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IEEE *XPLORE*® 全文電子資料庫

教育講座

學術講師: 鄭琳祺 Sylvia

課程目標 1

- 認識IEEE

課程目標 2

- IEEE Xplore® 提供了哪些資源?

課程目標 3

- IEEE Xplore® 如何協助我作研究?

課程目標 4

- 提高文獻檢索、閱讀和使用效率的小工具

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課程目標1： 認識IEEE

關於IEEE (THE INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS)

- 美國電子電機工程師學會，全球最大的技術學會
- 提供全球超過三分之一的電機工程與資訊工程相關領域研究文獻

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IEEE帶動全球技術發展…

Our Global Reach

431,000+
Members 會員

45
Technical Societies and Councils
技術協會和委員會

160+
Countries 國家

Our Technical Breadth

1,400+
Annual Conferences 年會

3,700,000+
Technical Documents技術文獻

170
Top-cited Periodicals
被引用最多的期刊

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專利文獻大量引用了IEEE期刊

Thomson Reuters Journal Citation Reports® by Impact Factor

IEEE publishes:

18 of the top 20 journals in Electrical and Electronic Engineering 電子電機

18 of the top 20 journals in Telecommunications 通訊科技

8 of the top 10 journals in Computer Science, Hardware & Architecture 計算機科學、硬體與架構

7 of the top 10 journals in Cybernetics (電腦)控制學

3 of the top 5 journals in Automation & Control Systems 自動化與控制系統

3 of the top 5 journals in Artificial Intelligence in 人工智慧

2 of the top 5 journals in Robotics 機器人學

The Thomson Reuters Journal Citation Reports presents quantifiable statistical data that provides a systematic, objective way to evaluate the world's leading journals.

Based on the 2014 study released June 2015

More info: www.ieee.org/citations

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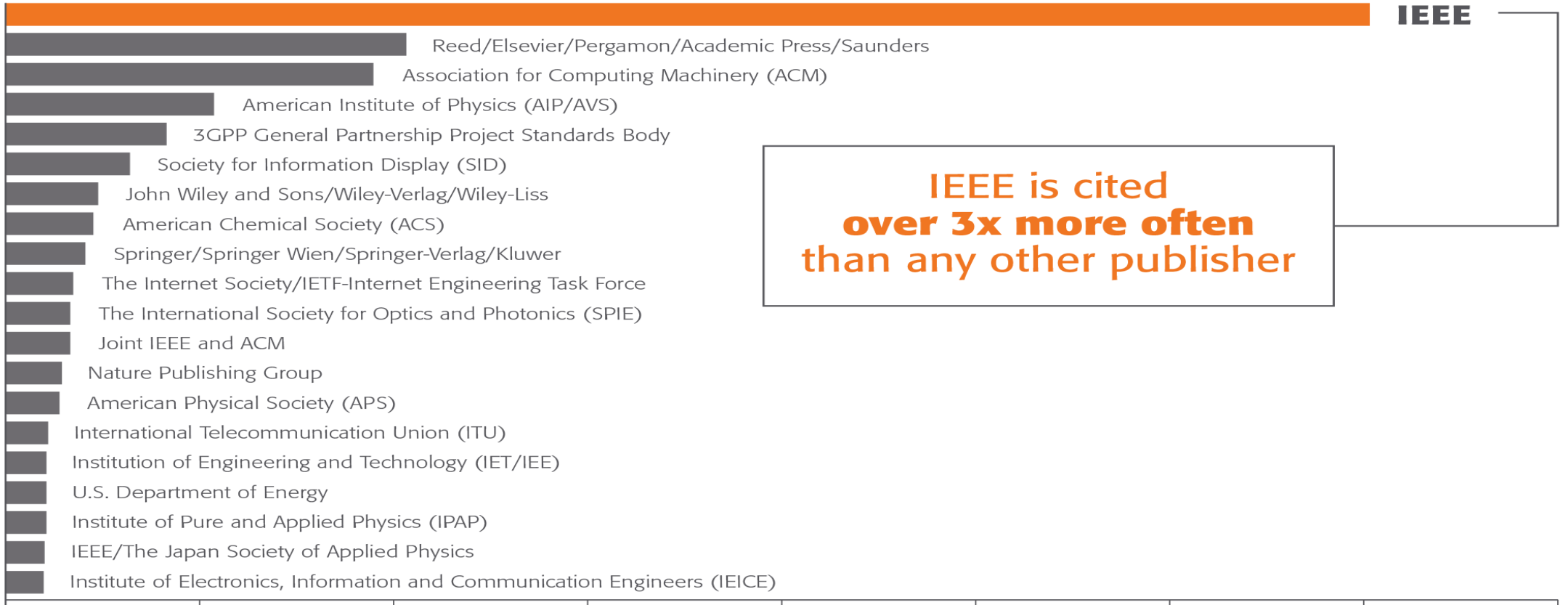
IEEE 引領著專利發展

