

Sample Topics for Research Paper

- Alternative fuels for automobiles
- Diesel engines (how they work, their applications)
- The technology behind military self-guided missiles
- CD-RW, DVD +R/-R drives (how they work)
- Nanocrystalline technology (specialized metal-ceramic composites used for coatings)
- Sophisticated electronic surveillance equipment used by high-level government agencies
- The Envisat satellite (how it monitors the Earth, how it was launched, how it is maintained)
- Distributed Computing and Peer-to-Peer Computing (P2P) (SETI@home)
- Data encryption technology (e.g. Twofish, Triple-DES, AES encryption methods, etc.)
- Digital audio compression technology (e.g., MP3, Sony's ATRAC compression scheme, etc.)
- Energy scavengers (wireless vibrational parasites)
- Bluetooth wireless technology protocol
- 802.11a, b, and g wireless technology protocol
- The technology behind the popular game boxes (Play Station, X-box, etc.)
- Cell phone technology (how the cell grid operates, digital versus analog communication)
- LASIK procedure (laser eye-correction surgery)
- Smart roads (embedded devices in the roadway to guide automobiles)
- Quantum teleportation (theory, recent experiments, and possible applications)
- Global Positioning Systems (GPS) (as used in automobiles, missile guidance systems)
- Digital Video Discs (DVD) (how they work)
- Mini DV Digital video cameras (how they work)
- Modern electronic engine management systems (automobiles)
- Digital cameras (how an image is processed and recorded)
- High-definition plasma screens (how they work, advantages, disadvantages)
- Microelectronics and materials (production of high-resolution integrated circuits)
- Nanotube transistors
- Smart pills (emerging nanotechnology in medicine)
- Organic Light-Emitting Diodes (OLED) (flat panel displays using OLED technology)
- Magnetic levitation trains (Maglev trains)
- Airborne pathogen control systems (aerobiology of the indoor environment)
- Artificial neural networks (i.e., parallel distributed processing, neuro-computing, etc.)
- Advanced manufacturing technology (the use of robotics in precision assembly)
- Robotics and Mechatronics (robotic devices designed to help disabled people)
- Satellite Data Acquisition (methods used to transmit data back to Earth)
- Concrete technology (the science of formulating concrete for major structures)
- Geotechnics (ground improvement, slope stability, soil dynamics)
- RAID (Redundant Array of Inexpensive Disks) data storage technology
- Predictive and preventive maintenance systems used for asset optimization in manufacturing
- Information technology: protecting a company's critical information assets
- Managing a company's computer network infrastructure
- Automation systems used in high-tech manufacturing (self-monitoring equipment)
- Nanochips: design and manufacture
- Modern fuel injection systems used on automobiles
- Inexpensive customizable robots used for industrial purposes (swarmbots)
- Radio-Frequency Identification (RFID) tags/readers used for process automation and monitoring
- Stealth submarines: running silent and deep
- Synesthesia: hearing colors, tasting shapes

- Self-repairing computers
- Hearing implants
- Smart antennas: adaptive antenna arrays
- Nanomanufacturing
- Geocaching (the sport of searching for strategically placed hidden treasures via GPS devices)
- MEMS (Micro-Electromechanical Systems) technology
- Artificial neural networks
- Blu-Ray DVD versus HD-DVD formats (high definition, high capacity DVD formats)