

Title: On the embeddability of commuting continuous injections in iteration semigroups

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Let $f, g : (a, b) \rightarrow (a, b)$ be commuting continuous injections, iteratively incommensurable and such that $f < g < \text{id}$. We consider the problem of the embeddability of the mappings f and g in an iteration semigroup (semiflow). Among others we show that if f and g are continuously differentiable in an open interval $(a, a + \delta)$ and $f' > 0$, $g' > 0$ are of finite variation in $(a, a + \delta)$, then there exists a unique continuous iteration semigroup $\{h^t : t \geq 0\}$ of continuous functions such that $h^1 = f$ and $g \in \{h^t : t \geq 0\}$. We also consider the problem of the embeddability of convex and concave functions.

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