(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :11/04/2018

(21) Application No.201811013907 A
(43) Publication Date : 18/10/2019

(54) Title of the invention : AN IMPROVED QUANTUM DOT CELLULAR CELL BASED GATE DESIGN

(51) International classification	:G06N 10/00	(71)**Name of Applicant :** **1)CHITKARA INNOVATION INCUBATOR FOUNDATION** Address of Applicant :SCO : 160-161, SECTOR-9C, MADHYA MARG, CHANDIGARH- 160009, INDIA Email-director@chitkara.edu.in Landline No-01762-507084 Chandigarh India
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	(72)**Name of Inventor :** **1)MS. AMANPREETSANDHU** **2)DR. SHEIFALI GUPTA**
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
An improved quantum-dot cellular automata (QCA) cell-based gate design for an efficient RAM cell is disclosed. According to an embodiment, QCA cell-based gate design can include: a plurality of QCA cells to provide a route to communicate data; at least one output QCA cell configured with the plurality of QCA cells; and at least five input QCA cells configured with the plurality of QCA cells, wherein arrangement of the at least one output QCA cell and the at least five input QCA cells with the plurality of QCA cell allow single as well as multilayer design of the RAM cell, and wherein the arrangement of the at least one output QCA cell, the at least five input QCA cells with the plurality of QCA cells is adapted to reduce input to output delay of the RAM cell.

No. of Pages : 24 No. of Claims : 6