



INSPEC on OVID Tutorial

CARNet USERS CONFERENCE
CUC 2002

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A stylized blue lion logo is positioned in the background of the slide. The lion is facing left, with its head turned slightly towards the viewer. Its tail is long and curved, extending towards the right side of the slide. The lion's body is composed of several overlapping, semi-transparent blue shapes that create a sense of depth and movement. The overall color scheme is a gradient of blues, from a lighter blue at the top to a darker blue at the bottom.

INSPEC Tutorial Programme

- IEE/INSPEC overview
- INSPEC Database features
 - subject content, size and coverage
- Publications selection criteria
- Searching INSPEC on Ovid
- Subject and Bibliographic fields
- Demos & Examples throughout
- Discussion & Conclusions

IEE/INSPEC - Who are we?

IEE - Institution of Electrical Engineers

- Established in 1871
- UK-based Learned Society (*not-for-profit*)
- 140,000 Members world-wide
- Primary publisher - *books, journals, conferences, colloquia & distance learning*
- Secondary publisher - **INSPEC Database**

INSPEC Database

- Key to World-Wide Scientific Literature
 - ☞ Physics
 - ☞ Electrical & Electronics Engineering
 - ☞ Computing & Control Engineering
- A number of cross-disciplinary topics
- Journals, Conferences and Other Documents
- Global Coverage
- International Recognition for High Quality



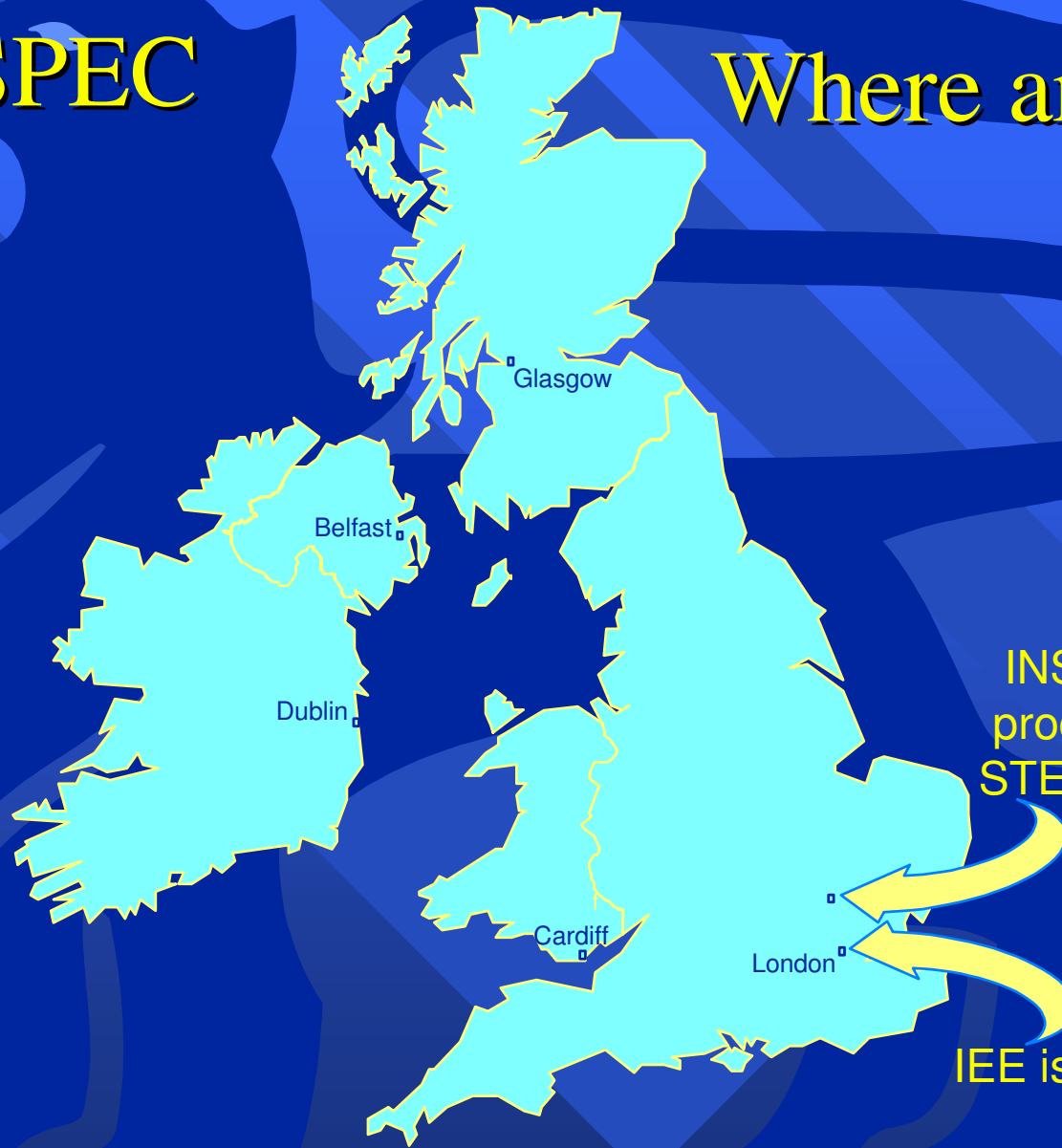
INSPEC Database size

- Over 7.3 Million Records
- Over 30 years of Electronic Data
- Over 350,000 Records p.a.
- Over 3000 Journals & 3,000 Other Publications
- 80 Countries of Publication

Jan 2002

IEE/INSPEC

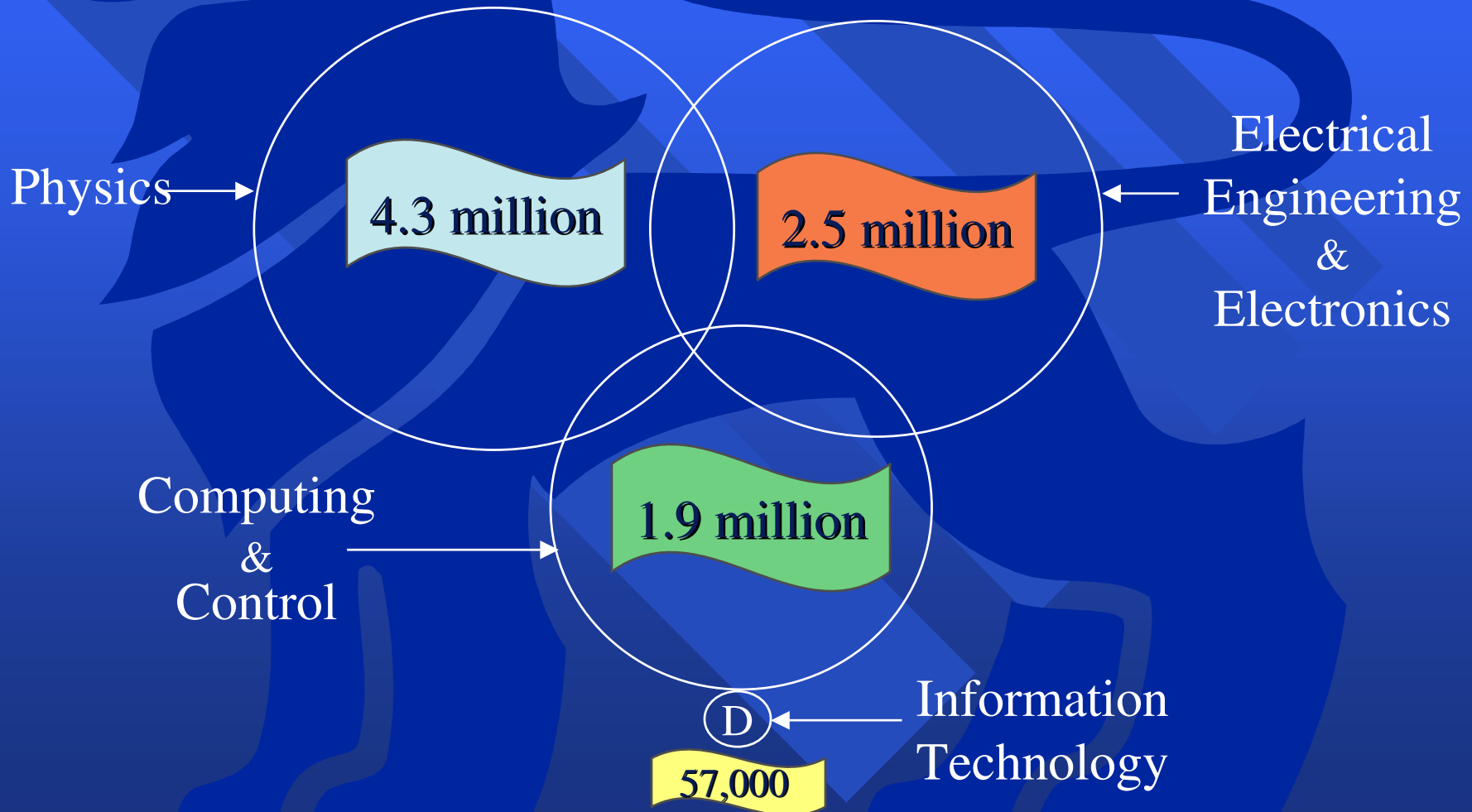
Where are we?



