

# QUANTUM COMPUTING WITH SUPER Q-BITS AND SUPER QUANTUM GATES

F.A. AIT MEZIANE AND A.BENSLAMA

*Laboratoire de Physique Mathématique et Subatomique  
Physics Department, Faculty of Fundamental Sciences,  
Constantine1 University, Constantine, Algeria*

**ABSTRACT.** Using super quantum gates, some arithmetic operations are discussed. The performance properties of these new proposed gates are also presented.