
Patrick Ahern and Anthony G. O'Farrell

Reversible Biholomorphic Germs

CMFT 9 No.2 (2009), 473–484. [ISSN 1617-9447]

Abstract. Let G be a group. We say that an element $f \in G$ is *reversible in G* if it is conjugate to its inverse, i.e. there exists $g \in G$ such that $g^{-1}fg = f^{-1}$. We denote the set of reversible elements by $R(G)$. For $f \in G$, we denote by $R_f(G)$ the set (possibly empty) of *reversers* of f , i.e. the set of $g \in G$ such that $g^{-1}fg = f^{-1}$. We characterise the elements of $R(G)$ and describe each $R_f(G)$, where G is the the group of biholomorphic germs in one complex variable. That is, we determine all solutions to the equation $f \circ g \circ f = g$, in which f and g are holomorphic functions on some neighbourhood of the origin, with $f(0) = g(0) = 0$ and $f'(0) \neq 0 \neq g'(0)$.

Keywords. biholomorphic germ, reversible, group.

2000 MSC. Primary 30D05; Secondary 39B32, 37F99, 30C35.

Received. July 30, 2008, in revised form December 9, 2008.

Published online. February 8, 2009.