

2D Discrete Fourier Transform

MATLAB functions	Example
<code>fftA = fft2(X)</code>	Returns the two-dimensional discrete Fourier transform (DFT) of X.
<code>X = ifft2(fftA)</code>	Returns the two-dimensional inverse discrete Fourier transform (DFT) of X
<code>P = angle(Z)</code>	Returns the phase angles, in radians, for each element of complex array Z. The angles lie between $\pm\pi$.

We have already noted that $F(u, v)$ is a complex number (i.e. real and imaginary parts). It is more useful to think of its MAGNITUDE (Fourier spectrum) and PHASE (phase angle) rather than its REAL and IMAGINARY parts, where:

$$F(u, v) = |F(u, v)| e^{j\phi(u, v)}$$

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fftB = (abs(fftA)) .* exp(1i*angle(fftA));
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Let's Try!