

1038-53-33

Jesse Ratzkin* (jratzkin@math.uga.edu), Department of Mathematics, University of Georgia, Boyd Graduate Research Tower, Athens, GA 30602, and **Karsten Grosse-Brauckmann, Nick Korevaar, Rob Kusner** and **John Sullivan**. *Rigidity and deformations of constant mean curvature surfaces.*

Any end of a properly embedded, finite topology, constant mean curvature (CMC) surface has a definite asymptotic structure. This asymptotics theorem motivates the following question: do the asymptotes (locally) determine the CMC surface? We prove a version of local rigidity for CMC surfaces in the presence of some topological restrictions and a strong symmetry by studying the linearized problem. This is joint work with K. Grosse-Brauckmann, N. Korevaar, R. Kusner, and J. Sullivan. (Received January 08, 2008)