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Sk. Safique Ahmad* (safique@iiti.ac.in), Indian Institute of Technology Indore, Simrol, Khandwa Road, Indore, 453552, India, and **Istkhar Ali** (istkhara@iiti.ac.in), Indian Institute of Technology Indore, Simrol, Khandwa Road, Indore, India. *Sensitivity analysis of matrices over a quaternion division algebra.*

In this work, we present the concept of perturbation bounds for the right eigenvalues of a quaternionic matrix. In particular, the Bauer-Fike type theorem for the right eigenvalues of a diagonalizable quaternionic matrix is derived. In addition, perturbations of a quaternionic matrix are discussed via block diagonal decomposition and Jordan canonical form of a quaternionic matrix. (Received July 20, 2017)