

1023-37-1550

**Nathaniel D Emerson\*** ([nemerson@usc.edu](mailto:nemerson@usc.edu)), University of Southern California, Department of Mathematics, KAP 107 (MC 2532), Los Angeles, CA 90089. *Return times of polynomials as meta-Fibonacci numbers.*

For a complex polynomial with a disconnected Julia set we show that certain closest return times of any critical point with bounded orbit are meta-Fibonacci numbers. For polynomials with a disconnected Julia set and exactly one critical point with bounded orbit, we give a condition on these meta-Fibonacci numbers that implies that the Julia set of such a polynomial has (absolute) area zero. (Received September 26, 2006)