Bagayoko, On strongly monotone difference equations

I will describe a theory of ordered valued difference fields where the automorphism shares key properties with substitution maps $f \mapsto f \circ g$ on Hardy fields of ordered fields of formal series equipped with composition law. We will focus on the existence of closures under algebraic equations and affine difference equations of order 1, and study the existential closedness of induced automorphism on the ordered value groups.

This is joint work with Adele Padgett and Elliot Kaplan.