Tooltip in scatter plot and histogram.
- LSSS setup wizard:
 - Redesigned to be much simpler.
 - Can be started again from the help menu.