

Simultaneous versions of Wielandt's positivity theorem

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The classical Wielandt Theorem is about “positivization” of a matrix: If an indecomposable matrix A and its modulus $|A|$ have the same spectral radius, then, after a diagonal similarity, A is just a scalar multiple of $|A|$. Here $|A|$ is the matrix whose entries are the moduli of those of A ; and “indecomposable” means that no nontrivial subset of the basic vectors spans an invariant subspace for (the operator whose matrix relative to this basis is) A . In joint work with Gordon Macdonald we present extensions of this result to certain semigroups of operators in finite and infinite dimensions.

This is a joint work with G. MACDONALD (University of Prince Edward Island).