Engineering Village

(check both database boxes)

Inspec

and

Compendex
Inspect and Compendex: Indexes to conference and journal papers (check both boxes - Inspect and Compendex)

- **Inspect** -- physics, electrical engineering, computer engineering, communications, optics, photonics, electronics, computers and control, simulation and modeling, biomedical technology, radar, electrical power, robotics, telecommunications, radio, mechanical and production engineering, and information technology for business

- **Compendex** -- All areas of engineering

- 20% overlap between Inspect and Compendex

- Combine Inspect and Compendex (check both boxes)

**PaperChem**: Pulp & paper index with chemical emphasis.
Fast Searches in Inspec & Compendex

Quickly browse for only a few papers on a topic

- Limit by (drop down menus, below search box)
  - “Journal article” (Document Type)
    - Find It @ GT works properly for **most** (but not all) journal papers, but **seldom** works for conference papers
  - “English” (Language)
  - **Date** (recent range of years, or sort by Date Newest)

- To add **synonyms** to your search strategy, check:
  - Title, Abstract, Subject heading fields
  - Thesauri (online)
  - Bibliographies/references and footnotes in similar papers

- **Sample quick review keywords**
Inspec 1896+ and Compendex 1884+

- **Autostemming - Turn ON**. Autostems (automatic plurals...) all key words except for Author names and words in quotations and/or braces.
- Be sure that **Autostemming is turned ON after every search**, such as after “Search history” is used (“Results”).
- Always check that Autostemming is turned ON when using “Expert Search”.
- Using truncation or wildcards will turn off the autostemming feature.
Inspec 1896+ and Compendex 1884+

• **Truncation** is asterisk (*). Model*.
• Note: use left truncation with care
  (*sorption returns absorption)
• **Exact phrase** within **quotes** (" ")
• **Select both boxes**, Inspec 1896+ and Compendex 1884+ (20% overlap)
• "**Search**" drop down menu (top row)
  - “Quick Search” or
  - “Expert Search”
Inspec 1896+ and Compendex 1884+

• **Proximity**
  - **Near/ #** - keywords are *within* zero to # terms of each other, in *any order*. Example: laser NEAR/4 diode
  - **Onear/ #** - *within* zero to # terms, in the *order* entered
  - **NEAR** and **ONEAR** can **not** be used with truncation, wildcards, parenthesis, braces or quotation marks
  - **Exact phrase**: use *quotes* “signal processing”
Inspec 1896+ and Compendex 1884+

• **Proximity**
  - **Autostemming** can be used with **proximity operators** (NEAR/# ONEAR/#) since all of the terms are automatically stemmed. You cannot use proximity operators with stemming unless **all** the terms are stemmed.

• **Search tips** (Compendex and Inspec):
  - [http://libguides.gatech.edu/Inspec](http://libguides.gatech.edu/Inspec)
  - [http://www.prism.gatech.edu/~bw21/databases-guides.htm](http://www.prism.gatech.edu/~bw21/databases-guides.htm)
  - ? (top, right of screen)
• **Databases** – check both boxes Compendex and Inspec

• **Sort by**
  - Date (Newest)
  - Relevance

• **Date**
  - Published _ year to _ year

• **Document type**
  - Journal article
  - Conference article

• **Browse indexes** (brings up pop-up screen)
  - Author (note author name variations)

• **Only Inspec “Treatment” types are current**
• **Results**
  - Default is “Citation” (brief info.)
  - Use “**Detailed**” or “**Abstract**” (for email, print, download – after “Select range” -- “Choose format”)

• **Remove Duplicates**
  - Choose “**Database Preference**” – Inspec or Compendex
  - Duplicate records will be removed from the first 1000 records in the result set

• **Display: 100** results per page
Personal Account (free)

- Alerts and Saved Searches
- My preferences
  - Two databases, Inspec & Compendex
  - 100 results per page
  - Sort by Date (Newest)
  - Download format (EndNote, RTF Word, etc.)
  - Download output (abstract or detailed)
  - Download location (My PC, your folders, etc.)
- With your personal account, you can create up to ten folders in which to save selected records. Each folder can contain up to 100 records.
- “Your session has expired due to inactivity of over 30 minutes. Create an account or login to extend the session time to 8 hours and retain your search history and selected records for 7 days.”
Author Names

- Author formats differ in each database
- **INSPEC** - Only author **initials**
- **Compendex** - Author names are as written in paper (initials or first names)
- Use "**Browse** indexes” “**Author**”
  - Browse using **both spaces** and **commas** after surnames
  - Browse with and without **middle initial**
  - Browse with **full first** name
“Browse indexes” (note author name variations)
“Search”