Top 20 Publishers Referenced Most Frequently by Top 40 Patenting Organizations



IEEE is cited **over 3x more often** than any other publisher

Source: 1790 Analytics LLC 2015. Based on number of references to papers/standards/conferences from 1997-2014

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課程目標 2：IEEE XPLORE® 提供了哪些資源?

http:// ieeexplore.ieee.org

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IEL (IEEE/IET ELECTRICAL LIBRARY)

收錄量最多

IEEE Xplore平台　http:// ieeexplore.ieee.org

- 完整收錄兩個學會的出版文獻

  -美國電子電機工程師學會(IEEE)

  -英國電機工程師學會(IET)

- 涵蓋領域最廣

(通訊, 生醫工程, 航太, 奈米, 光電, 電腦運算, 機器人……)

文獻品質高水準

- 每篇文獻經過嚴謹的同儕評核
- 文獻被引用次數最高，即時掌握最新技術發展

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IEEE XPLORE®平台收錄內容

- IEEE journals & magazines
- IEEE conference proceedings
- IEEE standards (except Draft Standards)
- IET journals & magazines
- IET conference proceedings
- IBM Journals
- MIT Journals
- VDE conferences
- Bell Labs Technical Journal
- Wiley-IEEE ebooks (2012-2015)
- MIT ebooks(2013)
- Morgan & Claypool ebooks

VDE IBM &C The MIT Press WILEY Publishers Since 1807 Alcatel·Lucent Bell Labs HINTON INFORMATION SERVICES

IEEE XPLORE ® 持續帶動台灣研發能量

- #**1** China
- #**2** USA
- #**3** India
- #**4** Taiwan
- #**5** Korea

全球下載量:台灣排名第四名

Data year end 2015

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IEEE Xplore® 2015年新增內容

- 8本IEEE期刊，4,000 多篇IEEE/IET期刊文獻
- 15,000 多篇會議論文
  (包含4,600 多篇VDE會議論文)
- 40多篇技術標準新增或修改
- 貝爾實驗室(Bell Lab)期刊

物聯網・雲端運算
網路系統控制

每個月新增 20,000+ 篇文獻

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New in 2015

貝爾實驗室期刊正式加入 IEEE Xplore®

Bell Labs Technical Journals: 貝爾實驗室技術期刊

- 阿爾卡特朗訊(Alcatel-Lucent；ALU)旗下研創機構
- 以發明電晶體、雷射、數位用戶迴 路（DSL）及多重輸入與多重輸出技術（MIMO） 聞名
- IEL用戶享有全文下載權限
- 收錄1992年迄今的研究文獻

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課程目標3.1　IEEE XPLORE® 如何協助我全面了解某項技術研究概況

- ✓ 快速定位該領域的專家及研究機構
- ✓ 尋找權威綜述文章
- ✓ 定位核心期刊和會議
- ✓ 了解學術界或業界研發情況
  - 作者/專利發明人檢索;
  - 所屬機構/專利發明機構檢索

