





Criticism of Fourier Spectrum

- It's giving you the spectrum of the 'whole timeseries'
- Which is OK if the time-series is stationary. But what if its not?
- We need a technique that can "march along" a time series and that is capable of:
 - Analyzing spectral content in different places
 - Detecting sharp changes in spectral character



























Discrete Wavelet Transform

Penn ESE 531 Spring 2018 - Khanna

















































































Big Ideas

• Wavelet transform

- Capture temporal data with fewer coefficients than STFT
- Compressive Sampling
 - Integrated sensing/sampling, compression and processing

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Based on sparsity and incoherency