- Quick
- Expert
- Thesaurus
• “Results” (top row)
• “View all results” - lower right corner
• “Search history” (recombine previous search statement lines)
• “Combine searches”
• **Results - View all Results**
• **Search history**
• **Combine searches**
  
  (#1 AND #2 AND #3) AND (radar)

Turn **Autostemming ON**

• **Actions**: Create Alert; Save search; Edit this search; Delete search from search history
**Turn Autostemming ON**

Default for “Expert Search” and “Search history” is off

Be sure “Autostemming” and turn **ON** before **every search**

Do **NOT** check this box
Search History (top row, “Results” – “View all results”)

- “Combine previous searches” in the **same databases**
- Manipulate **previous search statement** numbers with **Boolean operators** and **keywords**
- Can add keywords. “**Search History**” example:
  
  #1 and #2 and (laser* wn ti)
- Open a **Word document** and keep track of search statement **line numbers**
- **Alerts** and **Save Search** – **one line only**
- **Combined** search set is only one search statement line - one long string of keywords used in previous statements
- Example. “Combine” -- when combining search statements, the earlier search statement numbers are lost.

#4 displays as a **string of keywords, not as (#1 and #2 and #3)**
Combine searches can also include **keywords**. Example:

\[
#1 \text{ AND } #2 \text{ AND } #3 \text{ AND } ((\text{Ehrfeld OR Borenstein}) \text{ wn au})
\]
• **Combined (#4) does not say #1 and #2 and #3.** It only gives keyword result (after Combined)

• Open a **Word file** and copy and paste statement lines

• **Email Alert** and **Save Search** both save only **one line**

• Session expires after 30 minutes of inactivity. Register for extra time.
• “Remove Duplicates” (from first 1000 records)
• Choose “No field preference” (there is no full text)

Do NOT choose “Has Full Text” – these databases have no full text (under “No field preference”)

- Create **alert**
- **Save** Search
- **Display:** 100

**Sort on:** Date (Newest)

- **Email** selections
- **Print** selections
- **Download**

**Sort on:** Date (Newest)
• Session may expire after 30 minutes of inactivity
• Select all boxes on one screen or check specific boxes

**Output:** Choose “Detailed” or Abstract (not “Citation”). DOI # is only in “Detailed” record format
• E-mail or Print or Download records to avoid being **timed out**
• **Download** Format – EndNote, CSV, Excel, RTF, etc.

---

**Download record(s)**

NOTE: Your selected records (maximum of 500) will be kept until your session ends. To clear selected records:
* Go to the Selected records page and clear records; OR
* End your session

**Location:**
- My PC
- Mendeley
- RefWorks
- Google Drive
- Dropbox
- Your Folder(s)

**Format:**
- EndNote (RIS, Ref. Manager)
- BibTeX
- Text (ASCII)
- CSV
- Excel®
- PDF [add search summary]
- RTF (Word®)

**Output:**
- Current page view
- Citation
- Abstract
- Detailed record

File name: Engineering_Village

_detailed_Date/Time.rtf

Remove selected records after download
Login or Create account to save to My Preferences

[Download record(s)]
Engineering Village Registration

- Alerts will send new records on your chosen topics to your email
- Saved records to folders
- Longer time-out – 8 hours
- Save your searches
- Save and customize download formats
- Customize your searching and results

Retain Session information for Registered Users

Highlights:
- Logged in users retain session information from previous session
- Up to 50 searches and 500 selected records are stored
- Session info saved for 7 days
- If user is timed-out, session searches/selected records are saved
Modern spectral analysis techniques for blood flow velocity and spectral measurement using pulsed Doppler ultrasound

Author(s): David, J.-Y.; Jones, S.A.; Giddens, D.P.

Author affiliation: Georgia Inst. of Technol., Atlanta, GA, USA

Source title: IEEE Transactions on Biomedical Engineering


Volume: 38

Issue: 6

Publication date: June 1991

Pages: 589-96

Language: English

ISSN: 0018-9294

CODEN: IEBEAX

Document type: Journal article (JA)

