ECE Undergraduate Search Hints

Searching the Library GIL Catalog
Using Inspec record information

• ECE Search Examples and Library Guide
  http://www.prism.gatech.edu/~bw21/eceunder.htm
  - Additional examples are under “Examples of searches” at
    http://www.prism.gatech.edu/~bw21/eceguides.htm

• For assistance
  - contact Bette Finn, ECE Subject Librarian, at Email: bette.finn@library.gatech.edu
Help Choosing a Topic

- **Handbooks and Encyclopedias**
  
  - [Encyclopedia for ECE](http://www.prism.gatech.edu/~bw21/eceref.htm), 24 volumes, TK9 .E53 2nd Floor East (Southeast corner). Last volume has **table of contents** and **index**.
  
  - Other ECE **handbooks** in TK’s on **2nd floor east SE corner**
  
  - Electronic reference resources
    
    - **Handbooks**: Knovel, ENGnetBASE, Referex Engineering
    
    - **Encyclopedias**

- **GIL Library Catalog** [http://gil.gatech.edu/](http://gil.gatech.edu/)

- **IEEE Spectrum**. Table of contents

- **Inspec**. Restrict to title and general review/new developments

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http://www.prism.gatech.edu/~bw21/eceunder.htm
• Find paper mentioned in **index database**, such as [Inspek](http://gil.gatech.edu/)
• Go to **GIL Library Catalog** [http://gil.gatech.edu/](http://gil.gatech.edu/)
• In GIL Library Catalog record, find location of journal or conference in the Library (electronic or print/hard copy)

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**SEARCH & FIND**

- Articles (Databases)
- Journals
- Books (Catalog)
- Research Guides
- [more...](http://www.library.gatech.edu)

**ABOUT THE LIBRARY**

- [Hours](#) | [Directions](#)
- [Staff](#)
- [Visitors](#)
- [Jobs](#)
- [more...](#)

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- **Search & Find**
  - Articles (Databases) (such as [Inspek](http://gil.gatech.edu/))
  - Search the [Catalog (GIL)](http://gil.gatech.edu/)

- Must use GT [Account](#) number and password (Spectrum, etc.)
INSPEC 1896+ and Compendex 1884+

- **Combined** INSPEC 1896+ and Compendex 1884+
- **Choose Format**.  **Default** is “Citation” (only title).  Use “**Detailed** record” or “**Abstract**” Format (for email, print, download – after “Select range”)
- **Truncation** is **asterisk** (*)
- **Exact phrase** within **quotes** (” ”).  No truncation in “ ”
- **Proximity**. **No truncation** within NEAR/# or ONEAR/# or within quotes (exact phrases).
  - 0-x terms, **any order**: laser **NEAR/ 4** diode.
  - 0-x terms, **order entered**: laser **ONEAR/ 5** diode
- **Remove Duplicates**. Fewer errors in Inspec records.
- **Choose** “Database Preferences: Inspec” **Duplicate** records will be removed from the first 1000 records.
- **Library Search Hints and Guides**
  [http://www.prism.gatech.edu/~bw21/eceguides.htm](http://www.prism.gatech.edu/~bw21/eceguides.htm)
**INSPEC** 1896+ and **Compendex** 1884+

- **LIMIT BY**
  - **Language** = English
  - **Date**. Example: 1995 to 2006
  - **Treatment Types**
    - **General Review**
    - Applications
    - New Development
    - Practical
    - Product Review
  - Document Type, such as Journal Article
  - Can turn “Autostemming Off” if searching acronyms
Sample keywords

**future** or **overview** or **trend** or "State of the art" or "cutting edge" or **advance** or **advantage** or **disadvantage** or useful* or benefit* or **pros or cons** or **compare** or **comparison** or versus or "trade off" or "trade offs" or **tradeoff** or "better performance" or **improv** or **survey** or **review** or innovati* or **new** or novel or "current technology" or fundamental* or introduct* or drawback* or "draw backs" or "draw backs"
INSPEC 1896+ and Compendex 1884+

• **Search History.** Combine previous searches in same database.
  - Manipulate previous search statement numbers with Boolean Operators and keywords
  - Can add keywords. Example: #1 and #2 and laser*
  - Open a Word document and keep track of search statement line numbers

• Search by **Fields**
  - Author
  - **Title**
    - Controlled terms (thesaurus terms) and
    - Controlled terms can be different for each database and can have restricted date coverage
    - Uncontrolled terms (identifiers; subject headings that are not thesaurus terms)
Can also include keywords. Example: #1 and #2 and #3 and ((Ehrfeld or Borenstein) wn au)
• “Combined” does not indicate #1 and #2 and #3. Only gives keywords.