INSPEC is
produced in
STEVENAGE

IEE is based
in
LONDON

INSPEC Database Subjects



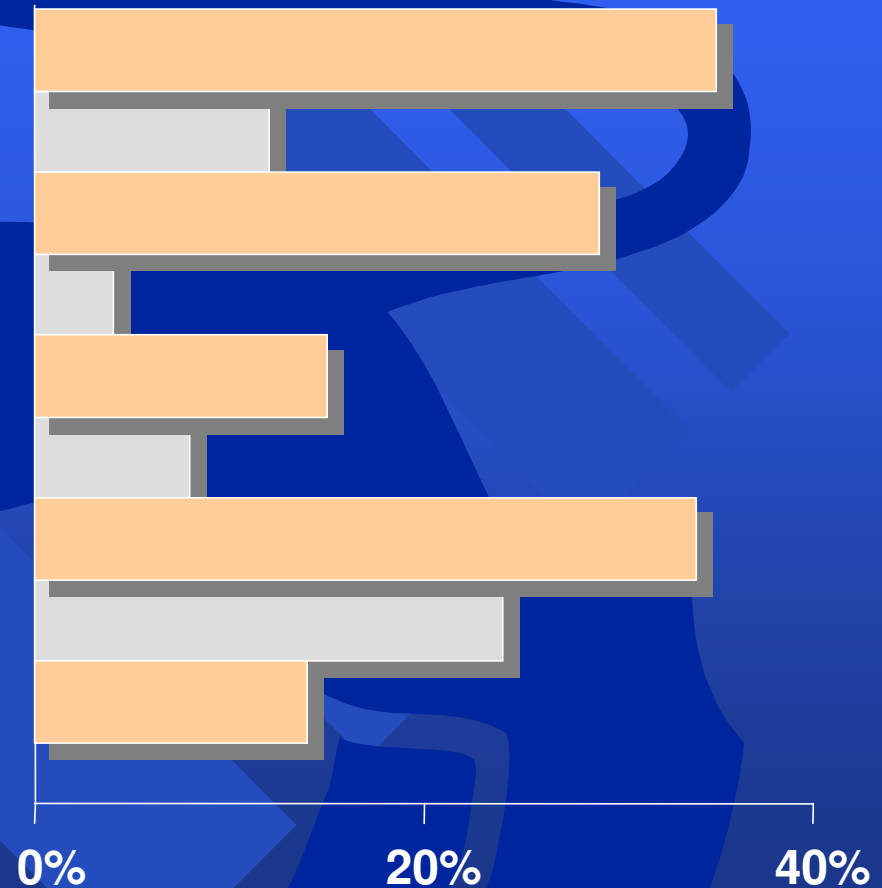
Physics - 4.3 Million Records

- A0 General
- A1 Elementary particles
- A2 Nuclear physics
- A3 Atomic & molecular
- A4 Fundamental physics
- A5 Plasmas & discharges
- A6 Solid state, non-electronic
- A7 Solid state, electronic
- A8 Cross-disciplinary physics
- A9 Geophysics & astronomy



Electrical & Electronic - 2.5 M

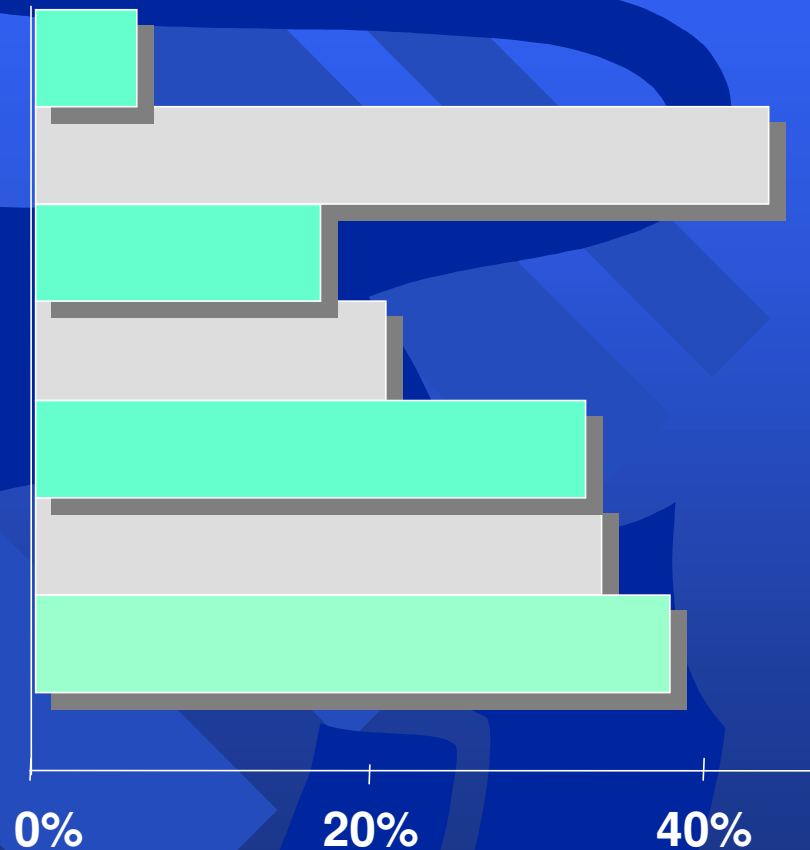
- B0 General, maths and materials
- B1 Circuits
- B2 Components, electron devices
- B3 Magnetic devices & materials
- B4 Optoelectronics
- B5 Electromagnetic fields
- B6 Communications
- B7 Instruments & Applications
- B8 Power systems



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Computing & Control - 1.9 M

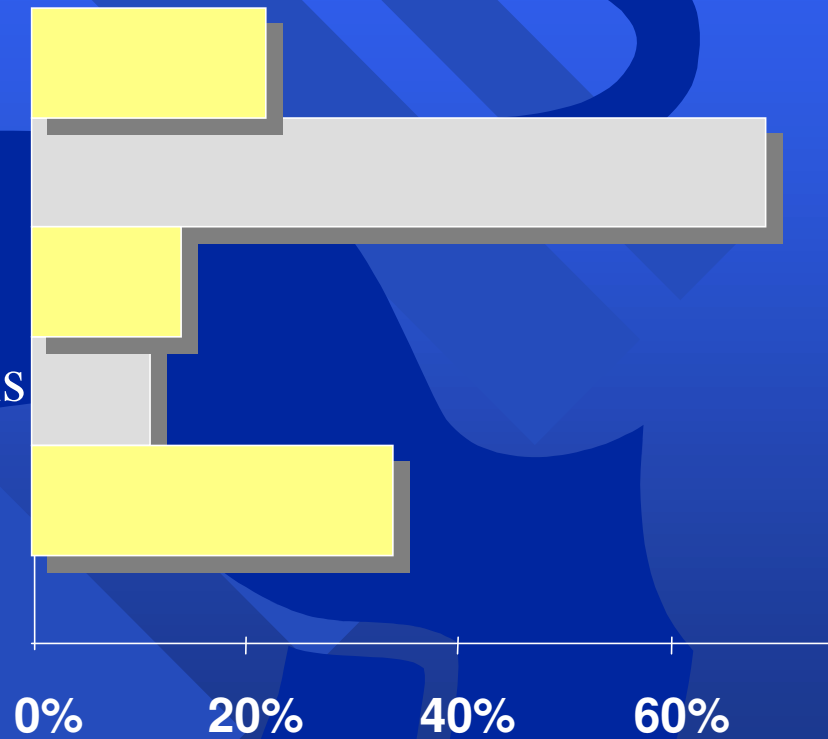
- C0 General & management
- C1 Systems & control theory
- C3 Control technology
- C4 Numerical & computer theory
- C5 Computer hardware
- C6 Computer software
- C7 Computer applications



