

# ACM DIGITAL LIBRARY

## User Guide



Association for  
Computing Machinery

*Advancing Computing as a Science & Profession*

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# 資料庫簡介

ACM Digital Library 是 Association for Computing Machinery 所出版之電子資料庫，收錄該學會所出版之雜誌、會刊和期刊全文，以及相關之會議論文集。

## 書目資料

ACM Digital Library 包括約從 1985 年至最近一期之 ACM 全文期刊和雜誌、會刊，至今 24 萬多篇文獻，約有超過 1,400,000 頁資料。

## Journals: (7)

- ✓ ACM Computing Surveys (CSUR)
- ✓ ACM Journal of Computer Documentation (JCD)
- ✓ ACM Journal on Emerging Technologies in Computing Systems (JETC)
- ✓ Journal of Experimental Algorithmics (JEA)
- ✓ Journal of the ACM (JACM)
- ✓ Journal on Educational Resources in Computing (JERIC)

## Magazines:(10)

- ✓ Communications of the ACM
- ✓ Computers in Entertainment (CIE)
- ✓ Crossroads
- ✓ eLearn
- ✓ intelligence
- ✓ interactions
- ✓ netWorker
- ✓ Queue
- ✓ StandardView
- ✓ Ubiquity

## Transactions:(31)

- ✓ ACM Letters on Programming Languages and Systems (LOPLAS)
- ✓ ACM Transactions on Accessible Computing (TACCESS)
- ✓ ACM Transactions on Algorithms (TALG)

- ✓ ACM Transactions on Applied Perception (TAP)
- ✓ ACM Transactions on Architecture and Code Optimization (TACO)
- ✓ ACM Transactions on Asian Language Information Processing (TALIP)
- ✓ ACM Transactions on Autonomous and Adaptive Systems (TAAS)
- ✓ ACM Transactions on Computational Logic (TOCL)
- ✓ ACM Transactions on Computer Systems (TOCS)
- ✓ ACM Transactions on Computer-Human Interaction (TOCHI)
- ✓ ACM Transactions on Database Systems (TODS)
- ✓ ACM Transactions on Design Automation of Electronic Systems (TODAES)
- ✓ ACM Transactions on Embedded Computing Systems (TECS)
- ✓ ACM Transactions on Graphics (TOG)
- ✓ ACM Transactions on Information Systems (TOIS)
- ✓ ACM Transactions on Information and System Security (TISSEC)
- ✓ ACM Transactions on Internet Technology (TOIT)
- ✓ ACM Transactions on Knowledge Discovery from Data (TKDD)
- ✓ ACM Transactions on Mathematical Software (TOMS)
- ✓ ACM Transactions on Modeling and Computer Simulation (TOMACS)
- ✓ ACM Transactions on Multimedia Computing, Communications, and Applications (TOMCCAP)
- ✓ ACM Transactions on Programming Languages and Systems (TOPLAS)
- ✓ ACM Transactions on Reconfigurable Technology and Systems (TRETSS)
- ✓ ACM Transactions on Sensor Networks (TOSN)
- ✓ ACM Transactions on Software Engineering and Methodology (TOSEM)
- ✓ ACM Transactions on Speech and Language Processing (TSLP)
- ✓ ACM Transactions on Storage (TOS)
- ✓ ACM Transactions on the Web (TWEB)
- ✓ IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB)
- ✓ IEEE/ACM Transactions on Networking (TON)

Publications by Affiliated Organizations (24)

- ✓ ALGOL Bulletin *Computer History Museum*
- ✓ Computational Linguistics *MIT Press*

- ✓ International Journal of Network Management *John Wiley & Sons, Inc.* **(Full Text is not available)**
- ✓ Journal of Computing Sciences in Colleges *Consortium for Computing Sciences in Colleges*
- ✓ Linux Journal *Specialized Systems Consultants, Inc.*
- ✓ Mobile Networks and Applications *Kluwer Academic Publishers*
- ✓ Personal and Ubiquitous Computing *Springer-Verlag*
- ✓ The Journal of Machine Learning Research *MIT Press*
- ✓ The VLDB Journal — The International Journal on Very Large Data Bases *Springer-Verlag New York, Inc.*
- ✓ Wireless Networks *Kluwer Academic Publishers*
- ✓ ACL: Annual Meeting of the ACL
- ✓ ANLC: Applied Natural Language Conferences
- ✓ CASCON: IBM Centre for Advanced Studies Conference
- ✓ COLING: International Conference On Computational Linguistics
- ✓ CSCL: Computer Support for Collaborative Learning
- ✓ EACL: European Chapter Meeting of the ACL
- ✓ HLT: Human Language Technology Conference
- ✓ ICLS: International Conference on Learning Sciences
- ✓ MUC: Message Understanding Conference
- ✓ NAACL-ANLP: ANLP/NAACL Workshops
- ✓ NAACL: North American Chapter Of The Association For Computational Linguistics
- ✓ TINLAP: Theoretical Issues In Natural Language Processing
- ✓ VLDB: Very Large Data Bases
- ✓ Wireless Networks

