1145-D1-2989   **David A Reimann*** (`dreimann@albion.edu`), Mathematics and Computer Science, Albion, MI 49224. *Simultaneously Visualizing Symmetry Subgroups.*

Symmetric patterns can be understood mathematically as the resulting action of a symmetry group on a base motif. Using the subgroup structure of a base symmetry group, patterns can be created that have some integration into the overall symmetry. Examples of this process are shown for several symmetry groups. In addition to being a design tool, this concept can be used to help students explore groups and subgroup structures, providing insight and intuition, especially with more complex concepts such as normal subgroups and stabilizers. (Received September 26, 2018)