CUNTZ--PIMSNER ALGEBRAS OF PARTIAL AUTOMORPHISMS TWISTED BY VECTOR BUNDLES

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We discuss how to associate a C*-algebra to a partial action of the integers acting on the base space of a vector bundle, using the framework of Cuntz--Pimsner algebras. We investigate the structure of the fixed point algebra under the canonical gauge action. We also analyse the ideal structure, and give conditions under which the Cuntz--Pimsner algebra is simple. Finally we establish a bijective corrrespondence between tracial states and invariant measures on the base space. This generalizes results about the C*-algebras associated to homeomorphisms twisted by vector bundles of Adamo, Archey, Forough, Georgescu, Jeong, Strung and Viola. If time permits, we will discuss nuclear dimension estimates.