

Research Statement: Thomas Johnstone

My research in set theory centers on large cardinals, indestructibility results, forcing axioms, and fragments of ZFC. A recent article, joint with Joel Hamkins, summarizes what we know about indestructibility for a certain kind of large cardinals, called the *strongly unfoldable* cardinals. Another area that I am interested in, are instances of forcing axioms much weaker than PFA, such as its bounded version BPFA, as well as the *Resurrection Axioms*, a new class of forcing axioms that form the center of an forth-coming article of Hamkins and mine. Currently, I am working with Victoria Gitman on obtaining indestructibility results for *Ramsey-like* cardinals; the hope is to also obtain results applicable to Ramsey cardinals. Another project aims to investigate what happens when the Power Set Axiom is removed from the usual ZFC axioms.