1001-20-413   **Lucian B. Zidaru*** (`lzidaru@hotmail.com`), 16441 S. Harrell's Ferry Rd., Apt. 1706, Baton Rouge, LA 70816, and **Robert W. Peck** (`rpeck@lsu.edu`), 4339 Fleet Dr., Baton Rouge, LA 70809. *Piano technique and permutation groups.* Preliminary report.

We transform the multitude of piano technical problems into a unique system. This system contains measurable patterns, which serve as its constituents. In doing so, we can change the artistic problem of piano technique into a set of mathematical problems. We associate a pianist's fingers with a set, and describe musically and technically relevant patterns as group actions on that set. Of interest among the groups we study are symmetrical, alternating, cyclic, dihedral, and Frobenius groups. The goal of this process is a better comprehension and consciousness of the technique we have; the techniques we need to have; and more importantly, the means of achieving better technique. (Received August 31, 2004)