• Email Alert & Save Search both save only one line.
Refine Search button keeps settings.
New Search reverts to defaults.
Results Manager

Select all on page  - Select range: to  - Clear all on page  - Clear all selections

? Choose format: Citation  Abstract  Detailed record  Clear selected records on new search

View Selections  E-Mail  Print  Download  Save to Folder

Search Results
81 records in Compendex & Inspec or  Remove Duplicates  Save Search  Create Alert  RSS

+(-((simulat* OR model* OR algorithm*) WN TI) OR ((simulat* OR model* OR algorithm*) WN CV)) AND (1884-2006 WN YR)) and ((((biomedical engineering) OR (biomedical NEAR/2 engineers) OR (biomedical NEAR/2 engineer) OR biotechnolog* OR ((medicine OR medical OR biolog*) AND engineer*)) OR bioengineer*)) WN KY)) AND (1884-2006 WN YR)) and ( (((mems OR (micro NEAR/2 electromechanical) OR ((micro electro mechanical) OR microelectromechanical*) WN KY)) AND (1884-2006 WN YR))

Sort by: Relevance  Date  Author  Source  Publisher

Sort By: Date/Year, Relevance, Author, Source

Remove Duplicates

Duplicate records will be removed from the first 1000 records in the result set. Choose the database that you prefer to see results from.

Field Preferences: ?
- No field preference
- Has Full Text
- Has Abstract
- Has Index Terms

Database Preferences

Choose Inspec (fewer errors in Inspec records)
Session will expire after 20 minutes of inactivity

“Select Range” or check boxes

“Choose Format:”
- Abstract or Detailed (not Citation)

E-mail or Print or Download records to avoid being timed out
Journal Articles

• **ISSN.** Copy and paste journal the ISSN number to [GIL Catalog](#) “Exact Search” screen

• **Journal Name.** Copy and paste exact journal name to [GIL Catalog](#) “Exact Search” screen

• “**Find It GT**” will usually, but not always, work for journal articles

• Note print and electronic **publication date (year)** coverage and **title changes**

• Watch for **aggregator e-journal** restricted **embargo dates** and **selective coverage** (ProQuest, EBSCOhost, Factiva, GaleGroup, Lexis Nexis, etc.).
**Title:** Modern spectral analysis techniques for blood flow velocity and spectral measurement of pulsed Doppler ultrasound

**Authors:** David, J.-Y.; Jones, S.A.; Giddens, D.P.

**First author affiliation:** Georgia Inst. of Technol., Atlanta, GA, USA

**Serial title:** IEEE Transactions on Biomedical Engineering

**Abbreviated serial title:** IEEE Trans. Biomed. Eng. (USA)

**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 quadratures to compare the relative merits of each technique for estimation of flow velocity and Doppler spectrum. 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 approach to autoregressive modeling. Both simulated signals and signals obtained from an in vitro flow system were used for this comparison. 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, providing...
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.
Problem with “Find It GT”

• The “Find It GT” online full text and GIL Catalog “GO” link does not always work properly

• The Library owns many publications not found by “Find It GT”

• Always check the GIL Catalog (manual search)

• Ask us for help, especially for conference proceedings and technical reports!
Conference/Proceedings Papers

• Ask us for help with Conference Proceedings Papers!
• They can be difficult for us to locate.
• Look for keywords: Conference, symposia, symposium, proceedings, meeting, workshop
• Conference proceedings research guide
Conference Papers

