

Vysoké učení technické v Brně
Fakulta stavební
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Spectral characterization of shadowing for linear operators on Hilbert spaces

Přednášku přednese prof. Mihály Pituk



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Abstract. In this talk, we consider one of the fundamental notions in dynamical systems, the shadowing of invertible operators on a Hilbert space. Although the problem of finding a spectral characterization for shadowing has been in the focus of the research for a long time, spectral criteria for shadowing are available in the literature only for rather special classes of invertible operators. In this talk, we give a complete spectral characterization for the shadowing of an arbitrary invertible operator T on a complex Hilbert space. It is shown that T has the shadowing property if and only if its right spectrum is disjoint from the unit circle in the complex plane. As a consequence, the shadowing property for T is equivalent to the uniform expansivity of its adjoint operator.

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vedoucí ústavu