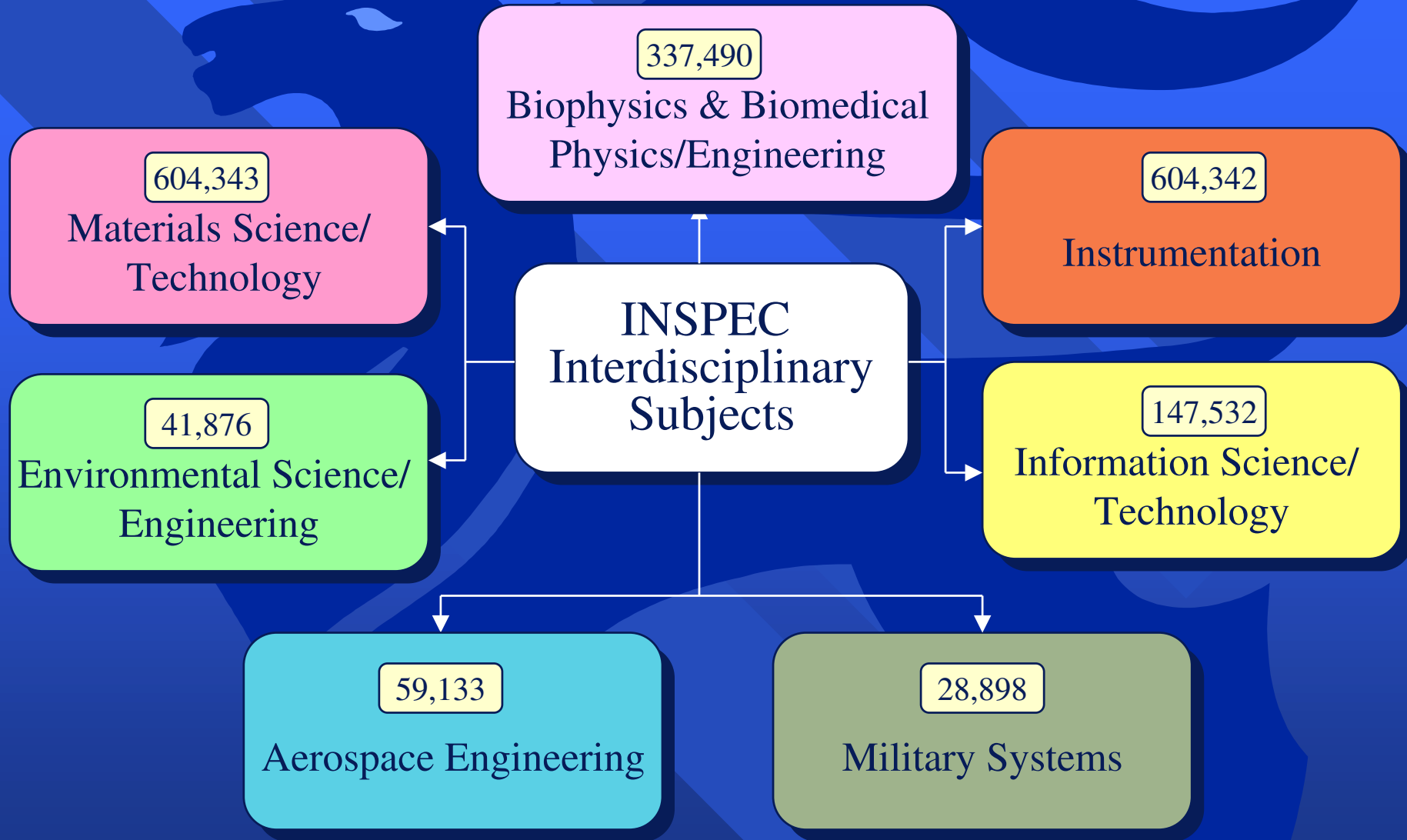
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Information Technology - 57,000

- D1 General & management
- D2 Applications
- D3 General Systems
- D4 Office automation/communications
- D5 Office automation/computing



