Bhama Srinivasan and C. Ryan Vinroot* (vinroot@math.wm.edu). Jordan decomposition of real-valued characters of finite reductive groups with connected center.

Let $G$ be a reductive group with connected center defined over a finite field $\mathbb{F}_q$ with $q$ elements, and let $G = G(\mathbb{F}_q)$ be the finite group of $\mathbb{F}_q$-points. We classify all irreducible complex characters of $G$ which are real-valued through the Jordan decomposition of characters. The main tool is a uniqueness result of Digne and Michel for the Jordan decomposition of characters when the center is connected. (Received January 06, 2015)