Stacey Muir* (mue11ers2@scranton.edu), University of Scranton, Math Department, Scranton, PA 18510. Construction of Complex-Valued Harmonic Mappings Convex in One or Every Direction. Preliminary report.

We will discuss a new method for using a complex-valued convex analytic mapping on the unit disk to construct a complex-valued harmonic mapping that is convex in the direction of the imaginary axis. In addition, we will show a necessary and sufficient condition for the harmonic mapping to be convex is that the analytic mapping be direction convexity preserving. Connections to some harmonic mappings that have already been studied and new examples will also be given. (Received September 21, 2010)