

EPTlib



Alessandro Arduino

<https://eptlib.github.io/>

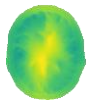
EPTlib has been developed in the framework of the 18HLT05 QUIERO Project. This project has received funding from the EMPIR Programme, co-financed by the Participating States and from the European Union's Horizon 2020 Research and Innovation Programme.



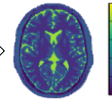
EPTlib:

- is an open-source, extensible C++ library collecting EPT methods.
- implements 3 methods:
 - Helmholtz-EPT
 - Convection-reaction-EPT
 - Gradient-EPT
- includes a terminal application.
 - Input data in HDF5 format
 - Configuration file in TOML format
- is an ongoing project distributed by an MIT license
 - Everybody can contribute to its development!

MRI transmit



Quantitative EPT



```
01 [root@localhost ~]# cd /home/arduino/Projects/18HLT05/QUIERO/18HLT05-EPTlib/
02 [root@localhost ~]# cd /home/arduino/Projects/18HLT05/QUIERO/18HLT05-EPTlib/
03 [root@localhost ~]# ls
CMakeLists.txt  README.md  cmake  CMakePresets.json  CMakeUserPresets.json  CMakeLists.txt
04 [root@localhost ~]# cmake -S . -B build
05 [root@localhost ~]# cmake --build build
06 [root@localhost ~]# ./main
07 [root@localhost ~]#
```

Links:

- <https://eptlib.github.io/>
- A. Arduino. EPTlib: An Open-Source Extensible Collection of Electric Properties Tomography Techniques. *Applied Sciences*, 11(7):3237, 2021.

EPTlib is an open-source, extensible C++ library collecting EPT methods. It has been developed at INRiM, the Italian metrological institute, in the framework of the European EMPIR project QUIERO.

Currently, EPTlib implements 3 methods: Helmholtz-EPT, Convection-reaction-EPT and Gradient-EPT. It also includes a terminal application for a ready-to-use adoption of the implemented methods with standardized file formats.

EPTlib is an ongoing project. The currently implemented methods can be optimized and new methods can be introduced in the next future. It is distributed by an MIT license, which allows a large re-usability of the software.

Everybody are invited to contribute to EPTlib by reporting issues, suggesting improvements or by forking the Github repository.