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Inequalities for the Davis-Wielandt Radius of Operators in Hilbert C^*-Modules Space

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Abstract

The content of this paper presents a fresh method of studying the Davis–Wielandt radius of bounded operators on Hilbert $C*$-modules. Using this method, we arrive at new results that improve upper and lower bounds for the Davis-Wielandt radius and generalize known theorems for bounded operators on Hilbert spaces to bounded adjointable operators on Hilbert $C*$-module spaces.

Keywords:
(1) C*-algebra
(2) inner product space
(3) numerical radius

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