1064-37-208 **Suzanne Hruska*** (`shruska@uwm.edu`), University of Wisconsin Milwaukee, PO Box 413, Milwaukee, WI 53201, and **Rodrigo Perez** and **John Smillie**. *Multivalued Dynamical Systems and Iterated Monodromy Groups.* Preliminary report.

This paper represents an effort to attune V. Nekrashevych's theory of iterated monodromy groups (IMGs) with Ishii and Smillie's notion of multivalued dynamical systems (MDS). The analogies are particularly striking in reference to expanding systems. We expect that the resulting dictionary will help and encourage the assimilation by the dynamics community of the rich algebraic language of IMGs. The connections will be illustrated with concrete examples of expanding maps, arising from holomorphic maps which are expanding on their Julia sets. (Received September 09, 2010)