

1165-57-255

Guillem Cazassus* (g.cazassus@gmail.com), Mathematical Institute University of Oxford, Andrew Wiles Building Radcliffe Observatory Q, Woodstock Road, Oxford, OX2 6GG, United Kingdom. *Equivariant Lagrangian Floer homology and extended Field theory*. Preliminary report.

Given a compact Lie group G and a Hamiltonian G -manifold endowed with a pair of G -Lagrangians, we provide a construction for their equivariant Floer homology. Such groups have been defined previously by Hendricks, Lipshitz and Sarkar, and also by Daemi and Fukaya. A similar construction appeared independently in the work of Kim, Lau and Zheng. We will discuss an attempt to use such groups to construct topological Field theories: these should be seen as 3-morphism spaces in the Hamiltonian 3-category, which should serve as a target for a Field theory corresponding to Donaldson polynomials. (Received January 19, 2021)