

Publicationes Mathematicae Debrecen **Year: 2023** **Vol.: 103** **Fasc.: 1-2**

**Title:** On the digital Hopf images and monoid isomorphisms

**Author(s):** Dae-Woong Lee

In this article, we develop the structures of digital Hopf images, and digital homotopy associative and commutative Hopf images. We find some basic properties of digital Hopf functions along with digital multiplications, and investigate methods of how to generate new digital homotopy associative and commutative Hopf images from the old ones. We also construct a monoid isomorphism between sets of digital homotopy classes.

**Address:**

Dae-Woong Lee  
Department of Mathematics, and  
Institute of Pure and Applied Mathematics  
Jeonbuk National University  
567 Baekje-daero, Deokjin-gu  
Jeonju-si, Jeollabuk-do 54896  
Republic of Korea