Coloring a Complex Function

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This picture represents the shape of a complex-valued function. It comes from composing

\[ R(z) = z^3 + \frac{-0.2 + 0.11i}{z^3} \]

with itself three times, computing the real part, and then plotting the level curves of heights \(-2, 0,\) and \(2.\)

This image is in Coloring Book of Complex Function Representations (MAA Press, 2017). The book contains 18 such images and describes the mathematics in more detail. Call the MAA Service Center at 800-331-1622 to order.