**New GUI Options**

1. **SubSampling** – Allowing to sub-sample the original data (use lower temporal resolution).

**Default: 1. DO NOT CHANGE (used for high resolution data).**

1. **nVolsToRemoveFromEnd** – Cut the last volumes of the test (sometimes the last volumes are distorted).

**Default: 0**

1. **SubSecondResolution** – Number of sub seconds parts for super resolution ("2" means 1/2 of a second).

**Default: 2**

1. **MinFirstBolusStd** – The minimum width of the bolus (standard deviation of the Gaussian that represents the first bolus).

**Default: 2**

1. **EM\_Num\_Of\_Iterations** – Number of iterations for the Expected Minimization algorithm which finds the optimal AIF and parameters. ).

**Default: 5. (Currently not used, the algorithm uses Murase)**

1. **FMS\_TolFun** – Function Minimum Search's (Matlab's) parameter. Tolerate Function – minimal improvement for continuing the search.

**Default:**

1. **FMS\_MaxFunEvals** – Number of possibilities for the F Mean Search at each step to change. Can think of it as in the case of 2-D vector f(**X**) ( How many 2-D points to move to from the current one).

**Default: 10000**

1. **FMS\_MaxIter** – Maximal Number of iterations for FMS algorithm.

**Default: 10000**

1. **MaxTDif\_ForAIFSearch** – The possible shift in time for the AIF of the representing voxels (in seconds).

**Default: 3**

1. **MaxTDif\_ForWholeVOI** – Same as MaxTDif\_ForAIFSearch, just when allowing shifting in time for all voxels in VOI (and not just representing voxels).

**Default: 6**

1. **Rep\_MaxAroundBolus** – Number of clusters around the bolus (for finding representing voxels).

**Default: 10**

1. **Rep\_RatioToEnd** – Number of clusters around the end of the test (for finding representing voxels).

**Default: 10**

1. **Rep\_nPerSet** – Number of total clusters will be MaxAroundBolus \*Rep\_RatioToEnd. This option will determine how many representing voxels we will choose from each cluster.

**Default: 1**

1. **MakeNoBATManualArtAnalysis** – If "1" and manualArt.nii exists, take the arteries from that file, take their average and make a regular calculation (we have AIF so we simply use Murase to get the PK parameters) without the possibility to shift BAT.

**Default: 0**

1. **MakeBATManualArtAnalysis** – If "1" and manualArt.nii exists, take the arteries from that file, calculate the parameters using F Min Search on the picked arteries (instead of finding representative) and allow the possibility to shift BAT.

**Default: 0**

1. **MakeBATAutoArtAnalysis** – The default mode of choosing the arteries automatically.

**Default: 1**

1. **Extracted FAs** – Correct the flip angles of the scan (we assume there is an error).

**Default: 1**

1. **IncludingMainInT1 -**

**Default: 1**

1. **UsingN3T1 -**

**Default: 1**

1. **TimeMultiplier –**

**Default: 1**

1. **Add reference files: Insert nifti file named:**

**RefVp\_WM\_830.nii**

**RefT1\_WM\_830.nii**

**Manual\_BrainMask.nii**