

[Liu, Kefeng](#)

On elliptic genera and theta-functions. (English) [Zbl 0858.57034](#)
[Topology](#) 35, No. 3, 617-640 (1996).

The author gives a unified new proof of the Witten rigidity theorem for some elliptic operators commuting with a circle action. He makes essential use of a new feature of loop spaces and loop groups, the modular invariance. Actually he shows that modular invariance implies rigidity. Some new properties of elliptic genera and their relationships with theta functions are also discussed.

Reviewer: [F.Gomez \(Malaga\)](#)

MSC:

[57R20](#) Characteristic classes and numbers in differential topology
[58J20](#) Index theory and related fixed-point theorems on manifolds
[58J26](#) Elliptic genera

Cited in **3** Reviews
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Keywords:

[Witten rigidity theorem](#); [elliptic operators](#); [loop spaces](#); [loop groups](#); [elliptic genera](#); [theta functions](#)

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