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The spinor bundle on loop space

We outline a construction of the spinor bundle of the loop space of a string manifold together with its fusion product. This construction was outlined by Stolz and Teichner in a preprint from 2005. In particular, we prove that the loop space of an oriented manifold X admits a spinor bundle with a fusion product if and only if X is string. Our work partially extends and somewhat simplifies a construction previously given by Kristel and Waldorf.

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