The function FSFFE executes the error correction in the fundamental frequency candidates of F0 estimators as proposed in [1]. The fsffe_HHTAmp executes the low/high pitch separation proposed in [1] to improve the accuracy of fundamental frequency candidates from HHT-Amp method [2].

These functions requires:
The emd.m file provided by G. Rilling and P. Flandrin at
http://perso.ens-lyon.fr/patrick.flandrin/emd.html.
The PEFAC F0 estimator files provided in
http://www.ee.ic.ac.uk/hp/staff/dmb/voicebox/voicebox.html

Usage of FSFFE:
[improvedCandidates,lowHighInfo] = fsffe(infile,candidates,timeShift,opts)
or
[improvedCandidates,lowHighInfo] = fsffe(infile,candidates,timeShift,struct([])) for default parameters

where
infile: input .wav filename
candidates: matrix time, in ms, in the first column followed by the F0 candidates
timeShift: time distance, in ms, between F0 estimates (default: 10)
opts: structure with the following optional parameters
opts.MaxIter: maximum number of iterations for the EEMD (default: 100)
opts.nIMF: number of IMFs extracted with the EEMD (default: 4)
opts.nEns: number of ensembles adopted for the EEMD (default: 100)
opts.NoiseRatio: noise ratio adopted for the EEMD (default: 0.01)
opts.lowHighFreqTresh: Threshold of low/high frequency (default: 200)

%%%

noisySpeech_sample.wav – a sample speech file by Babble noisy with SNR = 0 dB.
noisySpeech_F0candidates.pit – a file with F0 candidates extracted from HHT-Amp method
voicedInfo.txt – example file that defines, in ms, the initial and final time instants of each voiced region of the input speech signal
exampleFSFFE and exampleFSFFE_HHTAmp.m – example MATLAB files.

%%%