1053-57-233   **Eric J. Harper*** (`harper@math.miami.edu`), Department of Mathematics, Ungar Bldg Rm 515, 1365 Memorial Drive, Coral Gables, FL 33146, and **N. Saveliev**. *A Casson-Lin type invariant for links.*

In 1992, Xiao-Song Lin constructed an invariant $h(K)$ of knots $K \subset S^3$ via a signed count of conjugacy classes of irreducible $SU(2)$ representations of $\pi_1(S^3 - K)$ with trace-free meridians. Lin showed that $h(K)$ equals one half times the knot signature of K. Using methods similar to Lin's, we construct an invariant $h(L)$ of two-component links $L \subset S^3$. Our invariant is a signed count of conjugacy classes of *projective* $SU(2)$ representations of $\pi_1(S^3 - L)$ with a fixed 2-cocycle and corresponding non-trivial w_2. We show that $h(L)$ is, up to a sign, the linking number of L. (Received September 06, 2009)