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Synthesis in the Polynomial Kernel of Two Analytic Functionals

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Let π be an entire function of minimal type and order $\rho = 1$ and let $\pi(D)$ be the corresponding differential operator. Maximal $\pi(D)$ -invariant subspace of the kernel of an analytic functional is called its $\mathbf{C}[\pi]$ -kernel. $\mathbf{C}[\pi]$ -kernel of a system of analytic functionals is called the intersection of their $\mathbf{C}[\pi]$ -kernels. The paper describes the conditions which allow synthesis of $\mathbf{C}[\pi]$ -kernels of two analytical functionals with respect to the root elements of the differential operator $\pi(D)$.

Key words: spectral synthesis, differential operator of infinite order, invariant subspaces, submodules of entire functions.

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