Mikio Furuta and Tian-Jun Li\* (tjli@math.umn.edu), School of Mathematics, University of Minnesota, Minneapolis, MN 55455. The Pontrjagin-Thom constructions in non-linear Fredholm theories.

We describe constructions of twisted framed bordism, stable homotopy and stable cohomotopy invariants associated to compact moduli spaces of non-linear elliptic equations. Applications to 4-manifold topology will also be mentioned. (Received January 25, 2006)