

Year: 2020

Vol.: 97

Fasc.: 1-2

**Title:** The isomorphism problem of unitary subgroups of modular group algebras

**Author(s):** Zsolt Balogh and Victor Bovdi

Let  $V_*(FG)$  be the normalized unitary subgroup of the modular group algebra  $FG$  of a finite  $p$ -group  $G$  over a finite field  $F$  with the classical involution  $*$ . We investigate the isomorphism problem for the group  $V_*(FG)$ , i.e., we pose the question when the group algebra  $FG$  is uniquely determined by  $V_*(FG)$ . We give affirmative answers for classes of finite abelian  $p$ -groups, 2-groups of maximal class and non-abelian 2-groups of order at most 16.

**Address:**

Zsolt Balogh  
Department of Mathematical Sciences  
UAEU  
United Arab Emirates

**Address:**

Victor Bovdi  
Department of Mathematical Sciences  
UAEU  
United Arab Emirates