Meeting: 1002, Pittsburgh, Pennsylvania, SS 1A, Special Session on Invariants of Knots and 3-Manifolds

1002-57-165 **Uwe Kaiser*** (kaiser@math.boisestate.edu), Department of Mathematics, Boise State University, 1910 University Drive, Boise, ID 83725-1555. *Anti-homotopy skein theory for hyperbolic 3-manifolds.* Preliminary report.

Using the length function of loops and the injectivity radius of a closed hyperbolic 3-manifold, we define a knot invariant, which can be used to understand the structure of some anti-homotopy skein module in this case. We also discuss the relations with Vassiliev invariants and string topology in the general case. (Received September 13, 2004)