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Abstracts of Short Communications and Posters

Section:

8. Analysis

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Generalization of Lindelöf Theorem

Necessary and sufficient conditions are established on the coefficients of an entire Dirichlet series that defines a function F for fulfilling the correlation $\ln M(\sigma, F) = \Phi(\sigma + o(1))$, whenever $\sigma \to \infty$, where $M(\sigma, F) = \sup\big\{|F(\sigma + it)| : \ t \in \mathbb{R}\big\}$, and Φ is a positive on $(-\infty, +\infty)$ function such that $0 \le \Phi'(x) \uparrow +\infty$ $(-\infty < x \to +\infty)$.
If $\Phi(\sigma) = \tau \exp\{\varrho\sigma\}$, τ, $\varrho \in (0, +\infty)$ then the classic Lindelöf Theorem follows from the above correlation.
References: 1. E. Lindelöf, Sur la determination de la croissance des fonctions entiere definies par un developpement de Taylor, *Bull. Soc. Math.* **27(1)** (1903), 1–62.
2. Ya. Ya. Prytula, On the Lindelöf Theorem, *Mat. Studii* **8(1)** (1997), 31–42.