Biao Wang* (biwang@qcc.cuny.edu). Stability of spherical catenoids and helicoids in hyperbolic 3-space.

For a family of spherical catenoids \( \{C_a\}_{a>0} \) in the hyperbolic 3-space, there exists a constant \( a_c > 0 \) such that \( C_a \) is an unstable minimal surface with Morse index one if \( 0 < a < a_c \) and \( C_a \) is a globally stable minimal surface if \( a \geq a_c \).

For a family of helicoids \( \{H_{\tilde{a}}\}_{\tilde{a}>0} \) in the hyperbolic 3-space, there exists a constant \( \tilde{a}_c = \coth(a_c) \) such that \( H_{\tilde{a}} \) is an unstable minimal surface with Morse index infinity if \( \tilde{a} > \tilde{a}_c \) and \( H_{\tilde{a}} \) is a globally stable minimal surface if \( 0 \leq \tilde{a} \leq \tilde{a}_c \). (Received September 03, 2015)