Jan 2002



Jan 2002

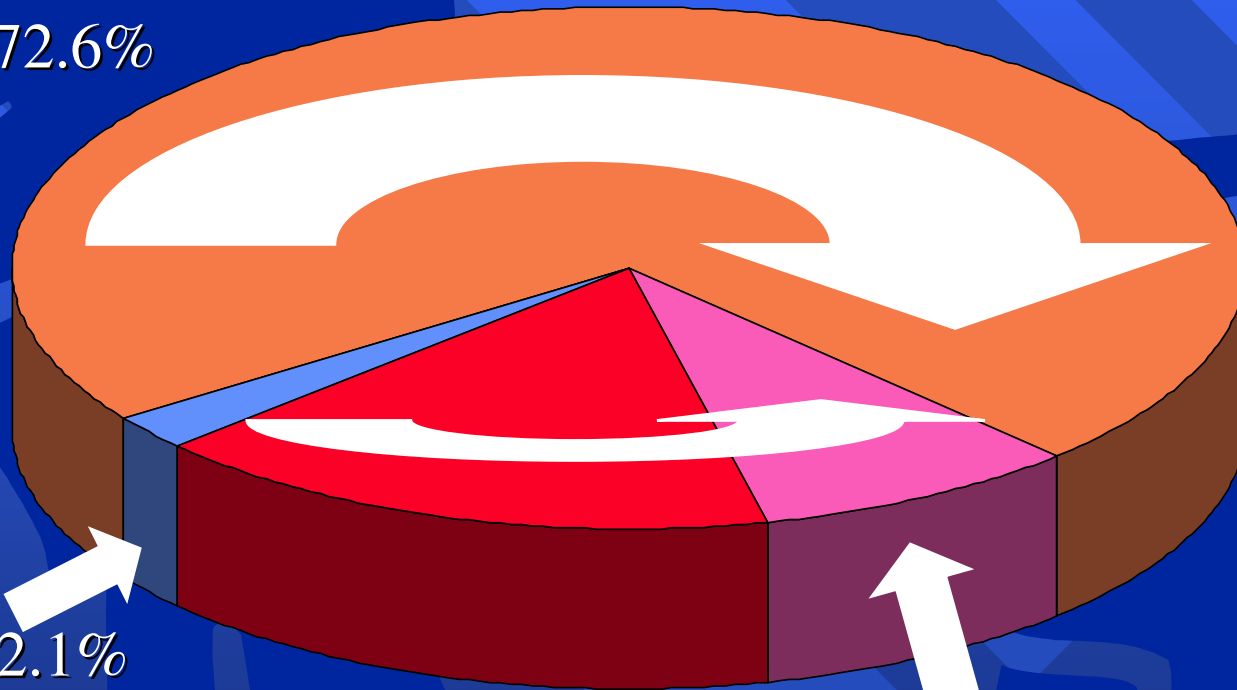
Source Documents

Journal 72.6%

Other 2.1%

Conference 16.8%

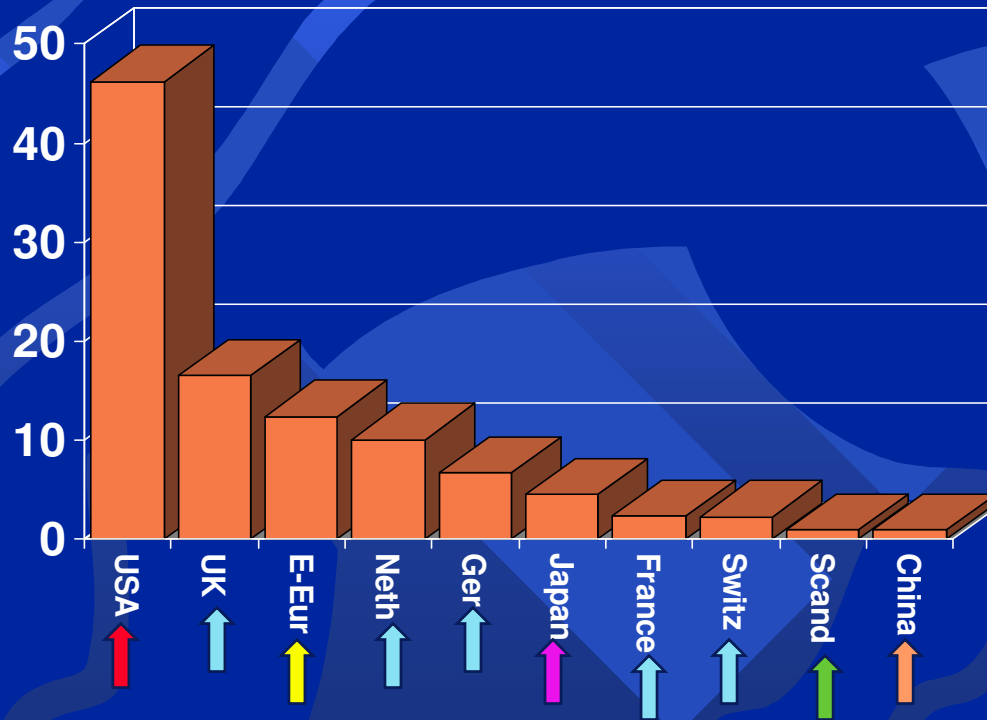
Conference in
Journal 8.5%



World-Wide Coverage

Percent

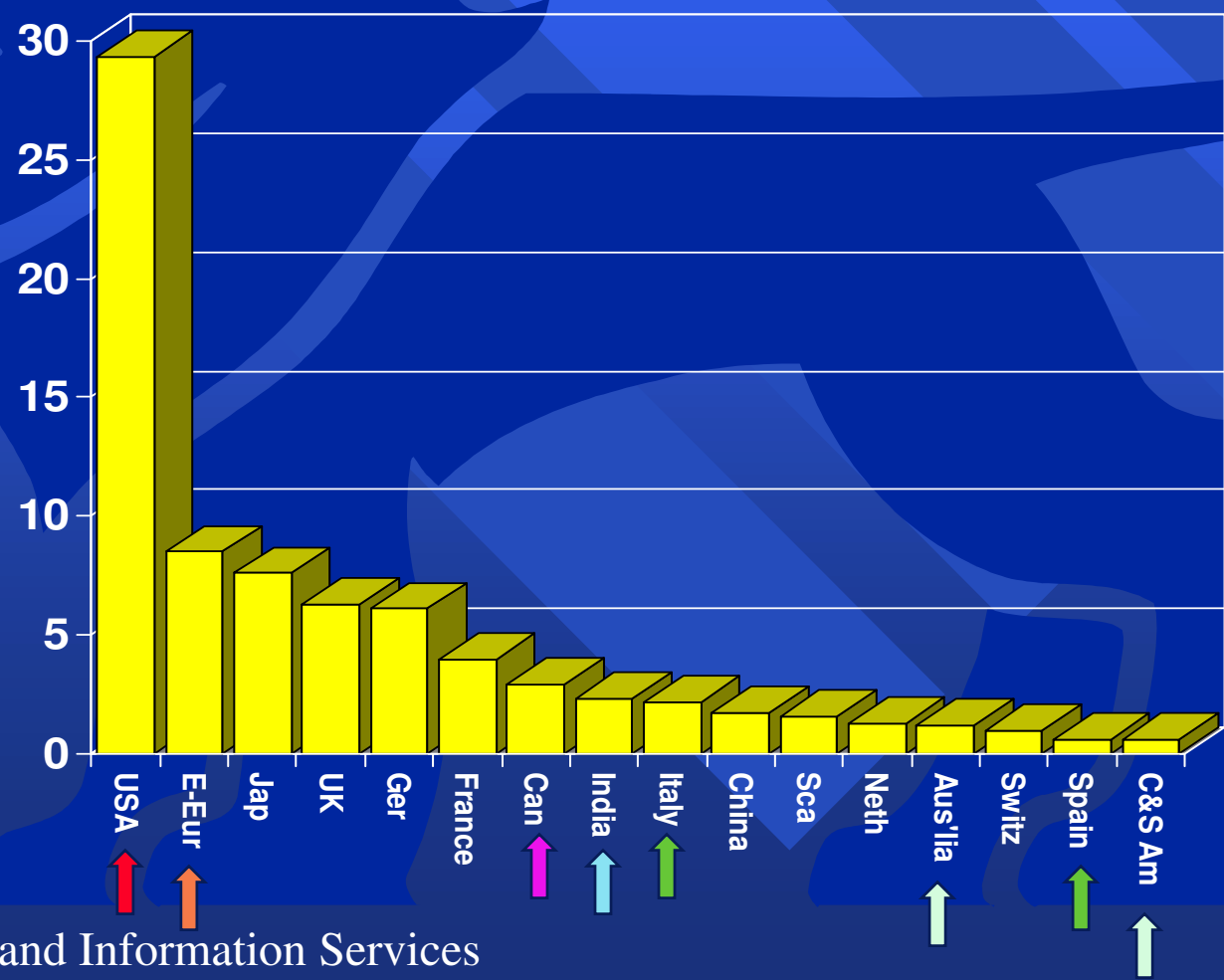
Country of Publication



World-Wide Coverage

Country of Author

Percent



INSPEC Top 25 Publishers

(Alphabetical List)

→ Academic Press

ACM

AIP

Allerton Press

American Geophys. Union

APS

Astron. Soc. Pacific

→ Elsevier

Gordon & Breech

→ IEE

→ IEEE

→ IOP Publishing

Inst. Electron. Inf. & Commun. Eng.

Japanese Journal Appl. Physics

→ Kluwer Academic Publishers

MAIK Nauka/Interperiodica Publishing

Opt. Soc. America

Plenum

Science Press

→ SPIE-Int. Soc. Opt. Eng.

→ Springer-Verlag

Taylor & Francis

Univ. of Chicago Press

→ Wiley

World Scientific

June 2000

Primary Selection Criteria

- INSPEC Subject Area
- Document Types (Journals, Conference Proceedings, Report Series, Other...)
- Shelf Life (No news items)
- Academic Format
 - Ti, Ab
 - Article length
 - References
 - Bibliographic Data


Additional Selection Criteria




- Publishers (INSPEC has agreements with many Top Publishers)
- Language
 - English Article
 - English Abstract
 - English Title
- Excessively Delayed Receipt of Publication
- Very Poor Quality of Print or Paper

INSPEC on OVID

OVID Choose a database ? Help

select a database to search select more than one database to search

-- To **begin a search**, click the name of the desired database.
-- To **get more information** about a database, click the information icon: 
-- Click the **select more than one database to search** tab to search up to 5 databases at once.
-- [Logoff](#)

 [INSPEC](#) 1987 to 2001 Week 16
 [INSPEC](#) 1969 to 2001 Week 16
 [PREMEDLINE and MEDLINE](#) 1966 to Present
 [PREMEDLINE](#) May 3, 2001
 [MEDLINE](#) Mid 1998 to April 2001


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Version: rel43.0, SourceID: 1.5031.1.149

INSPEC on OVID

OVID Choose a database ? Help

select a database to search select more than one database to search

-- To **begin a search**, click the name of the desired database.
-- To **get more information** about a database, click the information icon: 
-- Click the **select more than one database to search** tab to search up to 5 databases at once.
-- [Logoff](#)

-  [INSPEC](#) 1987 to 2002 Week 29
-  [INSPEC](#) 1969 to 2002 Week 29
-  [PREMEDLINE](#) July 25, 2002
-  [MEDLINE](#) 2002 to July Week 3 2002

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Version: rel5.0.0, SourceID 1.6100.1.111

Search Screen

INSPEC 1969 to 2000 Week 12

Author Title Journal Search Fields Tools Combine Limit Basic Change

#	Search History	Results	
1	asynchronous motor? mp. [mp=title, abstract, subject heading words]	2123	Display
2	Induction motors/	12944	Display

Run Saved Search Save Search History Delete All Searches

Enter Keyword or phrase: Map Term to Subject Heading

Limit to:
 Latest Update Abstracts English Journal Paper
From: To:

Switch off 'Mapping' to search the default subject fields

Search Fields/Indexes

Search Fields/Indexes

Perform Search Display Index(es)

Enter word or phrase: a

<input type="checkbox"/> <i>ab</i> : Abstract	<input type="checkbox"/> <i>id</i> : Key Phrase Identifiers
<input type="checkbox"/> <i>ax</i> : Abstract Number	<input type="checkbox"/> <i>lg</i> : Language
<input type="checkbox"/> <i>an</i> : Accession Number	<input type="checkbox"/> <i>nd</i> : Numeric Data
<input type="checkbox"/> <i>ao</i> : Astronomical Object	<input type="checkbox"/> <i>pg</i> : Pagination
<input type="checkbox"/> <i>au</i> : Author	<input type="checkbox"/> <i>pi</i> : Patent Information
<input type="checkbox"/> <i>cd</i> : CODEN	<input checked="" type="checkbox"/> <i>pt</i> : Publication Type
<input type="checkbox"/> <i>ch</i> : Chemicals	<input type="checkbox"/> <i>pu</i> : Publisher
<input type="checkbox"/> <i>cw</i> : Classification Code Words	<input type="checkbox"/> <i>rn</i> : Report Number
<input type="checkbox"/> <i>cc</i> : Classification Codes	<input type="checkbox"/> <i>si</i> : SICI
<input type="checkbox"/> <i>cf</i> : Conference Information	<input type="checkbox"/> <i>hw</i> : Subject Heading Words
<input type="checkbox"/> <i>cn</i> : Contract Number	<input type="checkbox"/> <i>sh</i> : Subject Headings

Publication Types Index

Index Display

Perform Search

Enter a new star

Choose from among the following index entries:

Term	Postings
<input type="checkbox"/> book.pt.	11156
<input type="checkbox"/> book chapter.pt.	18205
<input type="checkbox"/> conference paper.pt.	2036508
<input type="checkbox"/> conference proceedings.pt.	43848
<input type="checkbox"/> dissertation.pt.	9611
<input type="checkbox"/> journal paper.pt.	4726839
<input type="checkbox"/> patent.pt.	20586
<input type="checkbox"/> report.pt.	42721
<input type="checkbox"/> report section.pt.	872

Perform Search

Main Search Page

Conference Papers are the second major Record Type

Conference Proceedings records describe what the meeting was about

Journal Articles are the most frequent Record Type

Search Fields on INSPEC

Subject Fields

Title

Abstract

Key Phrase Identifiers

Subject Headings

Classification Codes

Treatment

Chemicals

Numeric Data

Astronomical Object

Bibliographic Fields

Author

Institution

Corporate Author

Year

Publication Type

Country of Publication

Journal Name

Conference Information

Accession Number

Coden/ISSN/ISBN

Update Code

Added
Value
Fields

INSPEC Search Fields on Ovid

Title

Effects of the method of cathode synthesis on the internal resistance of lithium/silver vanadium oxide batteries.

Abstract

Silver vanadium oxide (Ag/sub 2/V/sub 4/O/sub 11/, SVO) is the active cathode material in lithium primary cells for powering implantable cardioverter defibrillators. The SVO material is synthesized either by a decomposition method at 380 degrees C or by a combination method at 500 degrees C. The resulting materials have drastically different morphologies. The rate capability and cell resistance of lithium cells with these SVO cathode materials have been characterized. The sources of cell resistance were studied with cells having a built-in lithium reference electrode at various depths of discharge. The transformation of DSVO into a CSVO-like material is also discussed. (6 References).

Subject Headings

[Cathodes](#); [Defibrillators](#); [Electrochemical electrodes](#); [Electrochemistry](#); [Lithium](#); [Pacemakers](#); [Secondary cells](#); [Silver compounds](#); [Vanadium compounds](#).

From INSPEC Thesaurus

Key Phrase Identifiers

[Li-Ag/sub 2/V/sub 4/O/sub 11/ secondary cells](#); [active cathode material](#); [implantable cardioverter defibrillators](#); [rate capability](#); [cell resistance](#); [depths of discharge](#); [reference electrode](#); [500 C](#); [380 C](#); [Li-Ag/sub 2/V/sub 4/O/sub 11/](#).

From Ti, Ab and indexer's expertise

Classification Codes

Secondary cells [A8630F]; Electrochemistry and electrophoresis [A8245]; Prosthetics and other practical applications [A8770J]; Patient care and treatment [A8770G]; Secondary cells [B8410E]; Prosthetics and orthotics [B7520E]

FROM INSPEC Classification

Treatment

Experimental

Selected from 9 available codes: Theoretical, Practical, Review, General.....

