

1115-58-82

Thomas G. Leness* (lenesst@fiu.edu), Department of Mathematics, DM 430, Florida International University, Miami, FL 33199. *Gluing theorems for $SO(3)$ monopoles*. Preliminary report.

The non-compact ends of the moduli space of $SO(3)$ monopoles on smooth four-manifolds are described by the gluing maps. We describe joint work with P. Feehan on the construction of these gluing maps, their role in proofs of Witten's conjecture relating Donaldson and Seiberg-Witten invariants and of the superconformal simple type conjecture, and we describe the particular properties of these maps needed in these proofs. (Received September 06, 2015)