1046-57-139 **David C Bachman*** (bachman@pitzer.edu), 1050 N. Mills Ave, Claremont, CA 91711.

Topological index theory for isotopy classes of surfaces.

We introduce several notions of topological index for isotopy classes of surfaces in a 3-manifold. Each mimics the index of a minimal surface, in the sense that surprisingly analogous results hold. Applications include theorems about isotopy and stabilization of Heegaard splittings in the presence of topological barrier surfaces, such as those that arise in "sufficiently complicated" amalgamations. (Received August 05, 2008)