

# *Research Wiki for ESM*

Wiki

Wi•ki |wikē|

*Etymology—*

Coined by programmer Ward Cunningham (1949- ), from Hawaiian *wiki-wiki* ‘quick-quick.’

# What is a wiki?

**Wiki:** Wi•ki |wikē| —a web site that allows collaborative editing of its content and structure by its users.

- allows users to quickly create web pages
- simple to use, but well structured
- no HTML knowledge needed
- cut and paste entry
- multipurposing

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## Dr. Joseph L. Rose

### Ultrasonics Research and Development Lab

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A fully equipped Ultrasonic nondestructive Evaluation facility is available in the Engineering Science and Mechanics Department at Penn State University. A whole series of piezoelectric sensors and electro magnetic acoustic transducers are available over a frequency range from 50 KHz to 25 MHz. Five shock and tone burst instrumentation systems are available. We also have an 8 channel phased array tone burst system to do focusing in pipe, a laser based ultrasonic test system, and a set of air coupled sensors.

Computer modeling and computational software are also available to generate dispersion curves and wave structures for all sorts of geometries including plates, pipe, multiple layer structures, rail, rods and other shapes. Programs for [anisotropic](#) and [viscoelastic](#) structures can also be integrated into the programs. Elastodynamic wave propagation and scattering finite element and boundary element codes are also available for wave propagation and wave scattering from defects for a whole series of different wave guides.



- [Crack Detection in Green Compacts](#) – The Center for Innovative Sintered Products
- [An Ultrasonic Sensor System for Crystal Manufacture](#) – International Sematech
- [Ultrasonic Tomography for Net Shape Powder Metal Part Production Via Cold Compaction](#) – National Science Foundation
- [A Novel Wireless System for Structural Integrity Monitoring of Aircraft](#) – Intelligent Automation, Inc., US Navy
- [Guided Wave Sizing and Discrimination for SCC Research](#) – PRCI
- [High Frequency Guided Wave Phased Array Focusing in Pipe](#) – The Office of Naval Research
- [Guided Wave Tomography](#) – ASNT
- [A New Apache Helicopter Rotor Shaft](#) – Boeing
- [Ultrasonic Flow Meter Development](#) – General Electric
- [Miscellaneous Laboratory Exercises](#) – Internal, FBS

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## anisotropic

**anisotropic** |anˌɪsəˈtrɒpɪk; -ˈträpɪk| adjective Physics (of an object or substance) having a physical property that has a different value when measured in different directions. A simple example is wood, which is stronger along the grain than across it. • (of a property or phenomenon) varying in magnitude according to the direction of measurement. DERIVATIVES anisotropy |ˌanɪˈsətrəpē| noun *ORIGIN* late 19th cent.: from Greek *anisos* 'unequal' + *tropos* 'turn' + *-ic*.

Logged in as: Bill Ames

research/jlr9/anisotropic.txt · Last modified: 2006/01/23 10:34 by weal00

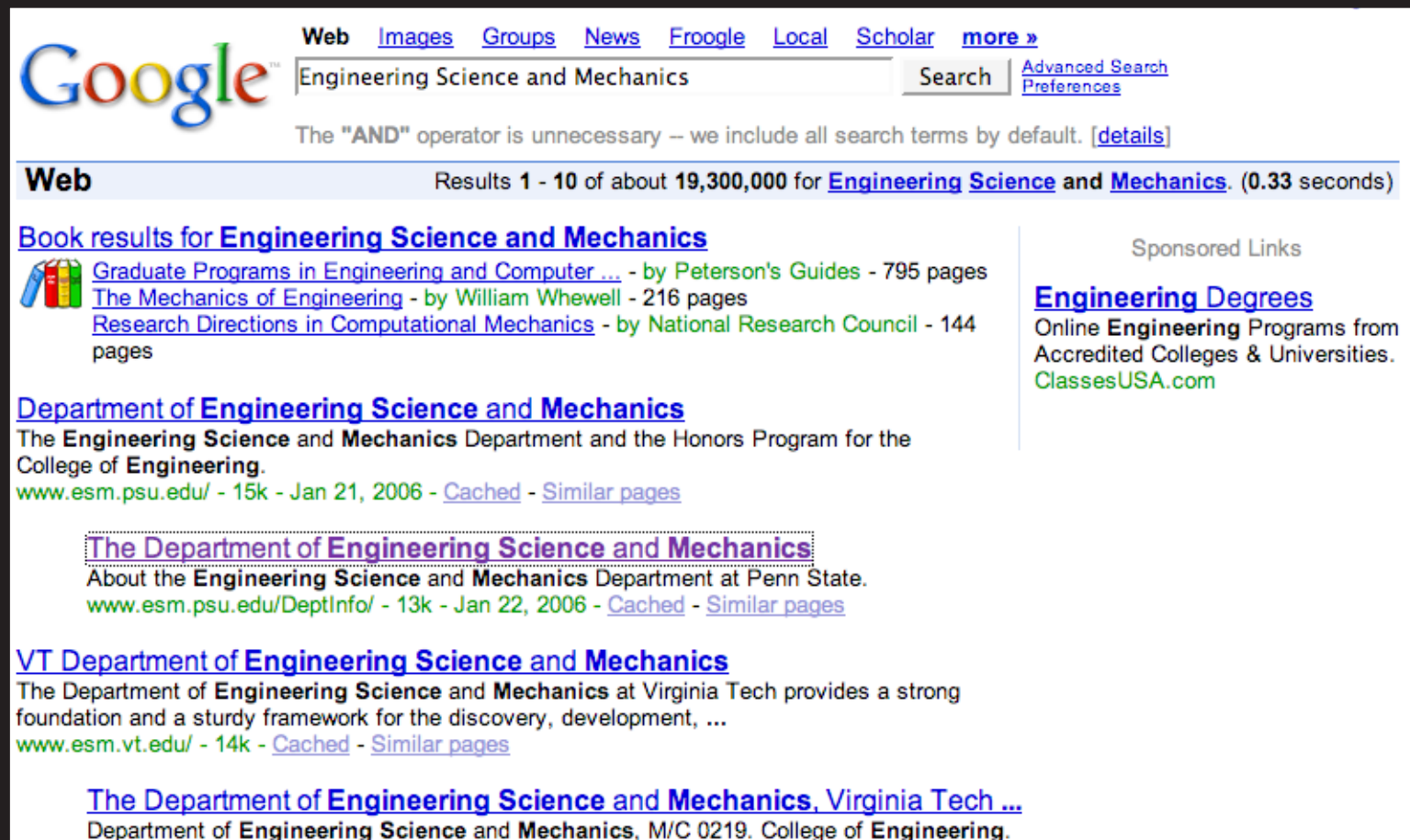
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# Why wiki?

