VENKATA KARTHIK TIMMAVAJJULA, University of New Brunswick, Fredericton
Extended diffeomorphism groups for noncommutative manifolds

Given an unital pre-C^* algebra B with a $*$-exterior algebra, one can define extended diffeomorphism group for the noncommutative manifold B and its subgroup of topologically trivial elements. Using results of Bratteli–Elliott–Jorgensen and Krähmer, we compute these groups when B is an irrational noncommutative 2-torus and the algebraic standard Podleś sphere, respectively. We then apply this to the computation of moduli spaces of solutions to Euclidean Maxwell's equations with fixed topological sector and current 1-form.

This is joint work with B. Ćaćić.