1044-54-233   **Bettina Richmond*** (`Bettina.richmond@wku.edu`), 1906 College Heights Blvd., Bowling Green, KY 42101. *Topologies from Semigroup Actions.*

Given a semigroup $(S, \cdot)$, Green's left quasiorder $\leq_{\mathcal{L}}$ is given by $a \leq_{\mathcal{L}} b$ if $a = u \cdot b$ for some $u \in S^1$, and this quasiorder generates a principal topology on S. Not every principal topology on a set X arises in this way. The purpose of this talk is to establish a one-to-one correspondence between principal topologies on a set X and appropriate transformation semigroups on X using semigroup actions. (Received September 02, 2008)