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Database Spotlight: Engineering Fall 2015

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Recommended Citation

The University of Alabama in Huntsville, "Database Spotlight: Engineering Fall 2015" (2015). *Database Spotlight*. 9.

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DATABASE SPOTLIGHT :

ENGINEERING

Getting the most out of your e-resources

FALL 2015

SPIE

SPIE was founded as the Society of Photographic Instrumentation Engineers in 1955. Over time and a couple of name changes, the organization grew in size and scope, eventually settling into the current iteration and brand: **SPIE-The International**

Society for Optical Engineering. Salmon Library's primary access to this organization's publications comes in the form of the *SPIE Digital Library*, an extensive resource devoted to covering optics and photonics. Researchers have access to 200,000 technical papers from SPIE journals and conference proceedings, including full coverage from 1990 to the present. More than 17,000 new technical papers are added annually. As for journal content, each publication is peer-reviewed and covers several topics, such as optical engineering, nanophotonics, electronic imaging, and microlithography. You'll also find a collection of several open access articles on important emerging technologies in *SPIE Letters*.



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The *Astrophysics Data System (ADS)* is a NASA-funded abstract service for astrophysics, instrumentation, and physics research. It's often used by searching for basic bibliographic data (author, title, etc.), but also for object names in astronomy. While the abstracts and most full text are freely available to the public, you may run into content behind a paywall. If UAH subscribes, you can get to it seamlessly by creating an account on the *ADS* homepage, then selecting "Library Links." At this point you can select UAH as your library link server, pushing you through to Salmon Library's resources!



Formerly known as the **American Society of Metals**, the ASM is a professional organization for materials scientists and engineers. Initially a United States based endeavor with a technical focus on treating steel, the society expanded to a more global scope in the 1930's, while also extending their work and research to other metals and materials. The *Failure Analysis Center* combines over 1,000 case histories with authoritative handbook information on failure mechanisms and analysis methods for mechanical engineering. This database enables you to find specific information to help you quickly solve your own failure analysis or materials performance issues.



Elsevier's *Scopus* is a massive abstract and citation database of peer-reviewed literature. Its global scope combines scholarly journals and thousands of conference proceedings with a powerful suite of tools to analyze, track, and visualize research. *Scopus* is designed to serve the information needs of educators, students, researchers, and even administrative personnel in the academic community. While it's a handy tool for finding high quality content, the ability to apply qualitative analytical data to the research process adds assessment value as well. This data can help in visualizing an institution or researcher in context with peer groups in academia. You can also sort your results by citation count, seeing just how much a given publication is being referenced. Search by affiliation to see where UAH faculty have contributed in a given subject area. *Scopus* puts things in perspective!



Quick Tip:

Academic Search Complete is a large multidisciplinary database; don't overlook this in your research process. A toolbar lining the top of the database's homepage offers a "Subject Terms" option. Click on this, then search for something like "materials science." You can then take a closer look at broader or more granular terms you may need to use while in this database for more efficient searching.

EBSCO's Research Starters

RESEARCH
STARTERS



If you've been using our *OneSearch* Discovery tool on the library homepage over the past year, you may have noticed the new **Research Starter** entries popping up at the top of your results. These are meant to provide a good overview of the topic, or closely related topics, you searched for. They can help you decide on a direction to take your research going forward, better understand the key players or issues in a heated debate, or point you toward other resources to grant more foundational concepts. As an example, search for **pneumatics** in *OneSearch*. The **Research Starter** gives a summary of pneumatics technology, some photographs, basic principles, and some key terms one should know going forward. After a brief historical overview, examples of current applications are covered. A closing bibliography mentions a few books and articles you can read to learn more. These can be good ways to kickstart a new research topic!

AIP
Conference
Proceedings

A subset of the *Scitation* database, this collection is provided by the American Institute of Physics. These proceedings chronicle scientific conferences from around the world, serving as valuable topical status reports on information before it appears in traditional journal literature. Since these documents are really a part of the *Scitation* platform, the same searching features one would use for the *AIP* journal content apply to the conference proceedings. This database uses a robust subject thesaurus of more than 7500 terms, granting the user access to the controlled vocabulary used to categorize the proceedings. Each record also contains useful metrics, letting you peek behind the curtain a bit to see citation count and views over time.

ProQuest®

The *ProQuest Science and Technology* database combines full text journals with detailed indexing of other global literature on natural sciences, engineering and technology. Areas covered include materials science, aerospace engineering, civil engineering, biology, aquatic sciences, environmental science, computer science, and earth sciences. The content is searchable by a variety of document types, such as reports, case studies, or proceedings. You can also tailor your search with certain document "features", such as by chart, diagram, graph, map, or illustrations. The new *Illustrata* product add-on provides deep indexing of these types of visual data points, enriching the research process further. Coverage dates vary by title.

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