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A parametrized index theorem for the algebraic K-theory Euler class

by

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Contents

0. Introduction

The classical setting. Suppose that $p: E \to B$ is a bundle of smooth compact manifolds. By this we mean that p comes with an atlas of local trivializations $\varphi_i: p^{-1}(U_i) \to U_i \times M_i$, where each M_i is a smooth compact manifold, the changes of charts

$$\varphi_j \varphi_i^{-1}: (U_i \cap U_j) \times M_i \to (U_i \cap U_j) \times M_j$$

are fiberwise smooth and the induced maps $(U_i \cap U_j) \times T^r M_i \to (U_i \cap U_j) \times T^r M_j$ are continuous for each $r > 0$.

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