

# Spectral analysis for hyperbolic integrodifferential equations in Hilbert space

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We study the solvability for abstract hyperbolic equations with variable delay and integral Volterra terms. We consider several spectral problems in autonomous cases by considering the operator-valued functions as the symbols of the equations under investigations. We analyse the structure of the spectra for the symbols of the above mentioned integrodifferential equations. We also present some applications of our results to integrodifferential equations of Gurtin-Pipkin type arising from the theory of heat propagation with memory, to the integrodifferential equations arising in the theory of viscoelasticity, acoustic problems in the theory of porous media.

The talk is based on a joint work with N. Rautian.