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**Christel Hohenegger\*** (choheneg@cims.nyu.edu), Courant Institute of Mathematical Sciences, New York University, 251 Mercer Street, New York, NY 10012-1185, and **Michael J Shelley**. *On the Stability of Active Suspensions*.

Large-scale swirling motions have been observed in bacterial baths which are suspensions of many swimming bacteria. From a recent model of an "active suspension" we investigate the instabilities of such systems from a state of near isotropy and uniformity. We consider the two distinct swimming motions of Pushers (swimming using the tail) or Pullers (swimming using the head). We show that, while the long wave instability depends on the swimming mechanism, the short wave instability, which is important for well-posedness, does not. (Received February 09, 2009)