1161-18-9   **Ettore Aldrovandi*** (`ealdrov@math.fsu.edu`), Department of Mathematics, Florida State University, 208 Love Building, 1017 Academic Way, Tallahassee, FL 32306-5410. *Categorical groups, their morphisms, and higher algebraic structures.*

I will review the main notions about categorical groups, in particular their morphisms, presentations, and classification via cohomological invariants. I will use them as a springboard to discuss other types of higher algebraic structures, such as categorical rings and (presheaves of) ∞-groups. These latter are motivated by some recent applications to intersection theory and determinant functors, which, if time permits, I will shortly illustrate. (Received July 06, 2020)