This folder contains statistical model based algorithms (Chapters 6 and 7):

| | | Ref |
|---|---|---|
| wiener_iter.m | Iterative Wiener algorithm based on all-pole speech production model. | [11] |
| wiener_as.m | Wiener algorithm based on a priori SNR estimation | [12] |
| wiener_wt.m | Wiener algorithm based on wavelet thresholding multi-taper spectra | [13] |
| mt_mask.m | Psychoacoustically-motivated algorithm | [14] |
| audnoise.m | Audible noise suppression algorithm | [15] |
| mmse.m | MMSE algorithm with and without speech-presence uncertainty | [16] |
| logmmse.m | Log MMSE algorithm | [17] |
| logmmse_SPU.m | Log MMSE algorithm incorporating speech-presence uncertainty | [18] |
| stsa_weuclid.m | Bayesian estimator based on weighted Euclidean distortion measure. | [19] |
| stsa_wcosh.m | Bayesian estimator based on weighted cosh distortion measure. | [19] |
| stsa_wlr.m | Bayesian estimator based on weighted likelihood ratio distortion measure. | [19] |
| stsa_mis.m | Bayesian estimator based on modified Itakura-Saito distortion measure. | [19] |

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USAGE

```
>> wiener_iter(infile.wav,outfile.wav,NumberOfIterations)
   where 'NumberOfIterations' is the number of iterations involved in iterative
   Wiener filtering.

>> wiener_as(infile.wav,outfile.wav)

>> wiener_wt(infile.wav,outfile.wav)

>> mt_mask(infile.wav,outfile.wav)

>> audnoise(infile.wav,outfile.wav)
   Runs 2 iterations (iter_num=2) of the algorithm.

>> mmse(infile.wav,outfile.wav,SPU)
        where SPU=1 - includes speech presence uncertainty
              SPU=0 - does not includes speech presence uncertainty

>> logmmse(infile.wav,outfile.wav)

>> logmmse_SPU(infile.wav,outfile.wav,option)
   where option=
      1  - hard decision ( Soon et al)
      2  - soft decision (Soon et al.)
      3  - Malah et al.(1999)
      4  - Cohen (2002)

>> stsa_weuclid(infile.wav,outfile.wav,p)
        where p>-2
```

```
>> stsa_wcosh(infile.wav,outfile.wav,p)
        where p>-1

>> stsa_wlr(infile.wav,outfile.wav);

>> stsa_mis(infile.wav,outfile.wav);
```

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