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Database Spotlight: Engineering Fall 2014

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Outside the Box : Frost & Sullivan

At some point you have to move from theory to practical application when developing a new technology, or improving upon an older one. It's important to become aware of the state of an industry or market for what you're working on, and Salmon Library has the tools for that! While listed as a business database, the engineer should be aware of *Frost & Sullivan's* database. This resource provides market and industry data to inform a global perspective for a given product idea or application. With a brand new layout in 2014, you can browse industries such as **Aerospace & Defense** or **Energy Systems**, or technologies by categories like **microelectronics** or **materials & coatings**. There are handy categories as well to allow customization in finding just industry research versus press releases, or for finding forecasts based on country. Be informed about the global application potential of your work!



301 Sparkman Drive Huntsville, AL 35899

phone: 256.824.6530 email: library@uah.edu

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Engineering Librarian

Ron Schwertfeger

256.824.6713

rls0032@uah.edu



Electronic Resources Librarian

Michael Manasco

256.824.6965

mdm0027@uah.edu



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DATABASE SPOTLIGHT :

ENGINEERING

Getting the most out of your e-resources

FALL 2014



With thousands of titles at your disposal, *IEEE Xplore* and *IEEE Standards* should definitely be a part of your research strategy in electrical engineering. There are thousands of articles and proceedings at your disposal, as well as numerous Standards. A toolbar at the top allows you to jump between the primary *Xplore* interface for all content, and one devoted to searching just these Standards. In addition to searching, you can simply browse by topic, like **Transportation, Power & Energy, Communication**, and more. Also, these Standards indicate whether or not they are active, withdrawn, or superseded. Back in the *Xplore* interface, search results can be further customized by author, publication year, and topic. HTML previews of an article allow you to view several tabs at the abstract level, enriching your research experience by providing easy-to-browse tabs for figures, keywords, multimedia, and more!



Quick Tip: When using the *Journal Citation Reports* database, select "Science Edition," search by "subject category," then "engineering" category. The results can be sorted by total cites or impact ratings, granting insights into leading journals in the field!



Our collection from the *ACS* covers 75 full text journals and magazines. Additionally, Salmon Library provides archival access to 44 of these titles. The *American Chemical Society's* website promotes more than basic article searching. In fact, this database features an assortment of multimedia content, from podcasts to videos. While some of this content focuses on interviews with journal editors or leaders in the field of chemical engineering, others are brief "how to" tutorials on using tools such as the *ACS* mobile app or guides to publishing your research. One should certainly take note of the **ACS LiveSlides** videos. These are presentations created by article authors concerning their published research in the *Journal of Physical Chemistry Letters*, including the author's own narration describing their research. While viewing this content, you can link out directly to the full text of the article. For broad subjects like "enzymes," topical sections collect relevant articles and authors in one place to make research easier!



Did you know...?

Salmon Library provides full text access to 36 titles from the *American Society of Civil Engineers*, such as the *Journal of Structural Engineering*, one of the field's oldest and most respected periodicals!

ScienceDirect

Salmon Library provides access to a few thousand titles from *ScienceDirect*. This is a key resource for our Engineering program, as we have over 900 titles under the

Physical Sciences and Engineering category alone that offer full text, as well as hundreds of abstracts. While our subscription is robust, take advantage of their Open Access collections as well! The database's homepage has a link near the bottom left that will take you to a directory of open access content which can also be browsed by subject area.

Another great feature is *ScienceDirect's* **Top 25 Hottest Articles**, located near the center of the page. This is a quick way to see a listing of some of the most relevant and highly cited content in a given year. Limit by **Engineering** to get a top 25 list which you can sort by year all the way back to 2004. In many cases, you can even view the most read articles from a particular journal. Elsevier uses data from a sister database, *Scopus*, to indicate how many times a given article has been cited. You can see that information under each article on this list, granting insights into an article's practical applications over time. As a bonus, there is an easy "Blog this" button on each article listed, providing an embedded link to copy and paste this article's data into a web application or program.



Did you know...?

The *Industrial & Engineering Chemistry Research* journal was cited 43,808 times in 2013, according to *Journal Citation Reports*.

Hint: We have this journal! Check it out!

OneSearch : Make It Work For You!

Ah, *OneSearch*...that "search everything right now" solution! Well, it can be a boon or a burden depending on how you use it. While this *is* a tool for discovering what offerings Salmon Library has on a subject across various databases, formats, and publishers, it can be overwhelming. It's probably not the best place to search for a term like **engineering**, unless you want around 22 million hits ranging from an encyclopedic entry for genetic engineering to a marketing report for global engineering services from 2012, with lots in between.

The rule of thumb for *OneSearch*? Use that limiter bar on the left, always! *OneSearch* works best when you cast that "search net" wide on a topic, such as **structural analysis engineering**. Sure, you may get 1.6 million results, but maybe you just want conference proceedings we have full text for at UAH right now. There are categories buried under "Source Type" on the left. Click what you want, and you'll be down to hundreds, then dozens in no time. It's all about narrowing down! We may still not have what you need, but we'll try and get it for you if we can!

ACM DL DIGITAL LIBRARY

Representing the Association for Computing Machinery, this collection contains full text to a mix of journals and conference proceedings. Salmon library provides access to over 1,100 titles from this association. Also, we are proud to offer over 1,000 titles from the *Special Interest Group* collection, featuring such groups as SIGGRAPH (Computer Graphics), SIGSOFT (Software Engineering), SIGAI (Artificial Intelligence), and more! Aside from the wealth of content available, *ACM's* interface offers transparent metrics on a given publication, such as citation counts and downloads, as well as a "Top 10" feature listing most downloaded and cited articles over a six week period. You can browse the primary journals, as well as search across all of them with a basic or advanced search bar. Each article has a reference list extracted from the full text article, so the abstracts available here are quite useful! Tools are also available to quickly export into EndNote for citation management.



Salmon Library has access to dozens of journals available from the *American Society for Mechanical Engineers*. A tab-delineated interface on the *ASME* homepage will have most of these listed to browse

through, as well as a nice **Topic Collections** tab to offer a quick way to track up-to-the-minute content on issues relevant to you, such as robotics and mechatronics, fluids engineering, or defense industry applications. Many of these articles contain several figures and references scattered throughout the full text, and there is a tool set available to export these into a Powerpoint slide set if you so choose. Full text is segmented into easy to navigate sections within an article, so getting directly to a literature review or conclusions from a technical brief is a breeze!

Compendex on Engineering Village

Covering well over 120 years of core engineering literature, the *Compendex* platform is a collection of bibliographic citations from thousands of engineering journals and conference proceedings. The website for this database has had a few "quality of life" upgrades over the past year, such as more prominent options to download to your PC or upload to a cloud setting, for example. Short for "Computerized Engineering Index," this database has over 13 million records, with about 1 million new records added each year from over 190 disciplines in engineering! Several unique search limiters are present, such as Ei (Engineering Index) codes and headings. The **Thesaurus Search** is quite useful in determining the best terminology to use, such as searching for **aerodynamics**, then selecting terms such as **aeroacoustics** or **aerodynamic stalling** for more focused results. While a standard limiter for "document types" exists for selecting journals versus dissertations, for example, another limiter for "treatment type" empowers your search to find content of a historical, experimental, or theoretical nature as well!