

Resolution on n-order functional - differential equations with operator coefficients and delay in Hilbert spaces

Abstract

We introduce the n-order functional-differential equation with operator coefficients and delay in Hilbert spaces:

$$L_{po}^n U(t) = D_t^n U(t) - \sum_{k=0}^{n-1} \sum_{j=0}^m [A_{kj} + A_{kj}(t)] S_{h_{k_j} + h_{k_j}(t)} D_t^k U(t) = f(t) \quad (1)$$

where $L_{po}^n : X_{R_+^{t_0}}^{n,\alpha} \longrightarrow Y_{R_+^{t_0}}^{0,\alpha}$, $D_t^k = \frac{d^k}{dt^k}$, $R_+^{t_0} = \{t \geq t_0\}$

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