Chemicals

Li-Ag2V4O11/int, Ag2V4O11/int, Ag2/int, O11/int, Ag/int, Li/int, V4/int, O/int, V/int, Ag2V4O11/ss, Ag2/ss, O11/ss, Ag/ss, V4/ss, O/ss, V/ss, Li/el

Numeric Data

Temperature 7.73E+02 K
Temperature 6.53E+02 K

Inorganic substances are indexed using special roles, e.g. 'el, bin, ss' (from 1987)

Numerical data are indexed using Numerical Thesaurus (standardised Quantities & Units), from 1987

Key Phrase Identifiers

- Key words and phrases selected from:
 - title, abstract
 - full text
 - indexer's expertise
- Useful particularly to
 - exclude topics that are only mentioned
 - search general but relevant topics
 - search terms common in INSPEC subject fields

Key Phrase Identifiers are searched by Keywords
What problems does it involve??

Free Language Search - Example

INSPEC
<1969 to 2001 Week 16>

Author Title Journal Search Fields Tools Combine Limit Basic Change Database Logoff

#	Search History	Results	Display
1	color centers mp. [mp=title, abstract, subject heading words]	1386	Display
2	colour centres mp. [mp=title, abstract, subject heading words]	4688	Display
3	color centres mp. [mp=title, abstract, subject heading words]	87	Display
4	colour centers mp. [mp=title, abstract, subject heading words]	114	Display

Answer: colour centres is a Subject Heading

Free Language Search - Problems

[Searching Ti, Ab and Id by keywords]

- ➔ ■ Variations in spelling, acronyms, terminology, and punctuation
- Chemical searching is complex
- Numerical searching can be difficult

Will be dealt with separately



Spelling

colour

defence

atomisation

aluminium

fibre

catalogue

sulphur

modeling

haemodynamics

disc

programme

grey

color

defense

atomization

aluminum

fiber

catalog

sulfur

modelling

hemodynamics

disk

program

gray

Acronyms

- Thousands of acronyms are used
e.g. RAM, NVRAM, DRAM, SRAM (RAM variations)
- Authors often assume the acronym(s) are known
- One acronym is often used for more subjects
 - PC (microcomputers or printed circuits or programmable controllers)
 - HV (high vacuum or high voltage)
 - FEA (finite element analysis or field emitter arrays)



Terminology

- US vs UK

- aerial vs antenna
- lift vs elevator
- assisted vs aided

- field specific - example

- PC, desk-top computer, microcomputer, laptop

Many examples exist in almost every subject

Subject Headings sh

*Overcomes
problems with
Free Language*

- Key Words and Phrases from the INSPEC Thesaurus
- Standardized Spelling, Punctuation, Terminology
- The 2002 Thesaurus has well over 16,000 terms

*Allows you to explore subjects
and to find additional broader,
narrower and related terms*



Thesaurus – Why Use It?

1. To overcome free language search problems
2. To find additional & related terms
3. To improve search accuracy

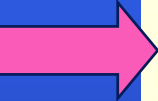
Thesaurus - Find Additional Terms

Select	Subject Heading	Explode	Scope Note
[Back up in List]			
<input type="checkbox"/> Induction heating (2225)		<input type="checkbox"/>	
Induction machines			
<input type="checkbox"/> Induction motor drives (2198)		<input type="checkbox"/>	
<input type="checkbox"/> Induction motor protection (41)		<input type="checkbox"/>	
<input checked="" type="checkbox"/> Induction motors (12951)		<input type="checkbox"/>	
[Used For]			
Asynchronous motors			
Hermetic motors			
Shaded-pole motors			
Split phase motors			
[Broader Terms]			
<input type="checkbox"/> AC motors (2367)		<input type="checkbox"/>	
<input type="checkbox"/> Asynchronous machines (1819)		<input type="checkbox"/>	
[Narrower Terms]			
<input type="checkbox"/> Induction motor drives (2198)		<input type="checkbox"/>	
<input type="checkbox"/> Induction motor protection (41)		<input type="checkbox"/>	
<input type="checkbox"/> Linear induction motors (214)		<input type="checkbox"/>	
<input type="checkbox"/> Squirrel cage motors (2252)		<input type="checkbox"/>	
[Related Terms]			
<input type="checkbox"/> Capacitor motors (173)		<input type="checkbox"/>	
<input type="checkbox"/> Variable speed drives (1981)		<input type="checkbox"/>	

Over 8,000 Thesaurus Terms with full relationships (preferred terms) are available

All Narrow Terms can be selected in one search

Nearly 8,000 Lead-Ins (Pointers to the Thesaurus Terms) are available



Thesaurus - Improve Search Accuracy

Search Topic: RAM

#	Search History	Results	Display
1	ram.mp. [mp=title, abstract, subject heading words]	12621	<input type="button" value="Display"/>
2	random access storage.sh.	7279	<input type="button" value="Display"/>

The records in the set 1 include a number of false drops, e.g.

- *transport of radioactive material (RAM)*
- *ram pressure stripping of dwarf galaxies*
- *ram force of hydraulic cylinder*
- *radar absorbent material (RAM)*

Smaller but more accurate result is obtained

May 2001



Finding Subject Headings

1. Use the '*Mapping*' tool
2. Start with **Trial Search** - link to *Thesaurus* via *Subject Headings* in citations
3. Explore *Thesaurus* via *Tools*
4. Browse the *Subject Headings* List via Search Fields

Using Mapping Tool - Step 1

The screenshot shows the INSPEC search interface. At the top, it displays 'INSPEC <1969 to 2001 Week 16>' and a 'Help' button. Below this is a toolbar with icons for Author, Title, Journal, Search Fields, Tools, Combine, Limit, Basic, Change Database, and Logoff. A table with columns '#', 'Search History', 'Results', and 'Display' is shown, with a single row containing dashes. Below the table is a 'Saved Searches' section. The main search area includes a text input field with 'asynchronous motors', a checked checkbox for 'Map Term to Subject Heading', and a 'Perform Search' button. Three pink arrows point to the input field, the checkbox, and the search button.

O V I D

INSPEC
<1969 to 2001 Week 16> ? Help

Author Title Journal Search Fields Tools Combine Limit Basic Change Database Logoff

#	Search History	Results	Display
-	-	-	-

Saved Searches

Enter **Keyword** or phrase: Map Term to Subject Heading

Using Mapping Tool - Step 2

Click 'Continue' to search the mapped term

The screenshot shows a web interface titled "Mapping Display". At the top left are window controls (O, V, I, D). A "Continue" button is highlighted with a red arrow. Below it, the text reads "Your term mapped to the following Subject Headings: See term mapped to thesaurus term". A table lists two subject headings: "Induction motors" (selected) and "asynchronous motors.mp. search as Keyword". An "Explode" checkbox is checked for the first heading. A "Hints" section at the bottom provides instructions on using subject headings and the explode function.

Combine selections with:

Your term mapped to the following Subject Headings:
See term mapped to thesaurus term

Select	Subject Heading	Explode	Scope
<input checked="" type="checkbox"/>	Induction motors	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	asynchronous motors.mp. search as Keyword	<input type="checkbox"/>	

Hints:

- Click on a **Subject Heading** to view its thesaurus - related terms that are more general and more specific.
- Select the **Explode** box if you wish to retrieve citations using the selected term and all of its more specific terms.
- If your search did not map to a desirable subject heading, select the box **Search as Keyword**.
- If you select more than one term, you can combine them using a boolean operator (AND or OR).
- If you wish to see the scope note for any term or heading, click on the information *i* icon, when available.

Click Subject Heading to examine the Thesaurus

Select 'Explode' check box to include all narrow terms

Subject Headings via Trial Search

Search Topic: Asynchronous motors

INSPEC <1969 to 2000 Week 14> Help

Author Title Journal Search Fields **2** s Combine Limit Basic Change Database Logoff **3**

#	Search History	Results	Display
1	asynchronous motors mp. [mp=title abstract, subject heading word] 1	1238	Display 3

Run Saved Search Save Search History Delete Searches

Enter Keyword or phrase: Map Term to Subject Heading

Limit to:
 Latest Update Abstracts English Language Journal Paper
Publication Year

1. Switch off 'Mapping'
2. Search your Keyword in the default fields
3. Display a few records and examine the 'Subject Headings'

Subject Headings via Trial Search

INSPEC <1969 to 2000 Week 14>

Results of your search: from 1 [asynchronous motor?].mp. [mp=title, abstract, subject heading words] keep 1

Citations available: 1

Citation displayed: 1

Citation 1.

Accession Number

006551674

Institution

Inst. d'Electron., Univ. Mentouri, Constantine, Algeri

Title

Identification and control of an asynchronous machi

Source

ICECS'99. Proceedings of ICECS '99. 6th IEEE International Conference on Electronics, Circuits and Systems (Cat. No.99EX357). IEEE. Part vol.2, 1999, pp.1043-6 vol.2. Piscataway, NJ, USA.

Abstract

In this work, we present the application of artificial neural networks to the identification and control of the asynchronous motor, which is a complex nonlinear system with variable internal dynamics. We show that neural networks can be applied to control the statoric currents of the induction motor. The results of the different simulations are presented to evaluate the performance of the neural controller proposed. (18 References).

Subject Headings

[Identification](#) [Induction motors](#) [Machine control](#) [Neurocontrollers](#) [Nonlinear control systems](#).

