

Representability of derived stacks

J.P.Pridham

(Submitted on 9 Nov 2010)

Lurie's representability theorem gives necessary and sufficient conditions for a functor to be an almost finitely presented derived geometric stack. We establish several variants of Lurie's theorem, making the hypotheses easier to verify for many applications. Provided a derived analogue of Schlessinger's condition holds, the theorem reduces to verifying conditions on the underived part and on cohomology groups. Another simplification is that functors need only be defined on nilpotent extensions of discrete rings. Finally, there is a semi-representability theorem, which can be applied to associate explicit geometric stacks to dg-manifolds and related objects.

Comments: 28 pages

Subjects: **Algebraic Geometry (math.AG)**

Cite as: **arXiv:1011.2189v1 [math.AG]**

Submission history

From: Jonathan Pridham [[view email](#)]

[v1] Tue, 9 Nov 2010 20:26:32 GMT (35kb)

[Which authors of this paper are endorsers?](#)

Link back to: [arXiv](#), [form interface](#), [contact](#).

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

math.AG

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1011](#)

Change to browse by:

[math](#)

References & Citations

- [NASA ADS](#)

Bookmark([what is this?](#))

