

A COUNTEREXAMPLE TO EREMENKO'S CONJECTURE

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In 1989, Eremenko investigated the set of points that escape to infinity under iteration of a transcendental entire function, the so-called escaping set. He proved that every component of the closure of the escaping set is unbounded and conjectured that all the components of the escaping set are unbounded. Much of the recent work on the iteration of transcendental entire functions is involved in investigating properties of the escaping set, motivated by Eremenko's conjecture. We will discuss constructing a transcendental entire function with a bounded connected component of the escaping set, providing a counterexample to Eremenko's conjecture. This is joint work with David Martí-Pete and Lasse Rempe.