



## NOVEL SYSTOLIC SCHEMES FOR SERIAL-PARALLEL MULTIPLICATION (ThuPmOR4)

### ★ Author(s) :

Isidoros Sideris

(Technical University Of Athens, Greece)

Kostantinos

(Technical University Of Athens, Greece)

Anagnostopoulos

(Technical University Of Athens, Greece)

Paraskevas Kalivas

(Technical University Of Athens, Greece)

Kiamal Pekmestzi

### ★ Abstract :

In this paper two new schemes of systolic multipliers are proposed, one based on Modified Booth encoding and the other is based on the selection of one of the terms 0, X, 2X, 3X where x is the serial input of the multiplier. The proposed multipliers operate with 100% efficiency that is without zero words inserted between successive data. Systolicity and the continuous operation are achieved without an increase in hardware complexity. The proposed schemes are especially suited for long number multiplication.