- **Fields** – Conference Name/Monographic Title and Source/Serial/Journal Title fields
- Conferences are cataloged as either a **book** or as a **serial** (similar to journal)
- “Find It GT will usually **not** work for conferences & reports. Conduct a manual GIL Catalog search and ask us for help!
- Library owns many publications even though “**Find It GT**” says “Paper version via: Not Available”
- “If **IEEE** or **IEE** or **IET**” is in the record, try **IEEE Xplore** 1988+ (selected journal/conference papers before 1988) and the **GIL Catalog**. Some conferences are not in **IEEE Xplore**.
**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

<table>
<thead>
<tr>
<th>Ei main heading</th>
<th>Hemodynamics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ei controlled terms</td>
<td>Cells</td>
</tr>
<tr>
<td>Uncontrolled terms</td>
<td>Asymmetrical stenosis</td>
</tr>
<tr>
<td>Ei classification codes</td>
<td>461.1 Biomedical Engineering</td>
</tr>
</tbody>
</table>

**Treatment:** Theoretical (THR)

**Database:** Compendex

Compilation and indexing terms, © 2003 Elsevier Epi.

- **“Find It GT”** usually (but not always) **works** properly for **journals**, but “Find It GT” **seldom** works for **conferences** or technical **reports**

Publisher: New York, N.Y.: American Society of Mechanical Engineers.

Description: xx, 421 p. : ill. ; 28 cm.

Series: BED; vol. 39

Notes: Includes bibliographical references and index.

Subject(s): Bioengineering Congresses.
Biomedical engineering Congresses.
Biomechanics Congresses.
Human mechanics Congresses.
Prosthesis Congresses.
Implants, Artificial Congresses.

Location: General Collection

Call Number: R856 .A2 A44 1998
Copy 1

Number of Items: 1

Status: Available
IEEE & IEE & IET -- IEEE Xplore or GIL Catalog

- If the *Inspe* or the Compendex record has either of the keywords *IEEE* or *IEE* or *IET* in the “source/journal” or “conference name” field, search *IEEE Xplore*.

- *IEEE Xplore* includes full text IEEE & IEE/IET journals and conferences *1988 to present* and selected journals and conference *before 1988*.

- Use “Search” “Advanced” in IEEE Xplore. Type in last name of one of the authors (“Author” field) and one “Title Document” keyword in each box (or exact phrases).

- The Library owns some IEEE and IEE/IET papers which are not in IEEE Xplore. Check the *GIL Catalog* -- ask us for help.
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”** with **“Expert Search”**
• Note **both spaces and commas** after surnames
• Ask us for help!
GIL Catalog  http://gil.gatech.edu/

- **GIL Quick Search** and **Quick Catalog Search**:
  - Searches “or” “and” “not” as keywords
  - Can not use truncation
  - Leave off extra spaces
- **Exact Search**: Exact, word for word phrases, left anchored. Use ISSN # or exact journal name
- **Keyword Search**: **Omit** “AND” “OR” “NOT”
  - Can restrict to Journals with “Narrow My Search”

- **Check My Requests**: Books you have checked out.

Library Search Hints and Guides
http://www.prism.gatech.edu/~bw21/eceguides.htm
Quick Catalog Search or Quick Search

- Searches “or” “and” “not” as keywords
- Does not allow truncation
- Leave off extra spaces
Exact Search

• Use word for word, **exact phrases, left anchored**
• **No initial articles** (the, an, a …)
• **Journal Title** (exact phrase, left anchored)
• Copy from INSPEC & Compendex **journal** records:
  **ISSN Number** (**xxxx-xxxx**)
• Call Number Browse
• Command uses boolean operators

**GIL Catalog**  [http://gil.gatech.edu/](http://gil.gatech.edu/)
“Search Tips” are above the search boxes.
Keyword Search

- Boolean operators are not allowed within a single input box
- **Leave out** “and” “or” “not”
- Leave out quotes
- **Truncation** symbol is (?). Example: http?
  (truncation overflow is possible, without warning)
Any of these:

"OR"

All of these:

"AND"

As a phrase

Keyword Search

<table>
<thead>
<tr>
<th>Search for:</th>
<th>intelligent robot? computer vision</th>
<th>all of these</th>
<th>Search in:</th>
<th>Keyword Anywhere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search for:</td>
<td>international</td>
<td>as a phrase</td>
<td>Search in:</td>
<td>Keyword Anywhere</td>
</tr>
</tbody>
</table>

GiL Catalog

http://gil.gatech.edu/
Search Limits are in effect!