#### 會議論文集

ACM Digital Library 有從 1985 到 1999 年之全文會議文獻資料，每年增加約 40 筆，包括 SIGGRAPH 與 SIGCHI 之會議論文。

# 資料庫主畫面

ACM Digital Library 網址：<http://portal.acm.org/dl.cfm>

The screenshot shows the ACM Digital Library portal interface. At the top, there is a navigation bar with the 'acm PORTAL' logo, links for 'Subscribe (Full Service)', 'Register (Free, Limited Service)', and 'Login'. Below the logo is a search bar with radio buttons for 'The ACM Digital Library' (selected) and 'The Guide', and a 'SEARCH' button. The main content area is divided into two columns. The left column features a green header 'THE ACM DIGITAL LIBRARY' and text stating 'Full text of every article ever published by ACM.' Below this are links for 'Using the ACM Digital Library' and 'Frequently Asked Questions (FAQ's)'. A section titled 'Recently loaded issues and proceedings:' lists several publications with volume and issue information, such as 'ACM Computing Surveys (CSUR) Volume 40 Issue 1'. The right column contains a 'SEARCH' button, a link to 'Advanced Search', and a 'Browse the Digital Library:' section with a list of categories: Journals, Magazines, Transactions, Proceedings, Newsletters, Publications by Affiliated Organizations, Special Interest Groups (SIGs), and ACM Oral History interviews. At the bottom right, there is a 'Personalized Services:' section with links for 'My Binders' and 'TOC Service'. Annotations with arrows point to various elements: '資料庫簡介' points to the left column header; '最近二週新出版期刊' points to the 'Recently loaded issues...' section; '簡易檢索' points to the search bar; '進階檢索' points to the 'Advanced Search' link; and '按資料類型瀏覽' points to the 'Browse the Digital Library:' section.

## 瀏覽功能

系統提供瀏覽功能，使用者可在首頁依不同的資料類型，瀏覽資料：

- Journal 期刊
- Magazine 雜誌
- Transaction 會刊
- Proceedings 會議記錄
- Newsletters 時事通訊
- Publications by Affiliated Organizations 相關附屬機構出版品
- Special Interest Groups (SIGs) 特殊興趣團體
- ACM Oral History interviews ACM 口述歷史訪談

使用方式：

1. 點選欲瀏覽之資料類型，例：Journals，系統會列出該資料類型下所有出版品，在此選擇欲瀏覽的刊物名稱，例：Journal of the ACM

Subscribe (Full Service) Register (Limited Service, Free) Login

Search:  The ACM Digital Library  The Guide

SEARCH

THE ACM DIGITAL LIBRARY Feedback

DL Home → Journals

Search within the ACM Journals: SEARCH Advanced Search

可在期刊中限定搜尋

Browse the ACM Journals:

- ◆ [ACM Computing Surveys \(CSUR\)](#)
- ◆ [ACM Journal of Computer Documentation \(JCD\)](#)
- ◆ [ACM Journal on Emerging Technologies in Computing Systems \(JETC\)](#)
- ◆ [Journal of Experimental Algorithmics \(JEA\)](#)
- ◆ [Journal of the ACM \(JACM\)](#)
- ◆ [Journal on Educational Resources in Computing \(JERIC\)](#)

ACM 所有收錄的期刊

2. 期刊主頁面顯示該本期刊之簡介，以及各刊期的連結。可選擇查看最新刊期 (current issue)，或查看以前所出版的各期 (archive)。點選刊期，即可查看該刊期之目次 (Table of Content)

Subscribe (Full Service) Register (Limited Service, Free) Login

Search:  The ACM Digital Library  The Guide

SEARCH

THE ACM DIGITAL LIBRARY Feedback

DL Home → Journals → JACM

Search within Journal of the ACM (JACM): SEARCH Advanced Search

可限定在單本期刊內容中搜尋

Browse Journal of the ACM (JACM):

**JACM**

ISSN: 0004-5411  
TOC Service

Current Issue  
Volume 55, Issue 2 (May 2008)

Archive  
Volume 1, Issue 1 (Jan. 1954)  
Volume 55, Issue 1 (February 2008)

The *Journal of the ACM (JACM)* serves as a venue for careful presentation of theoretical research in the core areas of computing: complexity of algorithms, computer architecture, system modeling, AI, data structures, database theory and graph theory, to name a few. The authors are world class scientists, writing to other scientists about advances, methods and findings behind the fundamentals.