- increase visibility on the web
- recruiting and development
- limited IT support required
- track research progress
- collaboration
- multipurposing



# Search engine optimization: **Success story...**




The screenshot shows a Google search interface with the query "Engineering Science and Mechanics". The search results are displayed under the "Web" tab, showing approximately 19,300,000 results. The first result is a book titled "Graduate Programs in Engineering and Computer ...". The second result is a department page from Penn State. The third result is a department page from Virginia Tech. The fourth result is another department page from Virginia Tech. The search results are displayed in a list format with links to the respective pages.

Google Web Images Groups News Froogle Local Scholar more »  
Engineering Science and Mechanics Search Advanced Search Preferences  
The "AND" operator is unnecessary – we include all search terms by default. [details]

**Web** Results 1 - 10 of about 19,300,000 for **Engineering Science and Mechanics**. (0.33 seconds)

**Book results for Engineering Science and Mechanics**

-  Graduate Programs in Engineering and Computer ... - by Peterson's Guides - 795 pages
- The Mechanics of Engineering - by William Whewell - 216 pages
- Research Directions in Computational Mechanics - by National Research Council - 144 pages

**Department of Engineering Science and Mechanics**  
The Engineering Science and Mechanics Department and the Honors Program for the College of Engineering.  
[www.esm.psu.edu/](http://www.esm.psu.edu/) - 15k - Jan 21, 2006 - [Cached](#) - [Similar pages](#)

**The Department of Engineering Science and Mechanics**  
About the Engineering Science and Mechanics Department at Penn State.  
[www.esm.psu.edu/DeptInfo/](http://www.esm.psu.edu/DeptInfo/) - 13k - Jan 22, 2006 - [Cached](#) - [Similar pages](#)

**VT Department of Engineering Science and Mechanics**  
The Department of Engineering Science and Mechanics at Virginia Tech provides a strong foundation and a sturdy framework for the discovery, development, ...  
[www.esm.vt.edu/](http://www.esm.vt.edu/) - 14k - [Cached](#) - [Similar pages](#)

**The Department of Engineering Science and Mechanics, Virginia Tech ...**  
Department of Engineering Science and Mechanics, M/C 0219. College of Engineering.

**Sponsored Links**

**Engineering Degrees**  
Online Engineering Programs from Accredited Colleges & Universities.  
[ClassesUSA.com](http://ClassesUSA.com)

# Implementation...

- brief training session
- lab liaisons assist
- researchers enter content directly
- faculty review entries
- IT staff monitor performance



# Keyword linking...

is a hyperlink that contains a keyword.

- inherent in wiki
- student web pages

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`<a href="http://www.esm.psu.edu">anisotropic</a>`

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One more thing...

# A new web site...

Over the summer of 2005, an entirely new web site for ESM was created. It was launched on the first day of the fall semester.

- Web Standards (XHTML, CSS, accessible)
- new linking structure
- new pages and hierarchy
- search engine optimization

nobody noticed

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