

NANOROBOTIC CHALLENGES IN BIOMEDICAL APPLICATIONS, DESIGN AND CONTROL

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ABSTRACT

Ongoing developments in molecular fabrication, computation, sensors and motors will enable the manufacturing of nanorobots - nanoscale biomolecular machine systems. The present work constitutes a novel simulation approach, intended to be a platform for the design and research of nanorobots control. The simulation approach involves a combined and multi-scale view of the

to 1.6 billion US\$ in 2007 [14]. A first series of commercial nanoproducts is foreseeable by 2007 [11]. In order to build electronics at nanoscales, firms are collaborating to produce new nanoproducts. Such companies include IBM, PARC, Hewlett Packard, Bell Laboratories, and Intel Corp., to name a few [14].

Recent developments in the field of biomolecular computing [1] have demonstrated positively the feasibility