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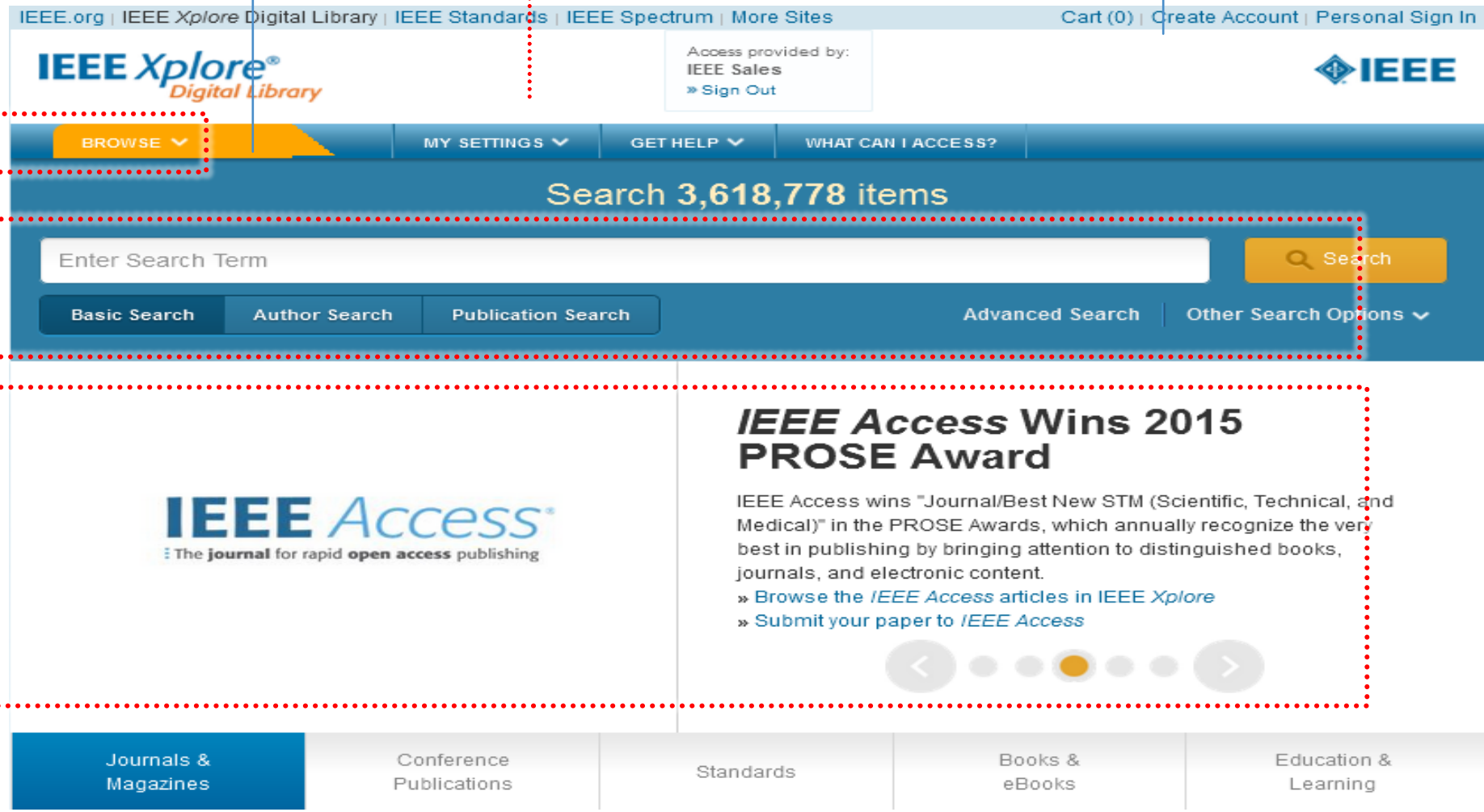
個人化功能

顯示學校英文名稱

個人化功能登入



瀏覽功能:

- 依文獻類型
- 依主題

檢索工具列:

- Basic Search 基本檢索
- Author Search 作者檢索
- Publication Search 出版品檢索
- Advanced Search 進階檢索
- Other Search Options 其他檢索

