My research area is the part of algebraic topology that is included within *topological fixed point theory*, a broad subject that has substantial interactions with several branches of mathematics as well as with other parts of topology. Fixed point theory is the study of solutions to the equation $f(x) = x$ for a map f of a space to itself. My specialty is *Nielsen theory*, named in honor of Jakob Nielsen who, in the 1920's, introduced the basic concepts, now called Nielsen numbers, which are lower bounds for the number of solutions to fixed point and other related equations, among maps homotopic to the given map. One such related topic is *coincidence theory* which is concerned with solutions to the equation $f(x) = g(x)$ for maps f and g.

During the past few years, I have been studying the Nielsen theory of multiple-valued functions that are continuous in an appropriate sense. A fixed point of a multiple-valued map f means that x belongs to the set $f(x)$. The general fixed point theory of such functions is a big enough subject to merit a 400-page book by Lech Gorniewicz that was published in 1999. On the other hand, their Nielsen theory is quite undeveloped: most of what is known about it I summarize in a few pages of the Handbook of Topological Fixed Point Theory (Springer, 2005, pages 440 - 444). My research concerned *n-valued maps*, that is, maps from a space to itself that associate to each point an unordered set of exactly n points. Helga Schirmer introduced the Nielsen theory of n-valued maps in 1984 - 5 and developed its geometric features. I found methods for computing the Nielsen numbers of n-valued maps. In particular, I showed that the n-valued Nielsen number can be calculated by computing the Nielsen coincidence number of certain *single-valued* functions. A consequence was a formula for the Nielsen numbers of an interesting class of n-valued maps of tori.

My most recent research has concerned the fixed point theory of fiber maps of fiberings with singularities. The fixed point theory of fiber (preserving) maps of fiber spaces is very well-developed, as can be seen in the survey of the subject by Philip Heath on pages 489 to 554 of the Handbook. The subject of fiberings with singularities is extensive enough to merit its own number in the Mathematics Subject Classification system. Yet nothing is known about the fixed point theory of fiber maps of such fiberings, that is, fiber-preserving maps that take singular fibers to singular fibers. I have initiated an investigation of fiber maps in the setting of Montgomery-Samelson fiberings, in which the singular fibers are points.