GI L Catalog
Keyword Search

Select methods for narrowing your searches below.
Search limits will remain in effect until you specifically clear them or until you close your browser.

Narrow My Search

Narrow to Magazines/ Journals with Format: "Serials"
Journals

- **Title changes** have separate Catalog records
  - “Continues” (title change)
  - “Continued By” (title change)
  - “Split into” (title change)
- “Library Has” fields (print/hard copy bound volumes and recent issues)
- **Bindery** information (Status field)
- **Storage** (journals through 1979)
- **Brackets** (missing journal issues)
Electronic Journals

The E-Journal list and the GI L Catalog
“Electronic Version: Get fulltext copy … Find It GT” electronic journal records contain aggregator journals (EBSCOhost, ProQuest, Factiva, GaleGroup, Lexis Nexis, etc.) with selected coverage and embargo date restrictions.
Electronic & Print Journals

Holdings. **Publication years** covered by the journal:

- **Print.** Dates of the Library's print subscription (years/volumes) are in the GIL Catalog "Library has:" fields -- General Collection, Storage, Recent Issues.

- **Electronic.** Date coverage of electronic journals (Library subscription, aggregator, open access) are indicated in the E-Journals list and in the GIL Catalog "Electronic Version full text ... Find It GT" field, after “Available from.”
• Separate records for **title changes**.
  • **Continues:**
  • **Continued by:**
  • **Split into:**
  • **Library has:** fields. Print bound volumes (publication years)
The “Electronic Version fulltext “Find It GT” field does not indicate publication dates. Check years!

- “Electronic Version: Get fulltext copy Find It GT” field for electronic journals
- Call Number: for print volumes in “Library has:” field
- Bindery information in the Status: field

Subject(s): Control theory Periodicals.

Electronic Version: Available online, IEEEExplore, 1988-1993:
Call Number: TK1.J41125

Status: v. 60 no. 1-13 Jan.-Mar. 2002 At Bindery - 07-03-02
v. 59 no. 41-49 Oct./Dec. 2001 At Bindery - 07-10-02
**Periodicals published through 1979 are in storage.** For retrieval, ask at Circulation Desk, 1st Floor East.

*Library has: v. 107--v. 112, pt. 1; July 1965--Mar. 1968@v.[112, pt. 2]; Apr.-June 1968@v. 113--v. 114, pt. 1; July 1968--Mar. 1969@v.[114, pt. 2]; Apr.-June 1969@v. 115--v. 116, pt. 1; July 1969--Mar. 1970@v.[116, pt. 2]; Apr.-June 1970@v. 117, July-Dec. 1970@v.[118, pt. 1];

<table>
<thead>
<tr>
<th>Call number</th>
<th>TJ210.3 I57 1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td><em>Intelligent robots and computer vision</em> XVIII: algorithms, techniques, and active vision: 20-21 September, 1999, Boston, Massachusetts / David P. Casasent, chair/editor; sponsored and published by SPIE--the <em>International</em> Society for Optical Engineering.</td>
</tr>
<tr>
<td>Publisher</td>
<td>Bellingham, Wash. : SPIE, c1999.</td>
</tr>
<tr>
<td>Description</td>
<td>viii, 438 p. : ill ; 28 cm.</td>
</tr>
<tr>
<td>Series</td>
<td><em>Proceedings</em> / SPIE--the <em>International</em> Society for Optical Engineering ; v. 3837</td>
</tr>
<tr>
<td>Notes</td>
<td>Includes bibliographies; bibliographical references.</td>
</tr>
<tr>
<td>Subject(s)</td>
<td>Robotics Congress, Artificial intelligence, Computer vision Computer, Image processing, Computer science</td>
</tr>
</tbody>
</table>

- **“Library has:” print fields** -- Storage, General Collection, Recent issues
- **Storage journals before 1980**
- **Missing journal issues [brackets]**
- **Status field.** Can place “Recalls” on **Checked out books** at Circulation Desk
- **Library of Congress Subject Headings**
**Title:** IEEE spectrum.