最新消息

http:// ieeexplore.ieee.org

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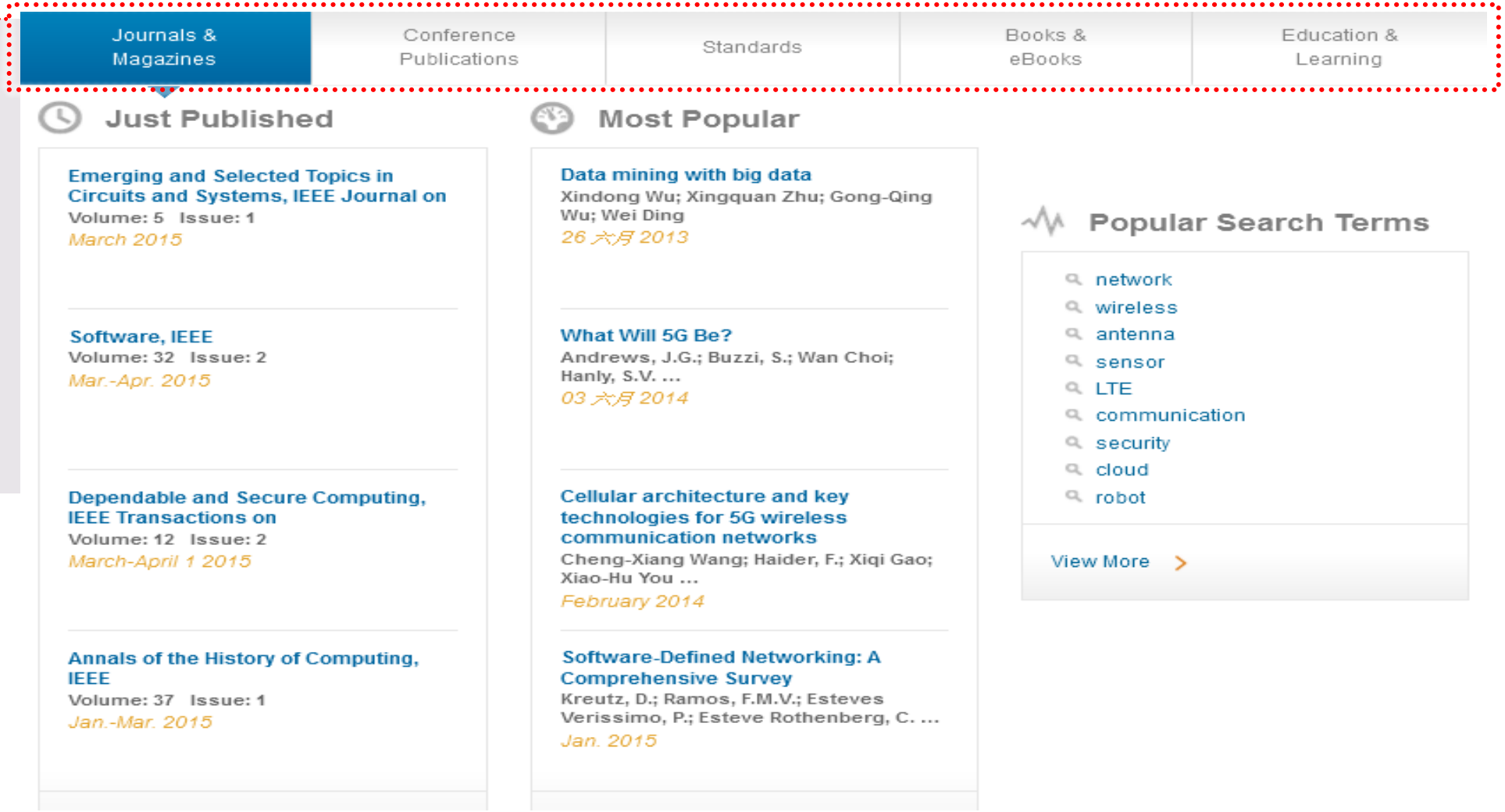
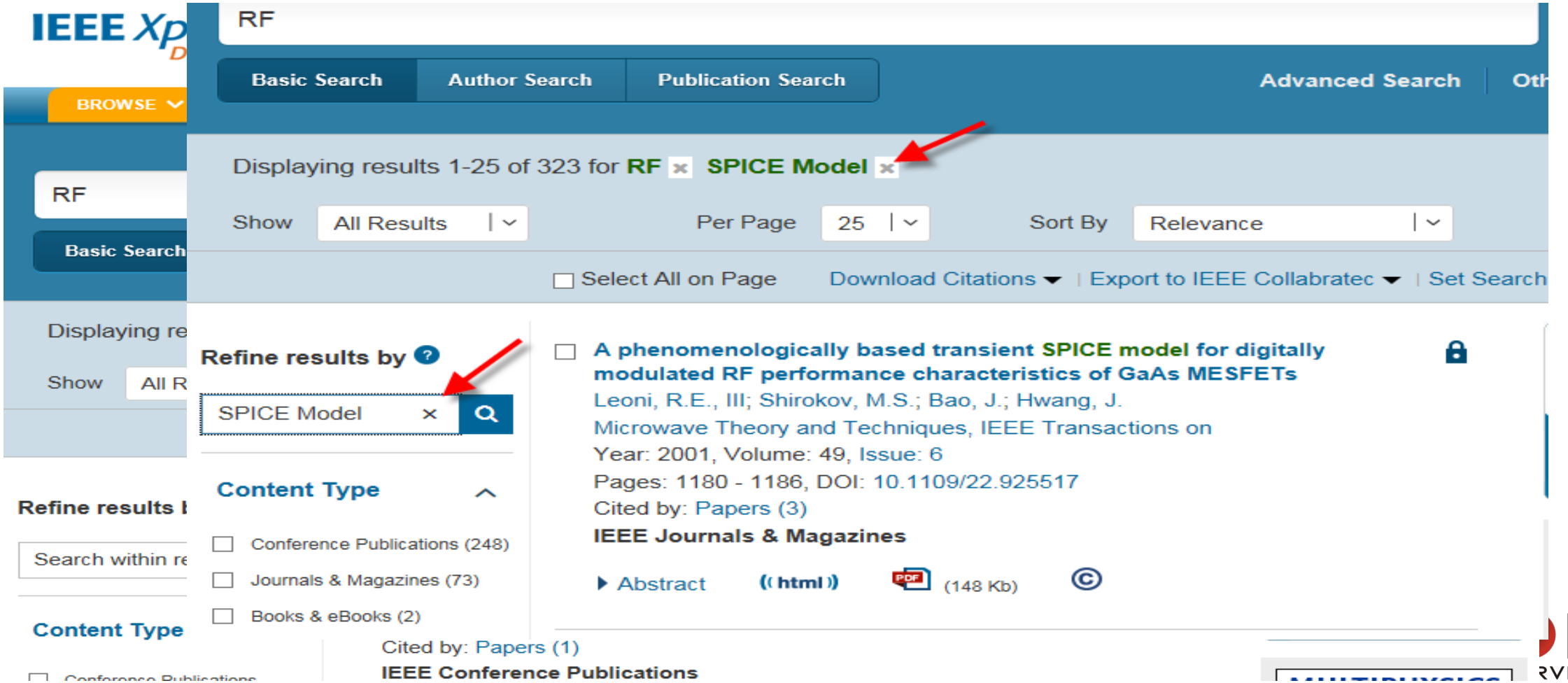
不同文獻類型的最新訊息:

