Comments on Pauls algorithm to calculate the STA STC and receptive fields

**Data analysis comments:**

1. It looks like there are many false positives with pixel size 1. The number is higher when using the covariance approach.
2. Receptive field sizes seem to be quantized and I don’t know why this should be the case, example below: There are sizes 0, 0.2, 0.4ish but nothing in between…



**Data organization comments**

1. The algorithm saves all cells in a “cell” structure in matlab. This will cause problem when analysing bigger datasets. There are two possible solution that are already established in the GUI: 1. save outputs for each cell as a file during the parfor loop, or, 2nd. Use batch processing (functions are established for the GUI) and save batches in one cell in the matlab workspace and than add to matfile after parfor loop.
2. Noise sequence: The Noise sequence doesn’t allow to load the hdf5 file, which we will be using in future. Also, since this will be frozen noise (the same sequence repeated for x times, it would be good to introduce another loop for each repetition). This needs to be implemented.
3. Parpool will break when called and there is a parpool established already. Generally, it would be better to import the number of workers from the GUI interface in general and remove it from this function, since it isn’t really essential.
4. Output has to be done using the sf\_organizer function from the GUI
5. Cell indices have to be stored
6. It would be more handy maybe if there were two outputs: One containing essential information to due further steps and one containing all information, this way we don’t need to load all the data every time we want to excess something.
7. Subset of cells should be handled at the level of the GUI rather than this function