Release: 1.4.3

Data: May 8, 2018

Installing the toolbox

MRTool is a MATLAB-based toolbox requiring SPM version 12. If you don't have it yet, please download and install it first from the following link: SPM12.

To use the toolbox within SPM, please follow the next steps. You need to set up MRTool to run as an SPM extension. To do this, the toolbox need to be in a subdirectory "MRTool" of the SPM toolbox directory. Here is an example for Unix. Imagine SPM12 was in: /usr/local/spm/spm12, and you have just unpacked the MRTool, giving you a directory: /home/myhome/MRTool

You could then create the MRTool directory in the SPM toolbox directory with:

mkdir /usr/local/spm/spm12/toolbox/MRTool

and copy the MRTool into this directory with:

cp -r /home/myhome/MRTool/* /usr/local/spm/spm12/toolbox/MRTool

the next time you start SPM you should be able to start the toolbox by selecting the "Batch" button on the SPM interface.

Once inside the "Batch Editor", go to SPM -> Tools -> MRTool.

What is new in this release?

This version offers robust improvements, whether you are new to the product, or making the transition from a prior release. Hereafter, the major changes listed by module:

- **T1-w/T2-w image**
  - Option to specify the output resolution for the calibrated images in MNI space
  - Improvements in the nonlinear histogram matching algorithms

Previous versions

MRTool 1.4.2 (October 18, 2017)

- **Optimized Normalization**
  - Enhanced normalization and segmentation of structural T1-weighted images for elderly subjects with enlarged lateral ventricles.
  - Preprocessing and normalization of functional MRI data
- **T1-w/T2-w image**
  - Small fixes and improvements

MRTool 1.4.1 (March 31, 2017)

- **Optimized Normalization**
  - Enhanced normalization and segmentation of structural T1-weighted images for elderly subjects with enlarged lateral ventricles.
- **T1-w/T2-w image**
  - Small fixes and improvements
- **Brain Extraction**
  - Small fixes and improvements

MRTool 1.3.1 (Feb15, 2017)

- **T1-w/T2-w image**
  - Refined registration of T1-w and T2-w imaging data

- Non-linear intensity calibration based on external landmarks (CSF, bone, soft tissues)
- Non-linear intensity calibration based on internal landmarks (GM, WM, CSF)
- Generation of skull-stripped images: calibrated T1-w/T2-w images, calibrated T1-w, calibrated T2-w

- **Brain Extraction**
  - Generation of skull-stripped images

Minimum Requirements

1. **T1-w/T2-w image**
   - MATLAB2014b or greater
   - Curve Fitting Toolbox (MATLAB toolbox)
2. **Optimized Bias Correction parameters**
   - MATLAB2014b or greater
3. **Brain Extraction**
   - MATLAB2014b or greater
4. **Optimized Normalization**
   - MATLAB2014b or greater

Contacts

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