

[Maruyama, Masaki](#)

Construction of moduli spaces of stable sheaves via Simpson's idea. (English) [Zbl 0885.14005](#)
Maruyama, Masaki (ed.), Moduli of vector bundles. Papers of the 35th Taniguchi symposium, Sanda, Japan, and a symposium held in Kyoto, Japan, 1994. New York, NY: Marcel Dekker. Lect. Notes Pure Appl. Math. 179, 147-187 (1996).

Earlier methods for constructing moduli spaces for semistable sheaves on a projective scheme X (including the fundamental papers of the present author) depended either on a construction of Mumford and Seshadri or one of Gieseker. The first of these made it difficult to prove projectivity of the moduli space, while the second required the underlying variety to be non-singular. Recent ideas of *C. T. Simpson* [Publ. Math. Inst. Hautes Étud. Sci. 79, 47-129 (1994)], which go back to Grothendieck's original construction of the Quot-scheme, remove these difficulties.

In this article, the author outlines the construction of moduli spaces under very general hypotheses using these ideas.

For the entire collection see [\[Zbl 0842.00034\]](#).

Reviewer: [P.E.Newstead \(Liverpool\)](#)

MSC:

- [14D20](#) Algebraic moduli problems, moduli of vector bundles
- [14L30](#) Group actions on varieties or schemes (quotients)
- [14L24](#) Geometric invariant theory

Cited in **9** Documents

Keywords:

[moduli spaces for semistable sheaves](#); [Quot-scheme](#)