Sets

$\mathbb{R}$	The set of real numbers
$\mathbb{R}^+$	The set of nonnegative real numbers
$\mathbb{Z}$	The set of integers
$\mathbb{F}_p$	Finite field with p elements
$\mathbb{Z}_p$	The set of integers modulo p

Vectors and matrices

$\mathcal{S}^n$	Set of column vectors of length n with entries from $\mathcal{S}$
$\mathbf{x}, \mathbf{y}, \mathbf{u}, \mathbf{v}, \mathbf{w}, \ldots$	Vectors
$\mathsf{A}, \mathsf{B}, \mathsf{G}, \ldots$	Matrices
I_n	$n \times n$ identity matrix
$\|\mathbf{x}\|$	ℓ^2-norm of $\mathbf{x}$
$\mathrm{Supp}(\mathbf{x})$	Support of the vector $\mathbf{x}$, i.e., the set of nonzero indices of $\mathbf{x}$

Random Variables and Events

$U, V, X, Y, Z, \ldots$	Random variables
$\mathbf{U}, \mathbf{V}, \mathbf{W}, \mathbf{Z}, \ldots$	Random vectors
$\Pr[A]$	Probability of event A
$\mathbb{E}[Z]$	Expectation of the random variable Z
$H(X)$	Entropy of the random variable X
$I(X;Y)$	Mutual information between X and Y
$X \perp\!\!\!\perp Y$	X and Y are independent random variables

Sequences

$f(n) = O(g(n))$	$\exists c > 0$ such that $f(n) < cg(n)$ for all sufficiently large n
$f(n) = \Omega(g(n))$	$\exists c > 0$ such that $g(n) < cf(n)$ for all sufficiently large n
$f(n) = o(g(n))$	$f(n)/g(n) \to 0$ as $n \to \infty$
$f(n) = o_n(1)$	$f(n) \to 0$ as $n \to \infty$