Search or Article-id

(Help | Advance

All papers

Mathematics > Symplectic Geometry

Parametrized Ring-Spectra and the Nearby Lagrangian Conjecture

Thomas Kragh

(Submitted on 23 Jul 2011)

We prove that any closed connected exact Lagrangian manifold L in a connected cotangent bundle T*N is up to a finite covering space lift a homology equivalence. We prove this by constructing a fibrant parametrized family of ring spectra FL parametrized by the manifold N. The homology of FL will be (twisted) symplectic cohomology of T*L. The fibrancy property will imply that there is a Serre spectral sequence converging to the homology of FL and the product combined with intersection product on N induces a product on this spectral sequence. This product structure and its relation to the intersection product on L is then used to obtain the result. Combining this result with work of Abouzaid we arrive at the conclusion that L -> N is always a homotopy equivalence.

Comments: 76 pages, 8 figures. With an appendix by Mohammed Abouzaid
Subjects: **Symplectic Geometry (math.SG)**; Algebraic Topology (math.AT)
MSC classes: `53D12, 55T10`
Cite as: **arXiv:1107.4674 [math.SG]**
(or **arXiv:1107.4674v1 [math.SG]** for this version)

Submission history

From: Thomas Kragh [view email]
[v1] Sat, 23 Jul 2011 10:06:14 GMT (543kb,D)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.

Download:

- PDF
- Other formats

Current browse cont

math.SG
< prev | **next >**
new | recent | 1107

Change to browse b

math
  math.AT

References & Citatio

- NASA ADS

Bookmark(what is this?)