1163-85-1353   **S. James Gates*** (`sylvester_gates@brown.edu`), Brown Theoretical Physics Center, Director's Office, Rm. 110, 340 Brook St., Providence, RI 02912. *Linking Supersymmetry in Physics to Permutations in Mathematics.*

The permutation group S_4 is a well known structure in mathematics. On the physics side the concept of "supersymmetry" as applied to elementary particles beyond the Higgs boson has been a source of vigorous investigation for over a decade. The "permutahedron" provides a representation of the group and can be connected to hypothetical superpartners in beyond the Standard Model physics speculations. (Received September 15, 2020)