

[Rees, Mary](#)

A partial description of the parameter space of rational maps of degree two. II. (English)

[Zbl 0827.58048](#)

Proc. Lond. Math. Soc., III. Ser. 70, No. 3, 644-690 (1995).

This paper is the second in a series devoted to the study of the variation of dynamics within the family of complex rational mappings of degree two viewed as dynamical systems. Part I of this paper [Acta Math. 168, No. 1-2, 11-87 (1992; [Zbl 0774.58035](#))] provided a comprehensive introduction to the topic, and announced some results whose proofs are completed in Part II.

Part II concentrates on rational maps of degree two for which one critical point is periodic, and explores critically finite branched coverings. An orientation-preserving branched covering $g : \overline{\mathbb{C}} \rightarrow \overline{\mathbb{C}}$ is called critically finite if the set $X(g) = \{g^n(c) : c \text{ is critical, } n > 0\}$ is finite. The author proves some general results about nonrational critically finite degree two branched coverings, and then identifies the boundary of the rational maps in the combinatorial model introduced in Part I.

Reviewer: [W.J.Satzer jun.\(St.Paul\)](#)

MSC:

[37F99](#) Dynamical systems over complex numbers

Cited in 4 Documents

Keywords:

[complex dynamical system](#); [rational maps of degree two](#); [critically finite branched coverings](#)

Full Text: [DOI](#)