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Ilya M Spitkovsky*, College of William and Mary, Department of Mathematics, P.O.Box 8793, Williamsburg, VA 23187. *Toeplitz operators with matrix almost periodic symbols: the state of affairs.*

There is a drastic change in the behavior of Toeplitz operators with matrix (as opposed to scalar) almost periodic symbols: a phenomenon not previously observed for symbols with better smoothness properties. In particular, a verifiable criterion for the invertibility of such operators is currently not known. We will discuss recent progress in two directions: (i) various sufficient invertibility results, that is (in alternative but equivalent language) description of new subsets of APF — the set of all factorable almost periodic matrix functions, and (ii) quantitative results on the topological structure of APF.

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