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**Christopher Towse\*** (ctowse@scrippscollege.edu) and **Eric Campbell**. *Construction and (some) classification of integer matrices with integer eigenvalues*. Preliminary report.

In spite of the provable rarity of integer matrices with integer eigenvalues, they are commonly used as examples for linear systems in introductory differential equations courses. We present a quick method for constructing such matrices starting with a given set of eigenvectors. In the case of repeated eigenvalues, we give some classification results along with additional fast constructions. (Received September 20, 2016)