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Repeated Compositions of Analytic Maps

CMFT 1 No.1 (2001), 235–248. [ISSN 1617-9447]

Abstract. Given a sequence f_j of analytic maps of the open unit disc \mathbb{D} into itself, we consider conditions that guarantee that the sequence $f_1 \circ \cdots \circ f_n$ of compositions converges uniformly on \mathbb{D} to a constant. The proofs are given entirely in terms of two and three-dimensional hyperbolic geometry.

Keywords. Continued fractions, Möbius maps, hyperbolic geometry, angular derivatives.

2000 MSC. 30D05, 30C80, 30D45.

Received. December 21, 2001.