THE EXISTENCE OF A GLOBAL ATTRACTOR FOR A CLASS OF RATIONAL MAPS[*]

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Abstract

In this paper we prove the global asymptotic stability of a class of rational iterative processes. Our approach combines the presence of a group of symmetries with certain a priori estimates.

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1 Introduction

During recent years a great deal of research has been done in an attempt to understand the dynamics of rational maps of several real variables. Valuable information can be found in the monographs of G. Ladas and his coworkers, devoted to this subject. See [2], [6], [7]. However, the theory of higher order rational difference equations is still in its infancy and new examples could be helpful for future progress.