Road map to make Multiplex Paper (ms#2, PLoS Comp Biol) figures

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| **Figure 1** | **Folder** (from PatternSepScripts) | **file.m** |
| 1b | Zfigures | stimRastersCorrMatrices  (Note: Input Sets were made using MakeCorrelatedPoissons.m in MakeCorrelatedTrains folder) |
| 1c | Zfigures | DisplayRawPatSepRecordingsGC  (see also DisplayRawPatSepRecordings) |
| 1d-e | CorrStimResp | CorrStimRespBatch ( with CorrStimResp\_cleaned)  + CorrStimRespBatchCollate\_cleaned\_PairwiseRplot |
| 1f | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 1) |

* SimilarityAnalysis\_AllCT\_Collate\_Publish:

- choose degree of polynomial Npol (Npol = 2 for parabolic fit, as displayed in Fig1F)

- uncomment the appropriate Xbinsize vector, that must correspond to the binsizes used to analyze the datasets of interest (they are written at the end of the path string). Comment out the others.

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| **Figure 2** | **Folder** (from PatternSepScripts) | **file.m** |
| 2a-c | NDP\_Scaling | rasterCorrVsVectorCases (using rasterCorrVsVector) |
| 2d | NDP\_Scaling | DotStimResp |
| 2e-f | NewCode\_multipleMetrics (Publish) | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 1) |

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| **Figure 3** | **Folder** (from PatternSepScripts) | **file.m** |
| 3a-c | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 2) |
| 3d | Kreuz-SPIKEandISI | KreuzStimRespBatch (using KreuzStimResp)  KreuzStimRespBatchCollate |

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| **Figure 4** | **Folder** (from PatternSepScripts) | **file.m** |
| 4a | MakeCorrelatedTrains: SF folder | In VaryingFR: MakeInputs\_lowSF\_CstFR |
| 4b | MakeCorrelatedTrains: SF folder | In VaryingBurstiness: MakeCorrelatedPoissons\_minSF |
| 4a-b | Zfigures | stimRastersCorrMatrices  (this actually makes the figures) |
| 4c | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 3) |

Note: to get Figure 4b using stimRastersCorrMatrices, change File.Stim.File to File.StimBurst.File and File.Resp.File to File.RespBurst.File

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| **Figure 5** | **Folder** (from PatternSepScripts) | **file.m** |
| 5a | NewCode\_multipleMetrics | SimilarityAnalysis (uncomment Display part + select the file you want to analyze,i.e. the catnum and itemnum) |
| 5b | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 4 and 5) |

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| **Figure 6** | **Folder** (from PatternSepScripts) | **file.m** |
| 6a | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 6) |
| 6b | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 7 and 8) |

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| **Figure 7** | **Folder** (from PatternSepScripts) | **file.m** |
| 7b | NoiseFitFtest | FSINcharacterisitcs (computes pBurst) |
| 7b | NoiseFitFtest | CompPairedTreatments\_FR\_pBurst (figure+ stats) |
| 7c | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 9)  (originally: SimilarityAnalysis\_ Collate, with stats) |
| 7d | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_ Collate\_summary (Figure 4) |
| 7e | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 10) |

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| **Figure 8** | **Folder** (from PatternSepScripts) | **file.m** |
| 8b top | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 11) |
| 8b bottom | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 12) |
| 8c | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 13) |

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| **Figure 9** | **Folder** (from PatternSepScripts) | **file.m** |
| 9a | NoiseFitFtest | FSINcharacterisitcs (computes ISI) |
| 9a | NoiseFitFtest | BurstAnalysisCompAllCT\_ISIandKLD (computes KLD and plots figures)  (originally part of a larger analysis, with more plots, in BurstAnalysisCompAllCT) |
| 9b | NewCode\_multipleMetrics: Publish | SimilarityAnalysis\_AllCT\_Collate\_Publish (Figure 14 and 15) |

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| **Figure S1** | **Folder** (from PatternSepScripts) | **file.m** |
| S1a | NDP\_Scaling | LinearRegBtwNDPandSFvsCorr\_fakeData\_AllPerms |
| S1b | NDP\_Scaling | LinearRegBtwNDPandSFvsCorr |
| S1c | NDP\_Scaling | LinearRegBtwNDPandSFvsCorr\_fakeData\_AllPerms |

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| **Figure S2** | **Folder** (from PatternSepScripts) | **file.m** |
| 4a-b | Zfigures | stimRastersCorrMatrices |

External toolboxes: Brewermap, Macke et al 2009, plot\_ci, kldiv (from David Fass)

Utilities: SymMat2List, SymMat2ListNaN, PolFitandFtest, readaxogrph and others in SimilarityAnalysis, check also FSINCharacteristics