Notation

$\mathrm{GF}(q)$	Galois field with q elements
$\mathbb{R}$	field of real numbers
$\mathbb{C}$	field of complex numbers
$\mathbb{N}$	set of natural numbers ($\mathbb{N}^*$ excludes 0)
$\mathcal{X}$	alphabet or set
$\lvert\mathcal{X}\rvert$	cardinality of $\mathcal{X}$
$\mathrm{cl}(\mathcal{X})$	closure of set $\mathcal{X}$
$\mathrm{co}(\mathcal{X})$	convex hull of set $\mathcal{X}$
$\mathbb{1}$	indicator function
$\{x_i\}_n$	ensemble with n elements $\{x_1, \dots, x_n\}$
x	generic element of alphabet $\mathcal{X}$
$\lvert x\rvert$	absolute value of x
$\lceil x \rceil$	unique integer n such that $x \leqslant n < x + 1$
$\lfloor x \rfloor$	unique integer n such that $x - 1 \leqslant n \leqslant x$
$[\![x, y]\!]$	sequence of integers between $\lfloor x \rfloor$ and $\lceil y \rceil$
x^+	positive part of x, that is $x^+ = \max(x, 0)$
$\mathrm{sign}(x)$	$+1$ if $x \geqslant 0$, -1 otherwise
x^n	sequence $x_1, \dots, x_n$
$\bar{x}^n$	sequence with n repetitions of the same element x
ϵ	usually, a "small" positive real number
$\delta(\epsilon)$	a function of ϵ such that $\lim_{\epsilon \to 0} \delta(\epsilon) = 0$
$\delta_\epsilon(n)$	a function of ϵ and n such that $\lim_{n \to \infty} \delta_\epsilon(n) = 0$
$\delta(n)$	a function of n such that $\lim_{n \to \infty} \delta(n) = 0$
$\mathbf{x}$	column vector containing the n elements $x_1, x_2, \dots, x_n$
$\mathbf{x}^\mathsf{T}$	transpose of $\mathbf{x}$
$\mathbf{x}^\dagger$	Hermitian transpose of $\mathbf{x}$
$\mathbf{H}$	matrix
$(h_{ij})_{m,n}$	$m \times n$ matrix whose elements are h_{ij}, with $i \in [\![1, m]\!]$ and $j \in [\![1, n]\!]$
$\lvert\mathbf{H}\rvert$	determinant of matrix $\mathbf{H}$
$\mathrm{tr}(\mathbf{H})$	trace of matrix $\mathbf{H}$
$\mathrm{rk}(\mathbf{H})$	rank of matrix $\mathbf{H}$
$\mathrm{Ker}(\mathbf{H})$	kernel of matrix $\mathbf{H}$

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X	random variable implicitly defined on alphabet $\mathcal{X}$
p_{X}	probability distribution of random variable X
$\mathsf{X} \sim p_{\mathsf{X}}$	random variable X with distribution p_{X}
$\mathcal{N}(\mu, \sigma^2)$	Gaussian distribution with mean μ and variance σ^2
$\mathcal{B}(p)$	Bernoulli distribution with parameter p
$p_{\mathsf{X}\mid\mathsf{Y}}$	conditional probability distribution of X given Y
$\mathcal{T}_\epsilon^n(\mathsf{X})$	strong typical set with respect to p_{X}
$\mathcal{T}_\epsilon^n(\mathsf{XY})$	strong joint-typical set with respect to p_{XY}
$\mathcal{T}_\epsilon^n(\mathsf{XY}\mid x^n)$	conditional strong typical set with respect to p_{XY} and x^n
$\mathcal{A}_\epsilon^n(\mathsf{X})$	weak typical set with respect to p_{X}
$\mathcal{A}_\epsilon^n(\mathsf{XY})$	joint weak typical set with respect to p_{XY}
$\mathbb{E}_{\mathsf{X}}$	expected value over random variable X
$\mathrm{Var}(\mathsf{X})$	variance of random variable X
$\mathbb{P}_{\mathsf{X}}$	probability of an event over X
$\mathbb{H}(\mathsf{X})$	Shannon entropy of discrete random variable X
$\mathbb{H}_{\mathrm{b}}$	binary entropy function
$\mathbb{H}_{\mathrm{c}}(\mathsf{X})$	collision entropy of discrete random variable X
$\mathbb{H}_\infty(\mathsf{X})$	min-entropy of discrete random variable X
$\mathbb{h}(\mathsf{X})$	differential entropy of continuous random variable X
$\mathbb{I}(\mathsf{X};\mathsf{Y})$	mutual information between random variables X and Y
$\mathbf{P}_{\mathrm{e}}(\mathcal{C})$	probability of error of a code $\mathcal{C}$
$\mathbf{E}(\mathcal{C})$	equivocation of a code $\mathcal{C}$
$\mathbf{L}(\mathcal{C})$	information leakage of a code $\mathcal{C}$
$\mathbf{U}(\mathcal{S})$	uniformity of keys guaranteed by key-distillation strategy $\mathcal{S}$
$\underline{\lim}_{x \to c} f(x)$	limit inferior of $f(x)$ as x goes to c
$\overline{\lim}_{x \to c} f(x)$	limit superior of $f(x)$ as x goes to c
$f(x) = O(g(x))$	If g is non-zero for large enough values of x, $f(x) = O(g(x))$ as $x \to a$ if and only if $\overline{\lim}_{x\to\infty} \lvert f(x)/g(x)\rvert < \infty$.