期刊內容的簡介

進入現刊目錄

進入所有卷期列表


### 3. 在特定期刊中查詢文章

進入瀏覽畫面（如上）後，可發現在上方有個快速搜尋欄位，在您不斷點選進入下一層瀏覽內容時，此欄位可不斷限縮搜尋的範圍，甚至可在單期的期刊內容中搜尋。其後我們將介紹進階查詢（Advanced Search），包含更多樣更精確的檢索方式。


## 書目資料顯示格式

在期刊的目錄中選擇單篇文章進入後，顯示的畫面如下：

### XML data exchange: Consistency and query answering

**Full text**  Pdf (1.09 MB) 開啟 PDF 全文

**Source** **Journal of the ACM (JACM)** [archive](#)  
Volume 55, Issue 2 (May 2008) [table of contents](#)  
Article No. 7  
Year of Publication: 2008  
ISSN:0004-5411



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**Publisher** [ACM](#) New York, NY, USA

**Bibliometrics** Downloads (6 Weeks): 0, Downloads (12 Months): 0, Citation Count: 0

書目資料、摘要、參考文獻、索引詞、DOI 號碼等連結，可下載至書目管理軟體

**Additional Information:** [abstract](#) [references](#) [index terms](#)

**Tools and Actions:** [Review this Article](#)  
[Save this Article to a Binder](#) Display Formats: [BibTex](#) [EndNote](#) [ACM Ref](#)

**DOI Bookmark:** Use this link to bookmark this Article: <http://doi.acm.org/10.1145/1346330.1346332>  
[What is a DOI?](#)

#### ↑ ABSTRACT

Data exchange is the problem of finding an instance of a target schema, given an instance of a source specification of the relationship between the source and the target. Theoretical foundations of data exchange have been investigated for relational data.

In this article, we start looking into the basic properties of XML data exchange, that is, restructuring o

書目資料中的超連結有兩種功能，一是幫助讀者快速跳至該部分，例如按下 reference 的超連結時，畫面會立刻跳至 reference；一是利用該項目在 ACM 裡頭做自動搜尋，方便讀者做延伸閱讀，例如按下作者的名字上的超連結時，系統會直接幫您搜尋在 ACM 裡收錄同一位作者所寫的其他文章。

## 參考文獻

### ↑ REFERENCES

Note: OCR errors may be found in this Reference List extracted from the full text article. ACM has opted to expose the complete List rather than only correct and linked references.

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### ↑ INDEX TERMS

#### Primary Classification:

H. [Information Systems](#)

↳ H.2 [DATABASE MANAGEMENT](#)

↳ H.2.5 [Heterogeneous Databases](#)

索引詞，ACM 自訂的電腦文獻分類系統

#### General Terms:

[Management](#), [Theory](#)

#### Keywords:

[Data exchange](#), [XML](#), [computing certain answers](#), [consistency](#)

關鍵詞



## 書目資料欄位

- 題名
- 全文連結：點選 PDF 文件圖示即可連結全文。必須先安裝 Acrobat Reader
- 出處：該篇文章的出處，可連結至該期刊各刊期之目次
- 期刊出版資訊：卷期、頁數、出版年、ISSN
- 作者：包括作者姓名與其服務機構，點選作者名字可連結至 ACM 裡所收錄同一作者所寫的其他文章
- 出版社：出版社名稱
- DOI：本篇文章之網路位址，可點選該連結，將本篇文章加入書籤
- 摘要：文章摘要
- 索引詞：系統所給予本篇文章之主題分類。點選主題分類可連結至分類於該主題下之文章列表
- 關鍵字：文章關鍵字。點選關鍵字可連結至其他具有同樣關鍵字之文章列表
- 參考文獻：本篇文章之參考文獻
- 評論：其他專家學者對本篇文章發表之評論。部份評論必須訂購 Reviews.com 資料庫才可觀看

**請注意：部份功能僅限個人或特定資料庫訂購者使用，團體訂購者無使用權限：**

- Review this Article （提供給 ACM 的評論者，用以評論該篇文章）
- Save this Article to a Binder
- My Bookshelf

