Agarwal, Ravi; O’Regan, Donal; Soori, Ebrahim
Existence of group nonexpansive retractions and ergodic theorems in topological groups.
(English) Zbl 07396544
Fixed Point Theory 22, No. 2, 455-464 (2021)

Summary: Suppose that $G$ is a topological group and $C$ a compact subset of $G$. In this paper we define group nonexpansive mappings and then we consider $S = \{T_i : i \in I\}$ as a family of the group nonexpansive mappings on $C$. Also we study the existence of group nonexpansive retractions $P_i$ from $C$ onto $\text{Fix}(S)$ such that $P_i T_i = T_i P_i = P_i$.

MSC:
47H09 Contraction-type mappings, nonexpansive mappings, $A$-proper mappings, etc.
47H10 Fixed-point theorems

Keywords:
fixed point; group nonexpansive mapping; topological group; retraction

Full Text: Link