**New GUI Options**

1. **SubSampling** – Allowing to sub sample the original data and then use super resolution (1=true, 0=false). Default: 1, DO NOT CHANGE (this is to reduce the temporal resolution of the data, used for high resolution data).
2. **nVolsToRemoveFromEnd** – Cut the last volumes of the test (sometimes the last volumes are distorted). ). Default: 0
3. **SubSecondResolution** – Number of sub seconds parts for super resolution ("2" means 1/2 of a second). ). Default: 2
4. **MinFirstBolusStd** – The minimum width of the bolus (standard deviation of the Gaussian that represents the first bolus). ). Default: 2
5. **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)
6. **FMS\_TolFun** – Function Minimum Search's( Matlab's) parameter. Tolerate Function – minimal improvement for continuing the search. Default: 1exp10-11
7. **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
8. **FMS\_MaxIter** – Maximal Number of iterations for FMS algorithm. Default: 10000
9. **MaxTDif\_ForAIFSearch** – The possible shift in time for the AIF of the representing voxels (in seconds). Default: 3
10. **MaxTDif\_ForWholeVOI** – Same as MaxTDif\_ForAIFSearch, just when allowing shifting in time for all voxels in VOI (and not just representing voxels). Default: 6
11. **Rep\_MaxAroundBolus** – Number of clusters around the bolus (for finding representing voxels). Default: 10
12. **Rep\_RatioToEnd** – Number of clusters around the end of the test (for finding representing voxels). Default: 10
13. **Rep\_nPerSet** – The 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
14. **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.
15. **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.
16. **MakeBATAutoArtAnalysis** – The default mode of choosing the arteries automatically. Default: 1
17. **Extracted FAs** - ???
18. **IncludingMainInT1**
19. **UsingN3T1**
20. **TimeMultiplier?**