

## SOME REMARKS ON FILLED-IN JULIA SETS

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ABSTRACT. We study some disks contained in the filled-in Julia sets associated with the complex polynomials of the form  $f(z) = z^n + c$  for some values  $c \in [-2, \frac{1}{4}]$  and  $n \geq 2$ .

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### REFERENCES

- [1] M. Barnsley, *Fractals everywhere*, 2nd edition, Boston MA, Academic Press, 1993, 532 pp.
- [2] A. F. Beardon, P. J. Rippon, *A remark on the shape of quadratic Julia sets*, *Nonlinearity*, 7, 1994, No. 4, 1277-1280.
- [3] R. L. Devaney, *An introduction to Chaotic Dynamical Systems*, The Benjamin/Cummings Publishing Co. 1986, 320 pp.
- [4] A. Douady, *Systèmes dynamiques holomorphes*, Sémin. Bourbaki, 1982/83, Exp. No. 599, Astérisque 105-106 (1983), 39-63.
- [5] A. Douady, J. H. Hubbard, *Étude dynamique des polynômes complexes*, Publ. Math. Orsay, 85-04 (1984), 138 pp.
- [6] A. Douady, J. H. Hubbard, *Itération des polynômes quadratiques complexes*, C. R. Acad. Sci., Paris, Sér. I, 294, 1982, 123-125.
- [7] G. Edgar, *Measure, Topology and Fractal Geometry*, 2nd ed, Undergraduate Texts in Mathematics, New York, Springer, 2008, 268 pp.
- [8] K. Falconer, *Fractal Geometry. Mathematical Foundations and Applications*, 2nd. ed, Chichester, Wiley, 2003, 337 pp.

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