**Electronic Version:** Get fulltext copy **Find It GT**

**Variant Title:** Spectrum

**Continues:** Electrical engineering.

**Publisher:** [New York] : Institute of Electrical and Electronics Engineers.

**Description:** v. : ill. ; 28 cm.

**Publication History:** Vol. 1, no. 1 (Jan. 1964)-

Monthly

**Subject(s):** Electric engineering Periodicals, Electronics Periodicals.

**Notes:** Title from cover.

Also available online.

**Holdings/Notes:** **Periodicals published through 1979 are in Storage, General Collection.**

**Access Restrictions:** Access restricted to authorized Georgia Tech users only.

**Other Contributors:** Institute of Electrical and Electronics Engineers.

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**Location:** - Georgia Tech electronic resource

**Electronic Version:** Available online, IEEEExplore, 1983-.

**Call Number:** TK1.115

**Library has:** v. 17 - v. 32 (1980 - 1995)

v. 33 (1996: Some issues missing)

v. 34 - v. 35 (1997 - 1998)

v. 36 (1999: Some issues missing)


---

**Location:** Storage, ask at Circulation Desk, 1st Floor East

**Call Number:** TK1.115

**Copy 1**

1-3 “Library has:” fields

**Library has:** v. 1-16 (1964 - 1979)

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- **“Electronic Version: Get fulltext copy** **Find It GT”** --
  Find date coverage of electronic journal (subscription, aggregator or open access), after “Available from”

- **“Library has:” fields** indicates print/ paper coverage – Storage, General Collection, Recent issues fields (years/ volumes)

- **Continues/Continued by/Split into indicates title changes** (separate records)
• **Check holdings** (publication **year** coverage). **Print and electronic**

• Separate [GIL Catalog](#) records for print/paper and electronic may exist.

• Electronic records are often listed before print/paper records

• Holdings (**dates** of coverage) indicated after “Available from”

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**Source:** IEEE spectrum [0018-9235]

**OnLine**

Article is available from [IEEE Xplore Journals](#)

Year: □ □ □ □ Volume: □ □ □ □ Issue: □ □ □ □ Start Page: □ □ □ □

Available from 1988 volume: 25 issue:1

Article is available from [EBSCOhost Academic Search Complete](#)

Year: □ □ □ □ Volume: □ □ □ □ Issue: □ □ □ □ Start Page: □ □ □ □

Available from 1996

Search for article in [Factiva](#)

Available from 1997

**Print**

Do we have a copy on the shelves? Check: [the GT Catalog (GIL)](#)

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**Paper** is at TK1 .I15, Library has: v.1 1964-v.40 2003

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• **Click on the** Library **subscribed**

database (here IEEE).

• **Avoid aggregator** databases (such as EBSCOhost, ProQuest, Factiva, GaleGroup, Lexis Nexis, etc.). They can have **selective coverage** and/or **embargo dates**.
Recalls:

All items are subject to recall. The borrower is guaranteed 21 total days with items. These 21 days are reflected in the "New Due Date" on the Recall Notice. If the item has been out less than 14 days, the item will be due on day 21. If the item has been out for more than 14 days, it should be returned to the library within 7 days from the date of recall. *Items which are needed for Reserves are due immediately.* Recalled items should be returned to the Circulation Desk on or before the “New Due Date”.

- **Graduate & Undergraduate Borrowing Privileges**
  http://www.library.gatech.edu/services/borrow/students.php
- **Borrowing from the GT Library**
  http://www.library.gatech.edu/services/borrow/from_gt.php
Click on **Full Format** in the GIL Catalog to Obtain:

- Translation information. Indication of the existence of an *English translation*.
- **Alternative title** information
- **Notes** or **Table of Contents** with detailed information about limitations (in confidence), thesis or dissertation information, advisor/researcher names, microform format, short stories, poems, essays, book chapters, collections, etc.
“Electric Engineering” is the Library of Congress Subject Heading for electrical engineering in the GIL Catalog.

Truncate - - electric?