

**Applications of virtual Morse–Bott theory to the  
moduli space of  $SO(3)$  Monopoles**

Thomas Leness

*Florida International University*

lenesst@fiu.edu

Paul Feehan

*Rutgers University*

feehan@math.rutgers.edu

We describe some recent joint work with P. Feehan on the Morse theory of a function on the moduli space of  $SO(3)$  monopoles on a smooth four-manifold and sketch some applications to the topology of smooth four-manifolds.