Country of publication: USA

Abstract: Four spectral analysis techniques were applied to pulsed Doppler ultrasonic quadrature to compare the relative merits of each technique for estimation of flow velocity and Doppler shift. The techniques were (1) the fast Fourier transform method, (2) the maximum likelihood method, (3) the Burg autoregressive algorithm, and (4) the modified covariance approach to autoregressive modeling. Both simulated signals and signals obtained from an in vitro flow system were used. Optimal parameter values (e.g. model orders) were determined for each method, and the signal-to-noise ratio and signal bandwidth were investigated. The modern spectral analysis techniques were shown to be superior to Fourier techniques in most circumstances, providing more accurate flow velocity and shift estimates.
four techniques were (1) the fast Fourier transform method, (2) the maximum likelihood method, (3) the Burg autoregressive algorithm, and (4) the modified covariance approach to autoregressive modeling. Both simulated signals and signals obtained from an in vitro flow system were studied. Optimal parameter values (e.g. model orders) were determined for each method, and the effects of signal-to-noise ratio and signal bandwidth were investigated. The modern spectral analysis techniques were shown to be superior to Fourier techniques in most circumstances, provided the model order was chosen appropriately. Robustness considerations tended to recommend the maximum likelihood method for both velocity and spectral estimation. Despite the restrictions of steady laminar flow, the results provide important basic information concerning the applicability of modern spectral analysis techniques to Doppler ultrasonic evaluation of arterial disease.

Number of references: 19

INSPEC controlled terms: biomedical ultrasonics | Doppler effect | haemodynamics | spectral analysis

Uncontrolled terms: optimal parameter values | spectral analysis techniques | blood flow velocity | spectral measurements | pulsed Doppler ultrasound | quadrature signals | maximum likelihood method | Burg autoregressive algorithm | simulated signals | in vitro flow system | model orders | signal-to-noise ratio | signal bandwidth | Fourier techniques | steady laminar flow | arterial disease

INSPEC classification codes: A8760B Sonic and ultrasonic radiation (medical uses) | A8770E Patient diagnostic methods and instrumentation | A8745H Haemodynamics, pneumodynamics

Treatment: Theoretical (THR); Experimental (EXP)

Discipline: Physics (A)

Database: INSPEC

Copyright 2003, IEE

- **Controlled** terms CV (Inspec **thesaurus** terms)
- **Uncontrolled** terms FL
Modern Spectral Analysis Techniques for Blood Flow Velocity and Spectral Measurements with Pulsed Doppler Ultrasound

Jean-Yves David, Steven A. Jones, Member, IEEE, and Don P. Giddens

Abstract—Four spectral analysis techniques were applied to pulsed Doppler ultrasonic quadrature signals to compare the relative merits of each technique for estimation of flow velocity and Doppler spectra. The four techniques were 1) the fast Fourier transform method, 2) the maximum likelihood method, 3) the Burg autoregressive algorithm, and 4) the modified covariance.

A number of spectral estimation techniques have recently been developed and have been compared to the more standard fast Fourier transform (FFT) method for Doppler ultrasonic signal processing. The most common of these methods are autoregressive (AR), moving aver-
Numerical study of an asymmetrical stenosis

Jin, Suo; Giddens, Don P.

Georgia Inst of Technology and Emory Univ Sch of Medicine, Atlanta, GA, USA

American Society of Mechanical Engineers, Bioengineering Division (Publication) BED

ASME Bioeng Div Publ BED

v 39

Advances in Bioengineering

1998

p 63-64

English

ASMBEP

Conference article (CA)

Proceedings of the 1998 ASME International Mechanical Engineering Congress and Exposition

Nov 15-20 1998

Anaheim, CA, USA

49454

ASME

ASME, Fairfield, NJ, USA
Abstract: Wall shear stress (WSS) and the flow dynamics in an asymmetrical aortic stenosis model were investigated using computational fluid dynamics. The study aims to determine whether the local flow environment of a raised eccentric plaque contains characteristics that have been associated with biological activity relevant to plaque rupture.

Number of references: 5

**Main heading:** Hemodynamics

**Controlled terms:** Cells | Wall flow | Shear stress | Physiological models | Computational fluid dynamics | Eulerian models

**Uncontrolled terms:** Asymmetrical stenosis | Wall shear stress (WSS) | Endothelial cells

**Ei classification codes:** 461.1 Biomedical Engineering | 631.1 Fluid Flow, General | 461.2 Biological Materials | 723.5 Computer Applications | 931.1 Mechanics | 921.2 Calculus

**Treatment:** Theoretical (THR)

**Database:** Compendex

**Full-text and Local Holdings Links**

---

**“Find It GT”** works for most (but not all) journals, but often does not work for conference proceedings, rarely works for technical reports, and does not work for patents.
“Find It @ GT” Link directs to interlibrary loan, even though the conference listed is in the GT Library Catalog


Subjects: Bioengineering -- Congresses; Biomedical engineering -- Congresses; Biomechanics -- Congresses; Human mechanics -- Congresses; Prosthesis -- Congresses; Implants, Artificial -- Congresses

Related Titles: Series: BED ; v. 39.

