

## COINCIDENCE AND SELF-COINCIDENCE OF MAPS BETWEEN DIGITAL IMAGES

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**ABSTRACT.** The aim of this paper is to study some properties of both the coincidence point set and the set of common fixed points of two or more digitally continuous mappings. Moreover, we study how rigidity may affect the sets of coincidence and homotopy coincidence points. Additionally, we investigate if some well-established results in the Nielsen classical topology regarding the sets of coincidence for many maps remain valid in the digital topological setting.

### 1. Introduction

Fixed point theory is a vital area in mathematics, it plays a fundamental role in many fields of mathematics from functional and mathematical analysis to pure and applied topology etc. In metric spaces, the Banach fixed point theorem [4] is the pioneer result in this direction; it guarantees not only the existence but also the uniqueness of a fixed point of a certain self-map  $f$ . Moreover, it provides

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