Key Phrase Identifiers

[asynchronous machine](#); [artificial neural networks](#); [identification](#); [motor control](#); [complex nonlinear system](#); [variable internal dynamics](#); [statoric currents](#); [neural controller](#).

Publication Type

Conference Paper.

1. Examine Subject Headings field
2. Click the Subject Heading link
OR
3. Examine the Subject Heading
via Tools - Thesaurus and then search

1

2

Subject Headings via Tools

The screenshot shows a web browser window with the title "Select a Tool to View". At the top left are standard browser window controls (minimize, maximize, close). At the top right is a "Help" button with a question mark icon. Below the title bar, there is a "Perform Search" button and a "Main Search Page" button with a house icon. A pink arrow points down to the "Perform Search" button. Below this, a text input field contains the word "asynchronous". A pink arrow points to the "Thesaurus" radio button, which is selected. Below the "Thesaurus" option is a description: "Enter a complete Subject Heading, and press the Perform Search button." A white arrow points to the "Permuted Index" radio button, which is unselected. Below it is the description: "Enter a single word, and press the Perform Search button." Below that are two more unselected radio buttons: "Scope Note" and "Explode", each with a description. At the bottom is a "Classification Codes" radio button, also unselected, with the description: "No Text Entry Needed, simply press the Perform Search button." A horizontal line separates the "Explode" and "Classification Codes" sections.

Subject: asynchronous

- Thesaurus**
Enter a complete Subject Heading, and press the Perform Search button.
- Permuted Index**
Enter a single word, and press the Perform Search button.
- Scope Note**
Enter a complete Subject Heading, and press the Perform Search button.
- Explode**
Enter a complete Subject Heading, and press the Perform Search button.
- Classification Codes**
No Text Entry Needed, simply press the Perform Search button.

Explore Subject Headings via Thesaurus

Thesaurus ? Help

Continue

Combine selections with:

Tools Display Home Main Search Page

Message: Term has been mapped to 'Induction motors'

Thesaurus for **Induction motors**
Database: INSPEC

Select	Subject Heading	Explode	Scope	Note
[Back up in List]				
<input type="checkbox"/>	Induction heating (2225) <i>Induction machines</i>	<input type="checkbox"/>		
<input type="checkbox"/>	Induction motor drives (2198)	<input type="checkbox"/>		
<input type="checkbox"/>	Induction motor protection (41)	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	Induction motors (12951) [Used For] <i>Asynchronous motors</i> <i>Hermetic motors</i> <i>Shaded-pole motors</i> <i>Split phase motors</i>	<input type="checkbox"/>		
	[Broader Terms]			
<input type="checkbox"/>	AC motors (2367)	<input type="checkbox"/>		
<input type="checkbox"/>	Asynchronous machines (1819)	<input type="checkbox"/>		
	[Narrower Terms]			
<input type="checkbox"/>	Induction motor drives (2198)	<input type="checkbox"/>		
<input type="checkbox"/>	Induction motor protection (41)	<input type="checkbox"/>		
<input type="checkbox"/>	Linear induction motors (214)	<input type="checkbox"/>		
<input type="checkbox"/>	Squirrel cage motors (2252)	<input type="checkbox"/>		
	[Related Terms]			
<input type="checkbox"/>	Capacitor motors (173)	<input type="checkbox"/>		
<input type="checkbox"/>	Variable speed drives (1981)	<input type="checkbox"/>		


Examine broader, narrower and related terms; click on the links or select and search via 'Continue'

Subject Headings via Permuted Index

O V I D **Select a Tool to View** ? Help

Perform Search Main Search Page

Subject:


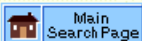
- Thesaurus**
Enter a complete Subject Heading, and press the Perform Search button.
-  **Permuted Index**
Enter a single word, and press the Perform Search button.
- Scope Note**
Enter a complete Subject Heading, and press the Perform Search button.
- Explode**
Enter a complete Subject Heading, and press the Perform Search button.

- Classification Codes**
No Text Entry Needed, simply press the Perform Search button.


















Subject Headings via Permuted Index

O V I D **Permuted Index** ? Help


Continue

Combine selections with:  

Permuted Index for **asynchronous**
Database: INSPEC

Select	Subject Heading	Explode	Scope Note
	asynchronous electric machines		
<input type="checkbox"/>	use ASYNCHRONOUS MACHINES (1819)	<input type="checkbox"/>	
<input type="checkbox"/>	ASYNCHRONOUS GENERATORS (1150)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE WINDINGS (3446)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE THEORY (12910)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE BEARINGS (1701)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE TESTING (5742)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE INSULATION (2461)	<input type="checkbox"/>	
<input type="checkbox"/>	ASYNCHRONOUS MACHINES (1819)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE WINDINGS (3446)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE THEORY (12910)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE TESTING (5742)	<input type="checkbox"/>	
<input type="checkbox"/>	use related SLIP (ASYNCHRONOUS MACHINES) (642)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE INSULATION (2461)	<input type="checkbox"/>	
<input type="checkbox"/>	use related MACHINE BEARINGS (1701)	<input type="checkbox"/>	
	asynchronous motors		
<input type="checkbox"/>	use INDUCTION MOTORS (12951)	<input type="checkbox"/>	

The link will lead you to the Thesaurus



Subject Headings via Indexes

Search Fields/Indexes ? [Help](#)

[Perform Search](#) [Display Index\(es\)](#) [Main Search Page](#)

Enter word or phrase:

<input type="checkbox"/> <i>ab</i> : Abstract	<input type="checkbox"/> <i>id</i> : Key Phrase Identifiers
<input type="checkbox"/> <i>ax</i> : Abstract Number	<input type="checkbox"/> <i>lg</i> : Language
<input type="checkbox"/> <i>an</i> : Accession Number	<input type="checkbox"/> <i>nd</i> : Numeric Data
<input type="checkbox"/> <i>ao</i> : Astronomical Object	<input type="checkbox"/> <i>pg</i> : Pagination
<input type="checkbox"/> <i>au</i> : Author	<input type="checkbox"/> <i>pi</i> : Patent Information
<input type="checkbox"/> <i>cd</i> : CODEN	<input type="checkbox"/> <i>pt</i> : Publication Type
<input type="checkbox"/> <i>ch</i> : Chemicals	<input type="checkbox"/> <i>pu</i> : Publisher
<input type="checkbox"/> <i>cw</i> : Classification Code Words	<input type="checkbox"/> <i>rn</i> : Report Number
<input type="checkbox"/> <i>cc</i> : Classification Codes	<input type="checkbox"/> <i>si</i> : SICI
<input type="checkbox"/> <i>cf</i> : Conference Information	<input type="checkbox"/> <i>hw</i> : Subject Heading Words
<input type="checkbox"/> <i>cn</i> : Contract Number	<input checked="" type="checkbox"/> <i>sh</i> : Subject Headings

Select Subject Headings

Index Display

Perform Search

Back in Index Main Search Page Forward in Index

Enter a new start term: Go

Choose from among the following index entries:

Term	Postings
<input type="checkbox"/> asynchronous circuits.sh.	649
<input type="checkbox"/> asynchronous generators.sh.	1150
<input checked="" type="checkbox"/> asynchronous machines.sh.	1819
<input type="checkbox"/> asynchronous sequential logic.sh.	665
<input type="checkbox"/> asynchronous transfer mode.sh.	13312
<input type="checkbox"/> atari computers.sh.	224
<input type="checkbox"/> atmospheric acoustics.sh.	1382
<input type="checkbox"/> atmospheric boundary layer.sh.	8580
<input type="checkbox"/> atmospheric chemistry.sh.	4038
<input type="checkbox"/> atmospheric composition.sh.	14480
<input type="checkbox"/> atmospheric electricity.sh.	4358
<input type="checkbox"/> atmospheric electromagnetic wave propagation.sh.	2792



Classification Subfiles

A - Physics


B - Electrical & Electronics

C - Computers & Control

D - Information Technology



Classification Codes - B subfile

- B0 General, engineering maths & materials science
- B1 Circuit theory, circuits
- B2 Components, electron devices & materials
- B3 Magnetic & superconducting materials & devices
- B4 Optical materials & applications, optoelectronics
- B5 Electromagnetic fields
- B6 Communications
-  B7 Instrumentation & special applications
- B8 Power systems & applications

Classification Codes - B76 subsection

B7000 **Instrumentation and special applications**

.....

.....

.B7600 **Aerospace facilities and techniques**

..B7610 General aspects of aircraft, space
 vehicles/satellites

..B7620 Aerospace test facilities and simulation

..B7630 Aerospace instrumentation

→ ..B7630A Avionics

...B7630B Power supplies

...B7630D Space vehicle electronics

..B7640 Aerospace propulsion

..B7650 Ground support systems

...B7650C Air traffic control

...B7650E Space ground support centres

.B7700 **Earth sciences**

Classification Codes Structure

B7630A

B	Electrical & Electronic Engineering
B7	Instrumentation & Special Applications
B76	Aerospace facilities & Techniques
<hr/>	
B7630	Aerospace Instrumentation
B7630A	Avionics

Notes:

- 1. Classification codes can be searched at any of the above level*
- 2. Truncation must be used at the five-digit level*

Finding Classification Codes

1. Start with a trial search and examine Classification Codes field
2. Browse through the Thesaurus Term(s)
3. Browse through printed INSPEC Classification

Note: You can use three-digit classification given in your Workbook!