# 查詢功能

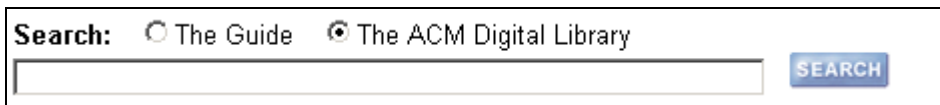
ACM Digital Library 的查詢功能分為簡易檢索與進階檢索，以下即針對兩種不同的檢索方式說明：

- 簡易檢索 Simple Search

利用簡單的字詞，在資料庫中搜尋符合條件之資料，不限出現欄位。

使用方式：

1. 首先選擇在 The Guide 或 ACM Digital Library 中查詢
2. 在空白欄位中輸入字詞
3. 點選 Search



- 進階檢索 Advanced Search

不同於簡易檢索，進階檢索提供更多欄位、更多檢索點與不同邏輯組合，幫助使用者更精確地找到所需資訊。

提供檢索點包含：

- 作者／編者姓名與服務機構
- 會議名稱、時間、地點等
- ISBN/ISSN/DOI
- 索引詞、關鍵字
- 出版資訊
- 辭彙出現處／文獻層次

## 進階檢索畫面：

標題、摘要、全文章的字詞

作者/編輯者/評論者姓名

**Words or Phrases**  
Find [any field] with  
all of this text (and)  
any of this text (or)  
none of this text (not)

**Names**  
Find [any field] with names  
using  all  any  none of the names

**Keywords**  
Find author's keywords  
using  all  any  none of the keywords

**Affiliations**  
Find company or school  
using  all  any  none of the affiliations

機構名稱

**Publication**  
Find publication  
using  all  any  none of the names  
Find publisher  
using  any  none of the names  
Published since [year] Published before [year]  
In publication types  Journal  Proceeding  Transaction  Magazine  Newsletter

出版品的名稱/年代/種類

**Conference**  
Find sponsor names  
using  all  any  none of the names  
Find year (yyyy)  
using  any  none of the years  
Find location  
using  any  none of the locations

會議舉辦地點年份

**Identification codes**  
Find ISBN/ISSN  
Find DOI

**Computing Classification System (CCS)**  
Find node  
Find subject/noun  
 Look at primary category only

**Required components**  
Results must have  Full Text  Abstract  Review

文章或期刊書目編碼

ACM 自訂索引分類系統

SEARCH

# 檢索技巧

使用者可學習檢索技巧的使用，利用簡單的檢索式，快速且精確的找到資料。

## 1. 搜尋在文章中的標題、摘要、評論或任何地方的字詞

The screenshot shows a search form titled "Words or Phrases". It includes a dropdown menu labeled "[any field]" with an arrow pointing to a callout box that says "利用下拉選單選擇疑問詞出現之處". Below the dropdown is the text "Find" followed by three input fields. The first field is labeled "all of this text (and)", the second "any of this text (or)", and the third "none of this text (not)". An arrow points from a callout box on the left, which says "注意欄位前方的解釋，將疑問詞填入適當欄位之中", to the first input field.

- 欄位一和二之間是用 and 連接，和欄位 3 則是用 not 連接
- 若將兩個疑問詞輸入欄位一，以空白鍵隔開，空白鍵是表示"and"；同理，欄位二的空白鍵則是表示"or"，欄位三則是"not"
- 舉例說明，若要尋找 RFID and sensor，則可以在第一個欄位輸入 RFID sensor【圖一】；或是在第一欄中輸入 RFID，第二欄中輸入 sensor【圖二】

【圖一】

The screenshot shows the search form with the text "RFID sensor" entered into the first input field. The other two input fields are empty.

【圖二】

**Words or Phrases**

Find  with

**all** of this text  
(and)

**any** of this text  
(or)

**none** of this  
text (not)

- 若要尋找 RFID or sensor，則可以在第二個欄位輸入 RFID sensor 【圖三】

【圖三】

**Words or Phrases**

Find  with

**all** of this text  
(and)

**any** of this text  
(or)

**none** of this  
text (not)

- 若要尋找 RFID not sensor，則可以在第一個欄位輸入 RFID，第三個欄位輸入 sensor 【圖四】

【圖四】

**Words or Phrases**

Find  with

**all** of this text  
(and)

**any** of this text  
(or)

**none** of this  
text (not)

## 2. 布林邏輯的使用

在許多檢索點的下方具有以下邏輯選項

using  all  any  none of the names

以輸入"John Day"查詢作者名為例，

布林邏輯	意 義	範 例
All	完全符合	僅出現完全符合"John Day"的作者名
Any	部分符合	出現包含任一的作者，例如亦會搜尋到John Gage
None	不包含特定概念	出現完全不包含"John Day"的作者

