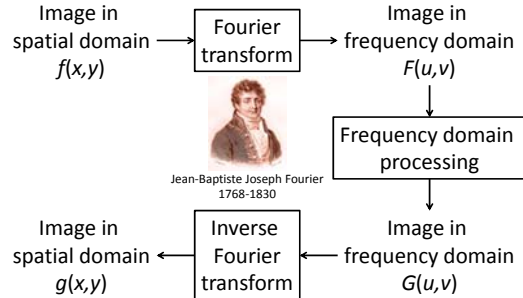


Sampling and Aliasing, and The Discrete Fourier Transform

Image Processing
CSE 166
Lecture 6

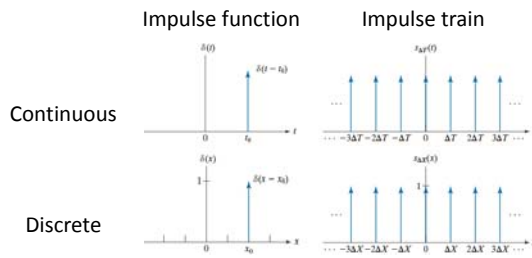
Overview: Image processing in the frequency domain



CSE 166, Fall 2017

2

1D impulse function and impulse train



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3

Sampling

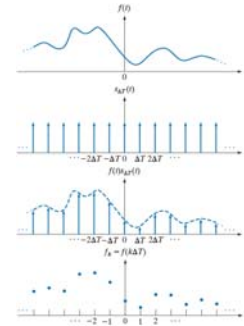
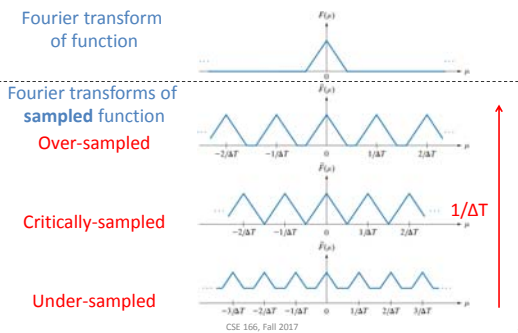


FIGURE 4.5 (a) A continuous function. (b) Train of impulses used to model sampling. (c) Sampled function formed as the product of (a) and (b). (d) Sample values obtained by integration and using the sifting property of impulses. (The dashed line in (c) is shown for reference. It is not part of the data.)

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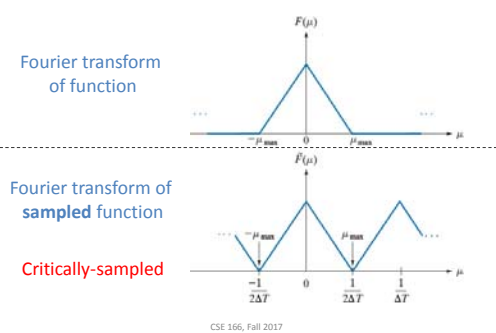
4

Sampling



5

The sampling theorem



6