Using Classification Codes - Example 1

Search Topic: Algol - Variable Star
Algol - software

Navigate your search to the astronomical part of the Physics Section (A)

#	Search History		
1	algol.mp. and a97.cc. [mp=title, abstract, subject heading words]	664	Display
2	algol.mp. and c6140?.cc. [mp=title, abstract, subject heading words]	794	Display
3	1 and 2	0	

Navigate your search into the software part of the C section (Computer and Control)

Using Classification Codes - Example 2

*Search Topic: Copyright 1/ Theoretical aspects
2/ Commercial aspects*

#	Search History	Results	Display
1	copyright.mp. and c72.cc. [mp=title, abstract, subject heading words]	844	Display
2	copyright.mp. and d.cc. [mp=title, abstract, subject heading words]	98	Display
3	1 and 2	3	Display

C72 code navigates your search to Information Science Topics

D code navigates your search to the 'Information Technology' section of the INSPEC Database

Classification Codes - Tips

- Use Classification Codes to navigate your search to the required subject area (Set context for general or common terms, e.g. data analysis, mathematics)
- Use narrow codes when searching repeatedly for very specific types of information e.g., B7630A for avionics

Treatment Index Display

Select	Treatment	# of Citations
<input type="checkbox"/>	a.tr.	424598
<input type="checkbox"/>	application.tr.	424598
<input type="checkbox"/>	b.tr.	58893
<input type="checkbox"/>	bibliography.tr.	58893
<input type="checkbox"/>	e.tr.	44018
<input type="checkbox"/>	economic.tr.	44018
<input type="checkbox"/>	experimental.tr.	2308758
<input type="checkbox"/>	g.tr.	430732
<input type="checkbox"/>	general or review.tr.	430732
<input type="checkbox"/>	n.tr.	103954
<input type="checkbox"/>	new development.tr.	103954
<input type="checkbox"/>	p.tr.	1665070
<input type="checkbox"/>	practical.tr.	1665070
<input type="checkbox"/>	product review.tr.	45417
<input type="checkbox"/>	r.tr.	45417
<input type="checkbox"/>	t.tr.	2582949
<input type="checkbox"/>	theoretical or mathematical.tr.	2582949
<input type="checkbox"/>	x.tr.	2308758



Treatment Codes TC

- Reflect the authors approach to the topic
 - theoretical, practical.....
- 9 codes are available
- Multiple treatment codes can be assigned
- Some records have none
- Treatment codes are subjective

Treatment Codes - Search Example

Search Topic: Multimedia - papers on communication aspects, with lots of references

b6 code is used to navigate the search to the communication aspects

#	Search History		
1	multimedia.mp. [mp=title, abstract, subject heading words]	31299	Display
2	multimedia.mp. and b6.cc [mp=title, abstract, subject heading words]	16532	Display
3	bibliography.tr	61455	Display
4	2 and 3	94	Display

'Bibliography' Treatment Code retrieves records that originate from articles with 50 or more Citations

Treatment Codes Example

Citation 1.

[Link to...](#) [Abstract](#)

Accession Number

006900421

Author

[Ishibashi Y.](#) [Tasaka S.](#)

Institution

Dept. of Electr. & Comput. Eng., Nagoya Inst. of Technol., Japan.

Title

A comparative survey of synchronization algorithms for continuous media in network environments.

Source

Proceedings 25th Annual IEEE Conference on Local Computer Networks. LCN 2000. IEEE Comput. Soc. 2000, pp.337-48. Los Alamitos, CA, USA.

Country of Publication

USA.

Conference Information

Proceedings 25th Annual IEEE Conference on Local Computer Networks. LCN 2000. Tampa, FL, USA. IEEE Comput. Soc. IEEE Comput. Soc. Tech. Committee on Comput. Commun. GTE. PARADYNE. Univ. South Florida. 8-10 Nov. 2000.

Abstract

This paper makes a survey of algorithms proposed for continuous media synchronization in network environments. We classify media synchronization control techniques used in the algorithms into four categories: basic control, preventive control, reactive control and common control. We also pick four representatives from among the media synchronization algorithms and give outlines of them in order to explain how the techniques are employed in each algorithm. Furthermore, we make a comparison among 38 algorithms in terms of factors such as locks, advance information on network delay bounds and synchronization control techniques, which determine the design of each algorithm. (93 References)

The number of citations is indicated at the end of the abstracts

Treatment Codes - Search Example

Search Topic: Multimedia - Product Information

Articles on multimedia hardware are retrieved

#	Search History	Results	Display
1	multimedia.mp. and c5.cc [mp=title, abstract, subject heading words]	11771	Display
2	product review.tr.	46274	Display
3	1 and 2	257	Display

'Product Review' Treatment Code finds papers on specific product models

Treatment Codes Example - Titles

Results of your search: **1 and 2**

Citations displayed: **1-10** of **257**

Go to Record:

[Citation Manager](#) • [Help](#) • [Logoff](#)

[Customize Display](#) [Reset Display](#)

1. Sauer J. Corporate DVD authoring: the software roundup. [Journal Paper] *E Media*, vol.14, no.2, Feb. 2001, pp.46-53. Publisher: Online Inc, USA.

[Abstract](#) • [Complete Reference](#)

2. Tanaka S. 160 MIPS high performance and low power DSP for **multimedia**. [Journal Paper] *NEC Research & Development*, vol.41, no.3, July 2000, pp.274-7. Publisher: NEC Creative, Japan.

3. Bursky D. Two-chip modem delivers low-cost remote access. [Journal Paper] *Electro*
Publisher: Penton Publishing, USA.

[Abstract](#) • [Complete Reference](#)

4. Ebihara T. Development of a next-generation ATM terminal (NBA). [Journal Paper] *NEC Research & Development*, vol.41, no.2, April 2000, pp.218-21. Publisher: NEC Creative, Japan.

[Abstract](#) • [Complete Reference](#)

5. Basoglu C, Woobin Lee, O'Donnell JS. The MAP1000A VLIM mediaprocessor. [Journal Paper] *IEEE Micro*, vol.20, no.2, March-April 2000, pp.48-59. Publisher: IEEE, USA.

[Abstract](#) • [Complete Reference](#)

6. Hascher W. High-speed data handling with a chip. New communications processor for high speed data, video and speech transmission via xDSL protocols. [Journal Paper] *Elektronik*, vol.48, no.22, 2 Nov. 1999, pp.58-63. Publisher: WEKA-Fachzeitschriften, Germany.

[Abstract](#) • [Complete Reference](#)

The papers often include information on specific models

A stylized blue lion logo is positioned in the background of the slide. The lion is facing left, with its tail raised and curved. The entire slide has a blue gradient background.

Chemical Indexing .ch.

- Controlled indexing for inorganic compounds and systems
- Applied to records from 1987-

Chemicals in Identifiers

Problems:

- CO vs Co ? (also co-ordinated.....)
- Semiconductor materials - many variations of the same compound, e.g. gallium aluminium arsenides
 - GaAlAs
 - AlGaAs
 - $\text{Al}_x\text{Ga}_{1-x}\text{As}$
 - $(\text{GaAs})_{0.5}(\text{AlAs})_{0.5}$

Chemicals in Descriptors

Imprecise:

- Thesaurus terms, e.g.
vanadium / vanadium alloys / vanadium compounds
- Cannot distinguish
 - vanadium trioxide *from* vanadium pentoxide
 - sodium chloride *from* sodium bromide *plus* potassium chloride

Chemical Indexing Roles

Basic roles

- el element
- bin binary system
- ss 3 or more components

Additional roles

- dop dopant
- int interface
- sur surface/substrate
- ads adsorbate

Examples of Chemical Indexing

- Co/el
- CO/bin C/bin O/bin
- V2O3/bin V2/bin O3/bin V/bin O/bin
- V2O5/bin V2/bin O5/bin V/bin O/bin
- H2SO4/ss H2/ss SO4/ss H/ss S/ss O4/ss O/ss



Chemicals - searching

Search format:

substance (*adjacent*) role (*subfield*)

substance (*adjacent*) role

Examples:

H₂SO₄

h2so4-ss.ch.

He-Ne

he-bin *adj10* ne-bin.ch.

GaAlAs

ga-ss *adj10* al-ss *adj10* as-ss.ch.



Numeric Data .nd.

- Controlled Indexing System for Numerical Data
- Applied to Records from 1987 Forward
- Designed to Solve Specific Problems with Free Text Numeric Searching

Numeric Data .nd.

Problems with

- Variations in quantities

velocity, speed

- Variations in units

C, Celsius, °C, K, Kelvin, F. ...

