Digital Signal Processing
List of Symbols

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$x[n]$ (or $\mathbf{x}$)	discrete-time signal (sequence)
$\bar{x}[n]$	finite-support signal (vector form)
$\tilde{x}[n]$	periodic signal
$\delta[n]$	discrete-time impulse
$\mathbb{C}^N$	space of length-N signals
$\tilde{\mathbb{C}}^N$	space of N-periodic signals
$[a,b]$	closed interval on the real line
$\ell_2(\mathbb{Z})$	space of square-summable signals
$L_2([a,b])$	space of square-integrable functions over an interval $[a,b]$
$\langle \mathbf{x}, \mathbf{y} \rangle$	inner product
$\|\mathbf{x}\|_2$	ℓ_2-norm
W_N	N-th root of unity ($W_N = e^{-j2\pi/N}$)
$\mathrm{Re}\{z\}$, $\mathrm{Im}\{z\}$	real and imaginary part
$\|z\|$, $\measuredangle z$	magnitude and phase (e.g. $\measuredangle W_N = -2\pi/N$)
z^*	complex conjugate
$X[k]$	discrete Fourier transform (DFT)
$\tilde{X}[k]$	discrete Fourier series (DFS)
$X(e^{j\omega})$	discrete-time Fourier transform (DTFT)
$X(z)$	z-transform
$x(t)$	continuous-time signal
$X(j\Omega)$	continuous-time Fourier transform
$\delta(t)$	Dirac delta
$\tilde{\delta}(\omega)$	2π-periodic Dirac delta
$*$	convolution operator
$\mathrm{E}[\cdot]$	statistical expectation
T_s	sampling period
F_s	sampling frequency (hertz)
Ω_s	sampling frequency (rad/sec)
Ω_N	Nyquist frequency (rad/sec)
$L_n^{(N)}(t)$	n-th Lagrange polynomial of order-N