1131-17-352 **Elizabeth G Jurisich*** (`jurisiche@cofc.edu`). *On the representation theory of three-point algebras.*

The three-point algebra is perhaps the simplest nontrivial example of a Krichever-Novikov algebra beyond an affine Kac-Moody algebra. Even though the three-point algebras are not graded by root lattices, nor are they **Z**-graded, they can be given a coordinatization. This coordinatization allows a generalization of field or vertex operator type representations to be constructed. We provide a natural free field realizations in terms of a beta-gamma system and the oscillator algebra of the three-point an affine Lie algebra when g = sl(2, C). In addition, one can construct central extensions of an N-point generalization of the Witt algebra, and a corresponding representation on the Fock space. (Received July 18, 2017)