

AFRL Library News

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New Books

Where Men Win Glory: the
Odyssey of Pat Tillman
by Jon Krakauer
Doubleday, 2009
GV939.T49 K73 2009

Finite Element Structural
Analysis: New Concepts
By J.S. Przemieniecki
American Institute of
Aeronautics and Astronautics,
2009
TA347.F5 P783 2009

Metamaterials: Critique and
Alternatives
By Ben A. Munk
Wiley, 2009
TK7871.6 .M855 2009

Polymer Tribology
Edited by Sujeet K. Sinha and
Brian J. Briscoe
Imperial College Press/World
Scientific, 2009
QD381.9.S97 P66 2009

FRAGILE NETWORKS: Identifying Vulnerabilities and Synergies in an Uncertain World, review

What is common between web traffic
and transportation?

If a path always has heavy traffic will
building a bypass or an alternative path
really help the cause? Or will it worsen
it?

How do you use network theory to solve
transportation and water supply
problems?

How is the study of networks helpful in
solving complex problems in finance
and economics?

Anna Nagurney and Qiang Qiang
answer these questions and more in
their book **Fragile Networks:**

Identifying Vulnerabilities and Synergies in an Uncertain World.

The authors talk about the scientific
underpinnings of networks and explain
about classical networks and interesting
applications of networks to different
disciplines.

They discuss Supernetworks, a new
branch of study which helps in solving
problems associated with constructing
and improving networks.

They assert that many of the solutions
to these network problems can be
applied to different disciplines with minor
modifications.

continued on next page

Free Access to SpringerLink's New Database

SpringerLink has launched a new
database and AFRL librarians at the
D'Azzo Research Library want to
remind you that time is running out to
try it out for free.

All customers have free trial access to
the **SpringerMaterials Landolt-
Börnstein Database** until January 29th,
2010.

SpringerMaterials covers 165,000
Substances & Material Systems, 3,000

Properties, and 1,000,000 Literature
Citations.

You can search either by subject area or
by the **Landolt-Börnstein** book series.

To access this new resource, visit
<http://www.afrl.af.mil/wrslibrary/> and
click the link under "New Trial
Database."

Please let us know what you think of the
Landolt-Börnstein Database.

“The past is
a source of
knowledge,
and the
future is a
source of
hope”

Stephen
Ambrose,
*Fast
Company*

FRAGILE NETWORKS (continued from page 1)

Following an introduction to the fundamental methodologies and tools required for network analysis and network vulnerability, the book explores its subject through three sections:

I -- Network Fundamentals, Efficiency Measurement and Vulnerability Analysis

II – Applications and Extensions

III – Mergers and Acquisitions, Network Integration and Synergies

Anna Nagurney is John F. Smith Memorial Professor in the Department of Finance and Operations Management in the Isenberg School of Management at the University of Massachusetts at Amherst.

She is the Founding Director of the Virtual Center for Supernetworks and the Supernetworks Laboratory for Computation and Visualization.

Her co-author, **Qiang Patrick Qiang**, currently researches mathematical modeling of complex decision-making on network systems.

You may find **Fragile Networks: Identifying Vulnerabilities and Synergies in an Uncertain World** on the third floor of the **D’Azzo Research Library**, call number T57.85 .N34 2009.

OhioLink: Electronic Theses and Dissertations Center

In 1999, the Ohio graduate deans’ group asked **OhioLink** to create a single, commonly shared **ETD** site to represent the work of Ohio’s scholars.

The **ETD Center** launched in 2001, as a joint project of OhioLINK and the Regents Advisory Committee on Graduate Study.

The **ETD Center** is a free, online database of Ohio’s masters and doctoral theses and dissertations from participating **OhioLINK** member schools.

It contains the abstract for all included theses and dissertations. The full-text is also available if it was submitted.

Here is a sample of the work being shared on ETD that AFRL researchers

might find interesting:

Aircraft Thermal Management Using Loop Heat Pipes by Andrew J. Fleming
http://etd.ohiolink.edu/view.cgi?acc_num=wright1238086423

Investigation of the Flowfield Surrounding Small Photodriven Flapping Wings by Bani Younes and Ahmad Hani
http://etd.ohiolink.edu/view.cgi?acc_num=dayton1249521436

The Effects of Localized Blade Endwall Suction on Surface Heat Transfer by Rebecca M. Hollis
http://etd.ohiolink.edu/view.cgi?acc_num=osu1243977349

To access the OhioLINK Electronic Theses and Dissertations Center, go to:
<http://etd.ohiolink.edu/>

Product Updates: CSA, IHS, and SPIE

CSA Update

CSA Materials Research Database with METADEX employs what it calls “deep indexing” to categorize data, variables and other content represented in tables, maps, photographs and other figures.

Usually, indexing of research articles is done at a rather high, general level where only the key concepts of the work are represented by a dozen or so index terms, but going deeper and specifically indexing the content associated with all the individual tables and figures enables the researcher to find information that otherwise would not be retrievable in traditional, article-level indexing systems.

