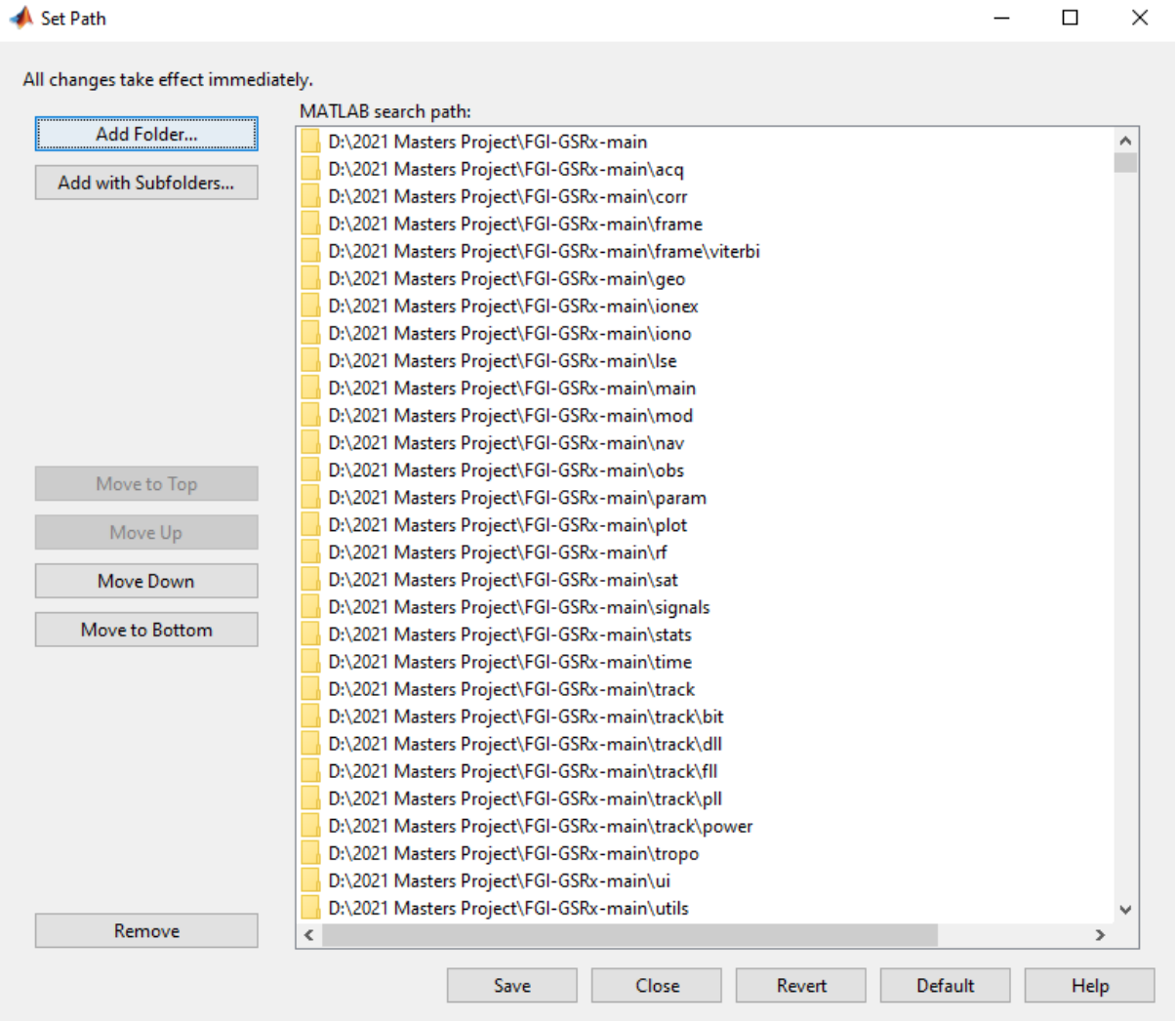
Multi-antenna user guide.

This version contains modifications to the original FGI-GSRx code found here: https://github.com/nlsfi/FGI-GSRx

The zipped folder should track multiple RF streams in a hybrid diversity implementation.

General FGI-GSRx Configuration (you do not have to follow this, but this is how I set my workplace up)

Add Path MATLAB (with subfolders): should look something like this



General Configuration information:

My settings txt files are found in the **main** folder. They read signals from a signals folder and spits the results in main. Not sure why I don't have to specify path, maybe something to do with MATLAB set path. The generated files can be moved.

Diversity Configuration Information

To change tracking modes, delete files listed in 'Changed files' and rename the corresponding old/diversity/single/hybrid to deleted file.

Single diversity example: Delete doAcquisition.m and copy doAcquisition_diversity.m, rename doAcquisition_diversity.m to doAcquisition.m. Likewise for GNSSCorrelation with GNSSCorrelation_single.

Folders with changed files:

- Acq
- Corr
- Track
- main

Each folder where files have been changed is appended with

- old: original FGI-GSRx file
- diversity: supports single or hybrid diversity mode
- single: supports single active antenna diversity mode only
- hybrid: support hybrid active antenna diversity mode only
- 2/3/4 in GNSSCorrelation: supporting files for multiple RF streams

If file is appended with diversity then no file changed necessary when moving from single to hybrid (vice versa)

Changed files:

- **Acq/doAcquisition.m**: Support extra IF streams
- **Corr/GNSSCorrelation.m**: Changed to implement diversity mode
- **Main/gsrx.m**: extracts multiple acq results and update acqData struct with strongest antenna code and carrier results. Also appends antNum representing strongest antenna
- **Track/doTracking.m**: opens multiple RF files and tracking streams
- **Track/initTracking.m**: update antNum data from acquisition

Txt file information:

- track_multi.txt: multi antenna RF stream tracking config file
- Read_data.txt: reads matlab.m file
- Track_signal.txt: tract single RF stream

Note: getDataForAcquisition2/3/4: Pulls different IF stream name (easier than manipulating string names). These do not have to be deleted as files appended with old do not call them. getDataForAcquisition is unchanged.