

1060-11-176

Jonathan Sondow* (jsondow@alumni.princeton.edu), 209 West 97th Street, New York, NY 10025, and **Cristian Dumitrescu** (cristiand43@gmail.com), 119 Young Street, Kitchener, Ontario N2H4Z3, Canada. *A monotonicity property of Riemann's xi function and a reformulation of the Riemann Hypothesis.*

We prove that Riemann's xi function is strictly increasing (respectively, strictly decreasing) in modulus along every horizontal half-line in any zero-free, open right (respectively, left) half-plane. The proof uses the Hadamard product representation of the xi function and the functional equation. A corollary is a reformulation of the Riemann Hypothesis (a slight improvement of a known result). Our paper is to appear in *Period. Math. Hungar.* (Received March 29, 2010)