## 3. 切截

代表字元	意 義	範 例
*	字尾切截 查詢相同字根，或不確定拼法之詞	zoop*，可查詢 zooplankton

## 4. 查詢字根

簡易檢索會自動幫使用者查詢以該檢索字詞為字根之其它字詞。例:輸入 meet，系統會查到包含 meet、meets 與 meeting 之文章。

若只想查詢該字詞，而不想查到使用該字詞為字根之其它字詞時，可使用雙括弧，例："meet"

## 5. 相近運算元

可界定檢索詞間位置關係：

代表字元	意 義	範 例
<NEAR>	兩字詞必須緊連在一起	html <NEAR> publishing
<SENTENCE>	兩字詞必須出現於同一句子	taiwan <SENTENCE> notebook
<PARAGRAPH>	兩字詞必須出現於同一段	Microsoft <PARAGRAPH> monopoly

# 檢索結果顯示格式

找到符合檢索條件之文章後，系統會將文章依相關程度排列出來。使用者亦可選擇不同的方式排序。系統提供以下排序方式：

- relevance 相關程度：相關程度高到低排列
- title 文章題名：依文章題名首字字母順序排列，自 A 到 Z
- publication 出版品名稱：依期刊刊名字順排序
- publication date 出版日期：依文章發表先後排序，最新的在前
- publisher 出版社名稱：出版社名稱自 A 到 Z
- citation count 被引用次數：多到少排列
- downloads (6 Weeks) 近六週被下載次數：多到少排列
- downloads (12 Months) 近一年被下載次數：多到少排列

## 檢索結果顯示畫面

The screenshot shows the ACM Portal search results for 'e-learning'. The page includes a search bar, navigation tabs (Search Results, Related Journals, etc.), and a list of search results. Annotations with arrows point to specific features:

- 檢索結果顯示方式格式**: Points to the 'Sort by' dropdown menu, which is currently set to 'relevance'.
- 在現有檢索結果中再新增搜尋條件**: Points to the 'Refine by Keywords' section, where 'e-learning' is entered in the search box.
- 選擇排序方式**: Points to the 'Sort by' dropdown menu.

The search results list includes:

- 1 [A knowledge-driven model to personalize e-learning](#)  
Chao Boon Teo, Robert Kheng Leng Gay  
March 2006 **Journal on Educational Resources in Computing (JERIC)**, Vol. 1, No. 1  
Publisher: ACM  
Full text available: [Pdf](#) (415.14 KB) Additional Information: [full citation](#) [abstract](#) [references](#)  
Bibliometrics: Downloads (6 Weeks): 107, Downloads (12 Months): 956, Citation Count: 2
- 2 [A comparative study of two usability evaluation methods using a web-based e-learning application](#)  
Samuel Ssemugabi, Ruth de Villiers  
October 2007 **SAICSIT '07: Proceedings of the 2007 annual research conference of the South African institute of computer scientists and information technologists on IT research in developing countries**  
Publisher: ACM  
Full text available: [Pdf](#) (175.53 KB) Additional Information: [full citation](#) [abstract](#) [references](#) [index terms](#)  
Bibliometrics: Downloads (6 Weeks): 147, Downloads (12 Months): 1164, Citation Count: 0

將查詢得到的結果進行二次篩選

- Refine By keywords : 篩選出相關主題內所包含文章數量
- Refine By People : 可依姓名、機構、作者、編輯者、評論者來篩選
- Refine By Publications : 可依出版品年代、出版品名稱、ACM DL 資料類型、出版品類型、內容形式和出版社來篩選
- Refine By Conferences : 可依主辦者、事件、會議名稱來篩選

**REFINE YOUR SEARCH**

▼ Refine by Keywords


SEARCH

**Discovered Terms**

- [students](#) (376)
- [education](#) (344)
- [e - learning](#) (335)
- [content](#) (226)
- [universality](#) (171)
- [context](#) (176)
- [practice](#) (169)
- [experience](#) (144)
- [More...](#)

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- [IEEE](#)
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**Bibliometrics:** publication history

Publication years	1978-2008
Publication count	378
Citation Count	1,497
Available for download	97
Downloads (6 Weeks)	465
Downloads (12 Months)	5,522

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- Publication Counts:累計作者發佈之文章數量
- Citation Counts:累計作者文章被引用次數
- Available for download:可被下載文章之總數量
- Downloads (6 Weeks) 近六週被下載次數：多到少排列
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