Rapid Prototyping Of Embedded Systems Via Reprogrammable

The word "robot" was introduced to the public by Czech writer Karel Čapek in his play R.U.R. (Rossum's Universal Robots), published in 1920. The term "robotics... bec565f1da

List of Japanese inventions and discoveries In particular, Japan has played a crucial role in the digital revolution since the 20th century, with many modern revolutionary and widespread technologies in fields such as electronics and robotics introduced by Japanese inventors and entrepreneurs. Japanese pioneers have made contributions across a number of scientific, technological and art domains. Embedded DRAM (eDRAM) — In 1988, a Toshiba research team led by Kazuhiro Sawada demonstrated an embedded 1 Mbit DRAM chip optimized for embedded system This is a list of Japanese inventions and discoveries. 1984 bec565f1da

Field-programmable gate array or PET/MRI systems. FPGAs are a subset of logic devices referred to as programmable logic devices (PLDs). FPGAs are often used in limited (low) quantity production of custom-made products, and in research and development, where the higher cost of individual FPGAs is not as important and where creating and manufacturing a custom circuit would not be feasible. The developed solutions can perform intensive computation tasks with parallel processing, are dynamically reprogrammable, and have A field-programmable gate array (FPGA) is a type of configurable integrated circuit that can be repeatedly programmed after manufacturing. Other applications for FPGAs include the telecommunications, automotive, aerospace, and industrial sectors, which benefit from their flexibility. They consist of a grid-connected array of programmable logic blocks that can be configured "in the field" to interconnect with other logic blocks to perform various digital functions bec565f1da

Outline of robotics more quickly than digital computers can. Rapid prototyping – automatic construction of physical objects via additive manufacturing from virtual models The following outline is provided as an overview of and topical guide to robotics: bec565f1da

Robot A robot can be guided by an external control device, or the control may be embedded within. Robots may be constructed to evoke human form, but most robots are task-performing machines, designed with an emphasis on stark functionality, rather than expressive aesthetics. computer—capable of carrying out a complex series of actions automatically. A robot can be guided by an external control device, or the control may be embedded within A robot is a machine—especially one programmable by a computer—capable of carrying out a complex series of actions automatically bec565f1da

Mechanical metamaterial Mechanical metamaterials can be seen as a counterpart to the rather well-known family of optical metamaterials. Inspiration for mechanical metamaterials design often comes from biological materials (such as honeycombs and cells), from molecular and crystalline unit cell structures as well as the artistic fields of origami and kirigami. "Negative stiffness honeycombs for recoverable shock isolation". ISSN 1355-2546 Mechanical metamaterials are rationally designed artificial materials/structures of precision geometrical arrangements leading to unusual physical and mechanical properties. 21 (2): 193–200. Rapid Prototyping Journal. doi:10. While early mechanical metamaterials had regular repeats of simple unit cell structures, increasingly complex units and architectures are now being explored. 1108/RPJ-12-2014-0182. These unprecedented properties are often derived from their unique internal structures rather than the materials from which they are made bec565f1da

The MOSFET is the basic building block of most modern electronics, and the most frequently manufactured device in history, with an estimated total of 13 sextillion (1.3 × 1022) MOSFETs manufactured between 1960 and 2018. It is the most common semiconductor device in digital and analog circuits, and the most common power device. It was the first truly compact transistor that... bec565f1da Robots can be autonomous or semi-autonomous and range from humanoids such as Honda's Advanced Step in Innovative Mobility (ASIMO) and TOSY's TOSY Ping Pong Playing Robot (TOPIO) to industrial robots, medical operating robots, patient assist robots, dog therapy robots, collectively programmed swarm robots, UAV drones such as General Atomics MQ-1 Predator, and even microscopic nanorobots. By mimicking... bec565f1da Robotics is a branch of mechanical engineering, electrical engineering and computer science that deals with the design, construction, operation, and application of robots, as well as computer systems for their control, sensory feedback, and information processing. These technologies deal with automated machines that can take the place of humans in dangerous environments or manufacturing processes, or resemble humans in appearance, behaviour, and or cognition. Many of today's robots are inspired by nature contributing to the field of bio-inspired robotics. bec565f1da

List of MOSFET applications Modeling Systems and 3D Prototyping: Proceedings of the AHFE 2019 International Conference on Additive Manufacturing, Modeling Systems and 3D Prototyping. The voltage of the covered gate determines the electrical conductivity of the device; this ability to change conductivity with the amount of applied voltage can be used for amplifying or

switching electronic signals. Springer The MOSFET (metal–oxide–semiconductor field-effect transistor) is a type of insulated-gate field-effect transistor (IGFET) that is fabricated by the controlled oxidation of a semiconductor, typically silicon bec565f1da