Publisher: New York, N.Y. : American Society of Mechanical Engineers
Records resulting from combined Compendex and Inspec database searches include “Cited by in Scopus”

Click on “41” to retrieve the 41 Scopus indexed articles that cite Burrow’s Inspec/Compendex indexed paper (Multi-beam…)

Tools in Scopus
This article has been cited 41 times in Scopus since 1996.

- Sapogova, N.; Bredikhin, V.; Bilyurin, N.; Kamensky, V.; Zhigarcov, V.; Yusupov, V.
- Model for indirect laser surgery
- (2017) Biomedical Optics Express
- Angle-multiplexed optical printing of biomimetic hierarchical 3D textures
- (2017) Laser and Photonics Reviews

Learn more about Scopus
Find It @ GT and ILLiad

• “Find It @ GT” often does not work for conference papers, technical reports, patents, etc. Check the Catalog and ejournals list. Ask for help!

• “Find It @ GT” usually (but not always) works properly for journal articles

• You can request individual papers from journals and conferences and brief book chapters by filling out an ILLiad request form for each separate article/paper (https://illiad.library.gatech.edu/). PDFs will be sent to your ILLiad account. This applies to interlibrary loan articles (requested from other libraries) and to print journals/conferences owned by the GT Library

• Provide complete bibliographic information in your ILLiad request, using the “Additional Notes” field, if needed

• Interlibrary loan requests often take 1-3 weeks turn around time. Turn around time is much faster for GT owned materials
Inspec 1896+ and Compendex 1884+

**Thesaurus**

- **"Search"** (top row). Drop down menu
- **Search each database separately**
- Click on **"Exact Term"**
- Check **Scope Notes**
- **Controlled terms** (thesaurus terms)
  - **Controlled terms** can be **different** for each **database** and can have **restricted date** coverage
- **Uncontrolled terms** (identifiers – these are **not** thesaurus terms)
MEMS

Introduced: October 2006

• “Search” – Thesaurus
• Search each database separately
• For: Broader terms, Related terms, Narrower terms, Scope Note
• Search for author name variations:
  ➢ “Browse indexes” (top row, right)
  ➢ Select “Author”
• Only check Compendex and Inspec
• Author surnames can be followed by a space or by a comma, before the author's first name. Try a space after the last name, and then try a comma after the last name.
• Search 1 and 2 initials and also full first name.
• Example: Clough G ... Clough, G ... Clough W ... Clough, W (for G. Wayne Clough)
Author name search. Browse Indexes

**Inspec** does not use authors' first names, but only their initials.

Use of the **Author Browse Index** is strongly recommended for both Inspec and Compendex in order to make selections from all the possible variations on an author's name.

- Compendex Author names can be truncated by using an **asterisk (*)** as the truncation symbol:
  - *Smith, A* will retrieve
    - Smith, A.
    - Smith A.A.
    - Smith A.B.
    - Smith, A. Brandon
    - Smith, Aaron
    - Smith Aaron C. etc.
Author Names

• **Compendex “Author Affiliation” Field**
  - Prior to 2001, the official Compendex policy was to provide the institutional affiliation of the first author or editor.
  - Since 2001, the affiliation of the Compendex corresponding author has been given instead (Compendex)

• Beginning **March 16, 2009**, for Compendex and PaperChem, the following fields will be added or modified:
  - **Multiple Author Affiliations** - Multiple authors will now be listed in the author affiliations field. Now, if an article has more than one author, most of the names and affiliated institutions will appear
  - A corresponding author and email field will be added to the detailed record display. For those records with multiple author affiliations, the contact information of the lead author will appear
Free Engineering Village registration

- Create account (free), Sign in
- Save search statement lines (can recombine statements later; keep track of strategy with Word file or notes)
- Create alerts
- Save records to folders
- Set preferences (100 records per page, databases, sort)

and more
IEEE Explore

- Full image content available in IEEE Xplore: IEEE and IEE/ IET journals and conference proceedings from 1988, with select content before 1988
- Use Inspec/Compendex (1896+/1884+) for searching! IEEE Xplore is a subset of the Inspec database. IEEE Xplore includes Inspec abstracts and IEEE and Inspec index terms
- Use IEEE Xplore as document delivery for IEEE, IEE and IET journal and conference papers
- “Find It @ GT” will work for most (but not all) IEEE, IET and IEE journal articles. Also check the Catalog and ejournals list
Search by Fields

Author **AU**
Title **TI**
Controlled term **CV**
Uncontrolled term **FL**
First Author affiliation **AF**
Subject/Title/Abstract **KY**

- **Search by Fields (Author, Title …)**
- **Controlled terms (thesaurus terms)**
  - Controlled terms can be **different** for each database and can have **restricted date** coverage
- **Uncontrolled terms (identifiers)**
- **Keep Autostemming “ON”**
Inspec 1896+ and Compendex 1884+

• Inspec and Compendex have **different**
  ➢ **“Controlled Terms”** (**thesaurus** subject headings)
  ➢ “Document Types” and “Treatment Types”

• **Compendex “Document** Types” (journal paper, conference paper, etc.) are **only** for **1985** to present

• Unique “Types” in each database

• **Compendex “Treatment** Types” (General Review, Applications, etc.) are **only** from **1985 to 2008**. Do **not** use Compendex Treatment Types!

