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Factorizations in self-idealizations of UFRs.

The self-idealization of a commutative ring R is isomorphic to the ring $R[x]/(x^2)$ or, equivalently, the ring of upper-triangular Toeplitz matrices, $T(R)$, over a ring R . Recently, Chang and Smertnig characterized the sets of lengths of factorizations in $T(D)$ where D is a principal ideal domain. In this talk, we extend the study to $T(R)$ when R is a unique factorization ring that is not a principal ideal ring. (Received January 10, 2017)