

On collections of matrices with entries from a division ring

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The paper surveys recent results by H. Radjavi, P. Rosenthal, B.R. Yahaghi, H. Momenaee-Kermani, and the author about extensions of various results on transitivity, irreducibility, and triangularizability of collections of matrices with entries from a division ring D . The division ring may range from the most general case to the case that $[D; F]$ is finite or the most special case that D is the field of real quaternions. Also, the matrix collection may be a semigroup, an algebra over the center of D , or a left D -module ring.