1057-54-363 **Paul Bankston*** (`paulb@mscs.mu.edu`), 1313 West Wisconsin Ave., Milwaukee, WI 53201. *Using model theory to characterize when two classes of mappings coincide.*

A mapping between continua is monotone if inverse images of subcontinua are subcontinua. We introduce the class of semimonotone mappings as those for which the inverse image of a subcontinuum has a component that both maps onto the subcontinuum and contains the inverse image of the subcontinuum's interior. Our main theorem is that a continuum is locally connected iff every semimonotone mapping onto it is also monotone. The construction of semimonotone nonmonotone mappings onto continua that are not locally connected involves model-theoretic methods, particularly the ultrapower construction and the Loewenheim-Skolem theorem. (Received January 26, 2010)