1023-05-220   **Joseph E. Bonin*** (`jbonin@gwu.edu`), Department of Mathematics, The George Washington University, Washington, DC 20052. *Transversal Lattices.*

A cyclic flat of a matroid is a flat that is a union of circuits. The cyclic flats of a matroid M, ordered by inclusion, form a lattice, denoted $\mathcal{Z}(M)$. Two matroids can have radically different properties but have isomorphic lattices of cyclic flats. However, some lattices force certain properties to hold for all matroids for which these lattices arise via cyclic flats; such lattices are the focus of this talk.

A lattice L is a *transversal lattice*, or *Tr-lattice*, if all matroids M for which $\mathcal{Z}(M)$ is isomorphic to L are transversal. This talk treats some sufficient conditions, as well as a necessary condition, for lattices to be Tr-lattices. Operations that preserve the class of Tr-lattices will also be discussed. (Received August 25, 2006)