Tall Aadou*, amadou.tall@aims-senegal.org, and Sanghare Yacin Aly. Fast exponentiation methods using the generalized continued fractions.

Exponentiation is one the basic and most important operation. There are several methods of computing $x^n$. An optimal method for any integer $n$ doesn’t exist. The aim of this paper is to present a new way of computing short addition-subtraction chains using the generalized continued fractions where subtraction is allowed. We will recover the most exponentiation methods. (Received September 21, 2015)