Statistical symbols and conventions

Object	Symbol	Examples
Random variate	Bolded	$\mathbf{X}$, $\overline{\mathbf{X}}$
Random vector	Underlined, Bolded	$\underline{\mathbf{X}}$
Realization of random variate/real number	unbolded, lowercase	x
Realization of random vector/vector of real numbers	underlined, unbolded	$\underline{X}$
Matrix of real numbers	unbolded, uppercase	X
Population under study	italicized uppercase P	P, P_{T}