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**Eric Harper\*** (harper@math.miami.edu), Ungar 515, 1365 Memorial Drive, Coral Gables, FL 33146, and **Nikolai Saveliev**. *Casson-Lin type invariants for links*.

In 1992, Xiao–Song Lin constructed an invariant  $h(K)$  of knots  $K \subset S^3$  that is a signed count of conjugacy classes of irreducible trace–free  $SU(2)$  representations of  $\pi_1(S^3 \setminus K)$ . Lin shows  $h(K)$  is one half 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  $\pi_1(S^3 \setminus L)$  with a fixed 2–cocycle and corresponding non-trivial  $w_2$ . We show that  $h(L)$  is, up to a sign, the linking number. (Received April 12, 2010)