• **Inspec “Treatment** Types” are **current** (General Review, Application, Practical, New Development, etc.). Do **not** rely on these treatment types (not comprehensive)
Standards

- Selected standards records are being added to Engineering Village (such as IEEE and ASTM) “Standard” or Std is usually mentioned in the database record, such as in the document type field or in a subject heading field.

- The Georgia Tech Library subscribes to IEEE, ASTM, ASCE, and selected other standards.

- Most other standards must be purchased through the standards society or through a third party standards vendor.

- See the Standards Research Guide at http://libguides.gatech.edu/standards
• IET Inspec LibGuide
  http://iet.libguides.com
• http://help.engineeringvillage.com/
• Engineering Village – (?) top row, right
  ➢ Help
  ➢ Quick search tutorial
  ➢ Video help
• Engineering Village Quick Search
• Engineering Village Training videos
“Search Tips”

“Learn & Support” “Training” “Tutorials”

Training videos and webinars

Quick search tips

Use truncation (*) to search for words that begin with the same letters.

- comput* returns computer, computers, computerize, computerization

Truncation can also be used to replace any number of characters internally.

- sul*ate returns sulphate or sulfate

Use wildcard (?) to replace a single character.

- wom?n returns woman or women

Autostemming stems all search terms unless they are enclosed in quotation marks and/or braces or are contained in the author field, unless the “Autostemming off” feature has been selected.

- management returns manage, managed, manager, managers, managing, management

To search for an exact phrase or phrases containing stop words (and, or, not, near), enclose terms in braces or quotation marks.

- “near field scanning”
- “not to exceed”
- “Northeast University”
- {Journal of Microwave Power and Electromagnetic Energy}
- {rocks or minerals}
- {chemical physics}

Use NEAR or ONEAR to search for terms in proximity. The NEAR command is used for searching terms that are near to each other in any order.

- The ONEAR command is used for searching terms that are near to each other in the order specified in the search query.

NEAR and ONEAR cannot be used with truncation, wildcards, parenthesis, braces, or quotation marks. NEAR and ONEAR can be used with autostemming.
PlumX Metrics Are Located on the Record Page
OpenAthens Database Authentication

While accessing e-resources off-campus, you may notice an OpenAthens login screen. The OpenAthens screen will ask you to identify your home. Use the "Login via your institution: Other Institution Login" (box, right column of screen) then "Find your organization" or "Find your institution" to search for Georgia or Georgia Tech or Georgia Institute (Georgia Institute of Technology or Georgia Tech); the OpenAthens list may not be alphabetical. See example. From there, use the Georgia Tech login service and you will be given access to the resource.

If you see a different screen, you may need to look for sign in or login links, usually at the top; you might be asked to select your Federation, which is OpenAthens Federation or Open Athens Federation.

Learn about the Library's OpenAthens Authentication service at OpenAthens Frequently Asked Questions or OpenAthens FAQ. See examples.

Begin at the Library home page, choosing Databases, Journals (e-Journals), or the Library Catalog. A list of all databases is at http://libguides.gatech.edu/az.php (top row "Find, Borrow, Request" - "Find Materials" "Databases" then search by database name in the search box, or search the database name alphabetically or by subject). For one-on-one quick and in-depth database search assistance: contact Bette Finn at bette.finn@library.gatech.edu. If you have database access questions or problems, please contact ept@library.gatech.edu.
Assistant searching the Library’s Databases

- For **ECE and GTRI and PMASE** one-on-one **in-depth and quick** database search assistance and group instruction, please **contact Bette Finn** (bette.finn@library.gatech.edu)

- For other schools, contact your **Subject Librarian** for assistance searching any of the Library’s **databases**. Every GT school has a Subject Librarian

- For circulation questions (check-out books, **Recalls**, etc.) – contact an associate in the Public Services area (Crosland Tower, Grove Level Ground Floor, Library Store) or phone 404-894-4530

- **All Research guides**
- **All Databases**