1 Matlab Help on fft

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FFT Discrete Fourier transform.
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FFT(X) is the discrete Fourier transform (DFT) of vector X. For matrices, the FFT operation is applied to each column. For N-D arrays, the FFT operation operates on the first non-singleton dimension.

FFT(X,N) is the N-point FFT, padded with zeros if X has less than N points and truncated if it has more.

FFT(X,[],DIM) or FFT(X,N,DIM) applies the FFT operation across the dimension DIM.

For length N input vector x, the DFT is a length N vector X, with elements $N \\ X(k) = \sum_{n=1}^{N} x(n) \exp(-j*2*pi*(k-1)*(n-1)/N), 1 \le k \le N. \\ n=1 \\ The inverse DFT (computed by IFFT) is given by \\ N \\ x(n) = (1/N) \sum_{n=1}^{N} X(k) \exp(-j*2*pi*(k-1)*(n-1)/N), 1 \le n \le N. \\ k=1 \\ K=1$

See also fft2, fftn, fftshift, fftw, ifft, ifft2, ifftn.

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