

# Databases for Engineering Research

For a **complete list** of subject-specific databases, visit the Library's Database web page at: <http://www.lib.virginia.edu/databases/> or the engineering **Subject Guide** web page of your choice at: <http://www.lib.virginia.edu/brown/guides/>

For assistance in organizing found articles and citations, use **RefWorks** to create a personal database of citations. You can use these references in writing your paper and automatically format the paper and the bibliography in seconds. See <http://www.refworks.com/> for details.

For help citing sources, including web resources, see the Library's **Style Manuals and Writing** guide page at <http://www.lib.virginia.edu/reference/index.html>

The following are major databases that include all aspects of engineering:

## **Cambridge Scientific Abstracts (CSA)**

- A suite of over 40 databases, many of which are engineering-focused

## **Ei Compendex (Engineering Village)**

- The premiere engineering database for all engineering specialties

## **InfoTrac OneFile**

- A good basic index for most science and engineering topics

## **Lexis-Nexis Academic Search**

- Outstanding database aimed at newspapers, business and legal topics

## **Scitopia**

- Comprehensive database that searches the combined offerings of many engineering and science-related professional societies and other organizations

## **Web of Science**

- Excellent advanced database for most areas of science and engineering; original database to offer citation searching

The following is a list of additional databases relevant to engineering research categorized by engineering discipline. There are many other databases available – for assistance in choosing the right database for your research, call the Brown SEL Information Desk at 924-3628 or ask a librarian.

## **Aeronautical and Aerospace Engineering**

### **Aerospace and High Technology Database (CSA)**

- covers basic and applied research in aeronautics, astronautics, space sciences, and related fields.

### **NASA Scientific and Technical Aerospace Reports**

- lists citations and abstracts of NASA and worldwide aerospace-related research

## **Biomedical Engineering**

### **BioEngineering Abstracts and Biotechnology and Bioengineering Abstracts (CSA)**

- deals with research, applications, regulatory developments, and new patents across all areas of biotechnology and bioengineering

### **Medline**

- The world's premiere database covering medicine and related topics

## **Chemical Engineering**

### **Science Direct**

- journals published by Elsevier, major publisher of chemical engineering journals

### **SciFinder Scholar**

- can be searched by research topic, substance identifier, chemical structure, CAS registry number, chemical reaction, and/or author's name; other features also available
- available only to UVA faculty and students and requires software download—see a librarian for assistance

## **Civil and Environmental Engineering**

### **Building Green Suite, Inc.**

- an online resource for environmentally sensitive design and construction.

### **Civil Engineering Abstracts (CSA)**

- covers all civil engineering, including forensic engineering, theoretical mechanics and dynamics, management and marketing of engineering services, engineering education, environment, etc.

### **Environmental Engineering Abstracts (CSA)**

- covers technological and engineering aspects of air and water quality, environmental safety, and energy production.

### **TRIS Online**

- contains references to books, technical reports, conference proceedings, journal articles and on-going research in the field of transportation.

## **Computer Science**

### **Computer and Information Systems Abstracts (CSA)**

- areas of coverage include artificial intelligence, computer applications & programming, computer systems organization, hardware, mathematics of computing, and software engineering

### **INSPEC (Engineering Village)**

- provides access to physics, electrical engineering, electronics, communications, control engineering, computers and computing, and information technology

### **Internet & Personal Computing Abstracts (CSA)**

- provides comprehensive information on the latest personal computing products and developments in business, industry, education, libraries, and the home.

## **Electrical and Computer Engineering**

### **Electronics and Communications Abstracts (CSA)**

- covers circuits, components, photonics, telecommunications and power systems

### **IEEE Xplore**

- full-text access to IEEE transactions, journals, magazines and conference proceedings and all current IEEE Standards

### **INSPEC (Engineering Village)**

- provides access to physics, electrical engineering, electronics, communications, control engineering, computers and computing, and information technology

## **Materials Science and Engineering**

### **Engineered Materials Abstracts (CSA)**

- covers the research, manufacturing practices, properties and applications of ceramics, polymers and composites

### **Metadex**

- information on metals and alloys: their properties, manufacturing, applications, and development

## **Mechanical Engineering**

### **Mechanical and Transportation Engineering Abstracts**

- includes all areas of mechanical engineering, such as aerospace, automotive, and railroad engineering, industrial and manufacturing processes, electric power generation, industrial robots and automation, theoretical mechanics and dynamics, fuels and propellants, etc.

### **Society of Automotive Engineers (SAE) Publications Search**

- searches the publications of the premier society dedicated to advancing mobility engineering worldwide; SAE publications are not well indexed elsewhere

## **Science, Technology and Society (Social, Ethical and Economic Aspects of Science and Engineering)**

In addition to the subject-specific databases listed here there are many others not strictly devoted to science and engineering that include information relevant to the impacts of science and technology on society. Please consult the Brown Science and Engineering Library's subject guide for these topics at <http://www.lib.virginia.edu/science/guides/s-ethics.htm> for an extensive listing of useful databases.

## **Systems and Information Engineering**

### **MathSciNet**

- a comprehensive database covering the world's mathematical literature

### **Risk Abstracts (CSA)**

- encompasses risk arising from industrial, technological, environmental, and other sources, with an emphasis on assessment and management of risk.

See also relevant entries for other engineering disciplines above; Systems Engineering is very wide ranging and interdisciplinary. Also consider searching for such topics as human factors, ergonomics, engineering design, product safety and similar subjects as they relate to specific projects or assignments.

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