- Variations in values

27,500 kW 27.5 MW 2.75 E07 W

Numeric Data Format

temperature of 100°C (=373K)

From Numerical Thesaurus

quantity
temperature

value
3.73E+02

unit
K

Exponential (Floating) notation
(Explained in the Numerical Thesaurus)

Numeric Data Format

frequency range of 5 to 7 GHz

From Numerical Thesaurus

quantity

value to value

unit

frequency

5.0E+09 to 7.0E+09

Hz

Exponential (Floating) notation

Exponential (Floating Point) Notation

- Notation Especially Helpful for Very Large and Very Small Numbers:

$$1,952,000,000,000 = 1.952E+12$$

$$0.0000000000753 = 7.53E-10$$

Numeric Data Search Examples

- Length of 50 m
 - *size adj10 “5.0e+01”.nd.*
- Wavelength of 1.06 μ
 - *wavelength adj10 “1.06e-06”.nd.*
- Temperature range of 0 to 100 °C
 - *temperature adj10 “2.73 e+02” adj10 “3.73 e+02”.nd.*

Multiplying prefixes

<u>Prefix</u>	<u>Abbrev.</u>	<u>Factor</u>
exa	E	10^{18}
.....
giga	G	10^9
mega	M	10^6
kilo	k	10^3
.....
milli	m	10^{-3}
micro	mu	10^{-6}
.....
atto	a	10^{-18}

Numeric Data Indexing Thesaurus

temperature: K (kelvin)

C use K [$K = C + 273.15$]

degK use K

degC use K [$K = \text{degC} + 273.15$]

degF use K [$K = (\text{degF} + 459.67) * 0.55555556$]

F use K [$K = (F + 459.67) * 0.55555556$]

thickness use size



Numeric Data Indexing Thesaurus

*Is available from the IEE Website on
<http://www.iee.org.uk/publish/inspec/docs/ndithes.pdf>*

Bibliographic Indexes

■ Author	au
■ Corporate author	ca
■ Institution	in
■ Country of Publication	cp
■ Language	lg
■ Publication type	pt
■ Journal Name	jn
■ Conference Information	cf
■ Accession number	an
■ CODEN/ISSN/ISBN	cd/is/ib

Author .au.

All are included

Format is standardised

on OVID

Frey D.R.

frey dr

Dornberger, J.F., Jr

dornberger jf jr

Privorotskii, I.V.

privorotskii iv

Muller, G.

muller g

Van der Hart, W.F.M.

van der hart wfm

Lee Fo Long

lee fo long

Chon Yu-Taik

chon yu taik

Search example: frey dr.au.

Search tip: use index screen to browse

Institution in Corporate Author ca

- Affiliation is given for the first named author only
- Abbreviations are used (e.g., Co., Inc. Corp., Univ.)
- Includes city, state, and country of institution (country name is standardized throughout)

Institution in
Corporate Author ca

◆ *Included for the first author only*

Example:

Nat. Phys. Lab., Teddington, UK

Nat. Phys. Labs., Teddington, UK

National Phys. Lab., Teddington, UK

Div. of Electr. Sci., NPL, Teddington, UK

Search tip: Use the name of the town in your search



Country of Publication .cp.

All are searchable, e.g.

uk.cp.

usa.cp.

hungary.cp.

Search tips:

- ☞ This field is standardised*
- ☞ Use Search Fields/Indexes to browse the list of countries*



Language .lg.

All are searchable, e.g.

hungarian.lg.

russian.lg.

french.lg.

Search tips:

- ☞ Limit to any language via pull-down menu*
- ☞ Limit to English via Check-box on Search Screen*
- ☞ Browse Language Index via Search Fields*

Language Index .lg.

Language Index Display [?](#) Help

[Perform Search](#) [A-Z](#) [Back in Index](#) [Main Search Page](#) [Forward in Index](#) [A-Z](#)

Choose from among the following index entries:

Select	Language	# of Citations
<input type="checkbox"/>	czech.lg.	15757
<input type="checkbox"/>	danish.lg.	1398
<input type="checkbox"/>	dutch.lg.	8999
<input type="checkbox"/>	english.lg.	5804443
<input type="checkbox"/>	esperanto.lg.	8
<input type="checkbox"/>	estonian.lg.	2
<input type="checkbox"/>	finnish.lg.	750
<input type="checkbox"/>	flemish.lg.	130
<input type="checkbox"/>	french.lg.	85894
<input type="checkbox"/>	german.lg.	175518
<input type="checkbox"/>	greek.lg.	138
<input type="checkbox"/>	hebrew.lg.	102
<input type="checkbox"/>	hindi.lg.	1
<input type="checkbox"/>	hungarian.lg.	9127
<input type="checkbox"/>	indonesian.lg.	2

Limit facilities

Limit to:

Latest Update Abstracts English Language

Publication Year: 1985 - 2001

To select or remove multiple items from a list below, hold down the Shift, Ctrl, or "Apple" key while selecting.

<p>Languages</p> <ul style="list-style-type: none">EnglishEsperantoEstonianFinnishFlemishFrench	<p>Treatments</p> <ul style="list-style-type: none">EconomicExperimentalGeneral or ReviewNew DevelopmentPracticalProduct Review
<p>Publication Types</p> <ul style="list-style-type: none">Conference PaperConference ProceedingsDissertationJournal PaperPatentReport	<p>Chemical Roles</p> <ul style="list-style-type: none">Binary SystemSystem with Three or more ComponentsDopantInterface SystemSurface/SubstrateAdsorbate/Any Sorbate
<p>Numeric Data</p> <ul style="list-style-type: none">Electrical ConductivityEnergyElectron Volt EnergyFrequencyGainGalactic Distance	

[Limit Search](#) [Main Search Page](#)

Publication Type Index

○ V I D **Publication Type Index Display** ? Help

Perform Search A-Z Back in Index Main Search Page Forward in Index A-Z

Choose from among the following index entries:

Select	Publication Type	# of Citations
<input type="checkbox"/>	book.pt.	11131
<input type="checkbox"/>	book chapter.pt.	18022
<input type="checkbox"/>	conference paper.pt.	1884932
<input type="checkbox"/>	conference proceedings.pt.	41323
<input type="checkbox"/>	dissertation.pt.	9598
<input type="checkbox"/>	journal paper.pt.	4521280
<input type="checkbox"/>	patent.pt.	20586
<input type="checkbox"/>	report.pt.	42392
<input type="checkbox"/>	report section.pt.	872



Journal Name

jn

Journal Word

jw

- Browse through the Journal Name Index via Search Fields
- Search Journal Word Index in Command Line using adjacency operators
- Use Coden or ISSN if known

Search tip:

Coden and ISSN can change over the years

Journal Index Display

Search Topic: Electronics Letters

Index Display

Perform Search

Back in Index

Main Search Page

Forward in Index

Help

Enter a new start term: Go

Choose from among the following index entries:

Term	Postings
<input checked="" type="checkbox"/> electronics letters.jn.	30243
<input type="checkbox"/> electronics management.jn.	1
<input type="checkbox"/> electronics manufacture & test.jn.	399
<input type="checkbox"/> electronics manufacturer.jn.	36
<input type="checkbox"/> electronics purchasing.jn.	16
<input type="checkbox"/> electronics report.jn.	49
<input type="checkbox"/> electronics test.jn.	695
<input type="checkbox"/> electronics times.jn.	159
<input type="checkbox"/> electronics today.jn.	81
<input type="checkbox"/> electronics today international.jn.	905
<input type="checkbox"/> electronics week.jn.	95
<input type="checkbox"/> electronics weekly.jn.	170
<input type="checkbox"/> electronics world.jn.	64
<input type="checkbox"/> electronics world & wireless world.jn.	544
<input type="checkbox"/> electronique.jn.	25



Conference Field .cf.

Use cf field to search for

- ☞ Conference Title optic?.cf.
- ☞ Conference Location Amsterdam.cf.
- ☞ Conference Year 1998.cf.

Conference Proceedings Records

Use 'Conference Proceedings' publication type:

- ☞ to identify meetings
- ☞ to find out the main topics of the meeting(s)

Notes:

- *Conference Proceedings records have full bibliographic details*
- *The Abstract reflects the main topics of the Conference meeting and has the format 'The following topics are dealt with:...*

Conference Search Example

Search Topic: Conference meetings on the topic of 'induction motors' sponsored by IEE

#	Search History	Results	Display
1	induction motors.sh.	12944	Display
2	"conference proceedings".pt.	41323	Display
3	1 and 2	74	Display
4	3 and iee.cf.	14	Display

Accession Number

003178624

Title

Electric Energy Conference 1987. An International Conference on Electrical Machines and Drives.

Source

Instn. Eng. Australia. Sept. 1987, pp.2 vol. 723. Barton, ACT, Australia.

Conference Information

Adelaide, SA, Australia. Instn. Eng. Australia. Instn. Radio Electron. Eng. Australia. IEE. IEEE. 6-9 Oct. 1987.

Abstract

The following topics were dealt with: AC drives; DC drives; synchronous **motors**; squirrel cage **motors**; **induction motors**; DC **motors**; inverter fed **motors**; permanent magnet **motors**; machine theory; linear **motors**; machine testing; electric vehicles; and computer control of electric machines. Abstracts of individual papers can be found under the relevant classification codes in this or other issues.

Abstract is always in the format
'The following topics were dealt with....'

INSPEC features - Overview

1. One of the largest Science & Technology Databases
2. World-wide coverage
3. Extensive range of core subjects
4. A wide range of interdisciplinary subjects
5. Clear structure of subjects - easy search navigation
6. Over 80 search elements & value-added subject search fields

Ovid Implementation - Overview

8. Search Fields - most fields are searchable, many can be browsed
9. Mapping - finds Subject Headings easily
10. Search Tools - Explore Thesaurus and Classification
11. Search History - results can be processed easily & effectively
12. Links to full text - continuously increasing number of links



User Aids

- User documentation package
 - Thesaurus, Classification, List of Journals
- INSPEC Matters newsletter
- Online help desk
- In-house training seminars
- Internet Website - <http://www.iee.org.uk>



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