Search results – the objects – can be viewed in full, in either (thumbnail or enhanced format) along with the caption, author and source information and additional index terms that can be used for further searching.

A link back to the parent record provides a summary view of all the objects associated with that paper. In most instances, the parent abstract is displayed and context is further preserved by links to the full-text documents when available.

Thus, researchers can find relevant data faster and, because of the visual impact of the results, can quickly determine whether or not to spend time reading the source documents. The visualization of data can also lead to unexpected discoveries or connections between seemingly disparate pieces of work.

To use **Materials Science** and its supplements to the **Materials Research Database** with access to deep indexing for tables, figures, graphs, charts and

other illustrations from the scholarly research and technical literature for selected records, visit <http://www.afrl.af.mil/wrslibrary/> and click on **CSA Database** under **Popular Resources**.

IHS Standards Update

Haystack Gold enables researchers to perform a **Super Search**.

A **Super Search** allows you to search across multiple databases and sub-databases for records with a given **NIIN** or **Part Number**.

To perform a **Super Search** in **Haystack Gold**:

1. Go to Databases > **Super Search**.
2. Enter **NIIN** 005347553 in the **NIIN** field. All of the databases are selected by default.
3. Leave all of the check boxes selected and then click **Search**. The results list the number of records found for each database with a **NIIN** 005347553 record(s).
4. Click on a link in the **Records Found** column for a specific database to view a list of the **NIIN** records in that database.

<http://global.ihs.com/news/temp/NBD-email/haystack-screen.jpg>

SPIE Update

SPIE Digital Library now organizes and lists the top 10 downloaded papers by technology each month.

This list includes a cross-disciplinary sampling of the most frequently downloaded papers from **SPIE Conference Proceedings** and **SPIE Journal papers**.

"For in such
business,
action is
eloquence"

William
Shakespeare,
Coriolanus,
Act III, Sc. ii

“Technological progress is like an axe in the hands of a pathological criminal”

Albert Einstein

Product Updates (continued from page 3)

Each title is linked to the abstract page for that paper on the **SPIE Digital Library**.

Researchers may keep track of the top 10 overall papers, or they may see the top 10 in each of these topics updated monthly:

Astronomy

Biomedical Optics & Medical Imaging

Defense & Security

Electronic Imaging & Signal Processing

Illumination & Displays

Industrial Sensing & Measurement

Lasers & Sources

Micro/Nano Lithography & Fabrication

Nanotechnology

Optical Design & Engineering

Optoelectronics & Optical

Communications

Remote Sensing

Solar & Alternative Energy

<http://www.spiedl.org/journals/doc/SPIE-DL-home/myspie/Top10.jsp>

The librarians at the **D’Azzo Research Library** are always happy to give one-on-one help or set up a mediated search in **CSA, IHS, SPIE**, or any other database.

Let us know if we can be of assistance during your research process.

Again, we truly appreciate your business and look forward to continuing to provide you with the best critical information and insight for your work flow. If you find any of the information listed above of value to you or would just like to set a time to discuss your needs, please contact us directly:

Phone: 937-255-5511 x4238

Email: afri.wsc.library@wpafb.af.mil

THE D'AZZO RESEARCH LIBRARY AFRL STAFF DIRECTORY

Contact Information

Email	Phone
Reference Questions afrl.wsc.library@wpafb.af.mil	255-5511 x4238
Circulation (checkouts & re-newals) CIRCDESK@afit.edu	255-3005
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Technical Reports Center wsc.secure-room@wpafb.af.mil	255-7415
Acquisition/Collections Services (purchase suggestions) afrl.wsc.library@wpafb.af.mil	255-5511 x4242
Library Director afrl.wsc.library@wpafb.af.mil	255-5511 x4271
FAX	656-7746

WEB SITE:

<http://www.afrl.af.mil/wrslibrary/>

The D'Azzo Research Library, Wright Site

Det 1, AFRL/WSC
2950 Hobson Way
Building 642, Room 1300
(AFIT Complex)
Wright-Patterson AFB, OH 45433-7765
Phone: 937-255-5511 x4238
Fax: 937-656-7746

Hours:

Hours of assistance from AFRL staff:

Monday to Friday, 0800-1630.

Library Facility Open Hours:

Monday-Thursday 0730-1800

Friday 0730-1700

Saturday & Sunday 1100-1800

Closed Federal Holidays.

The D'Azzo Research Library at WPAFB is operated under contract by Vistrionix, Inc.

Borrowing from the Library

AFRL personnel may borrow materials for 56 days with their AFRL Library Card. Video loan time is 14 days.

Limited renewals are available.

Do you use MSN messenger?

Add us and try our new chat reference service! To get started, send a note to the AFRL Library Reference Desk, afrl.wsc.library@wpafb.af.mil, with "IM startup" or something to that effect in the subject line. You will receive a reply from your TD Librarian Liaison. Alternatively, you can immediately add the name of an AFRL Librarian to your MSN Messenger contacts right now.