INDEX OF SYMBOLS

Throughout the thesis we use the following notations and conventions.

- $x \in p(x)$: The set of all $x$ for which $p(x)$ is true.
- $x \in A$: $x$ is an element of the set $A$.
- $A \cup B$: The set of elements belonging to $A$ or $B$.
- $A \cap B$: The set of elements belonging to $A$ and $B$.
- $A^C$: Complement of $A$.
- $T$: Large positive integer
- $i, k$: Integral-index, primes of summation.
- $\alpha$: Exponent occurring in the characteristic function of the stable law.
- $\epsilon, S, \beta$: Small positive number.
- $\sum_r$: Summation taken over all $r$.
- $\prod_r$: Product taken over all $r$.
- Sup: Supremum.
- Inf: Infimum.
- $P(E)$: Probability of the event $E$.
- $Y(u)$: Random variable.
- $\Xi$: Sure event.
- $\mathbb{R}$: $(-\infty, \infty)$.
- $\mathbb{C}$: Complex plane.
Number of real zeros of a random polynomial.

Expectation of Y

Variance of Y.

Almost surely.

Characteristic function.

Maximum.

Distribution function

Random variable.

Positive constants differing from one place of occurrence to another (may be large enough).

Tends to.