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Georgia Benkart, Rekha Biswal and Ellen E Kirkman* (kirkman@wfu.edu), Department of Mathematics and Statistics, Wake Forest University Box 7388, Winston-Salem, NC 27109, and **Van Nguyen and Jieru Zhu.** *McKay matrices for finite-dimensional Hopf algebras.*

For a finite-dimensional Hopf algebra H , the McKay matrix M_V of an H -module V encodes the relations for tensoring the simple H -modules with V . Steinberg showed that for $H = \mathbb{C}G$ the eigenvalues and the eigenvectors of M_V are related to characters, and further results in characteristic p were obtained by Grinberg, Huang and Reiner. We prove general results about McKay matrices, their eigenvalues, and their (left and right) (generalized) eigenvectors by using the coproduct and the characters of simple and projective H -modules. We illustrate these results for the Drinfeld double D_n of the Taft algebra for n odd and $n \geq 3$ by deriving expressions for the eigenvalues and eigenvectors of M_V in terms of Chebyshev polynomials. (Received January 16, 2021)