欄位依序為：

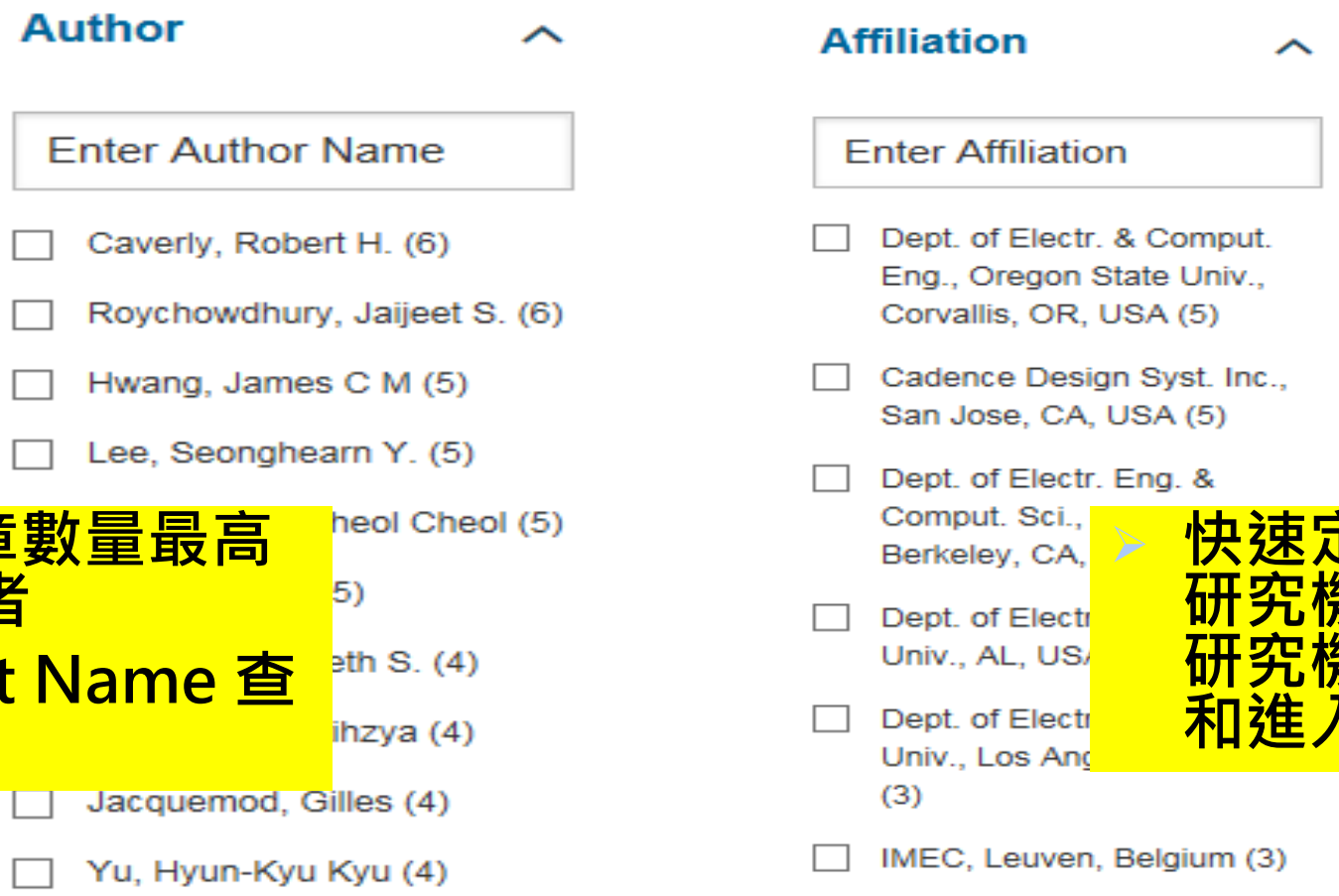
- 期刊雜誌
(Journals & Magazines)
- 會議論文
(Conference Publications)
- 標準規範
(Standards)
- 電子書籍
(Books & eBooks)
- 線上課程
(Education & Learning)



全面了解某項技術研究概況



快速定位該領域的專家及研究機構



- 顯示發表文章數量最高的前25位作者
- 優先使用Last Name 查詢特定作者

- 快速定位該領域的領先研究機構，深度了解該研究機構，為申請學校和進入公司做準備

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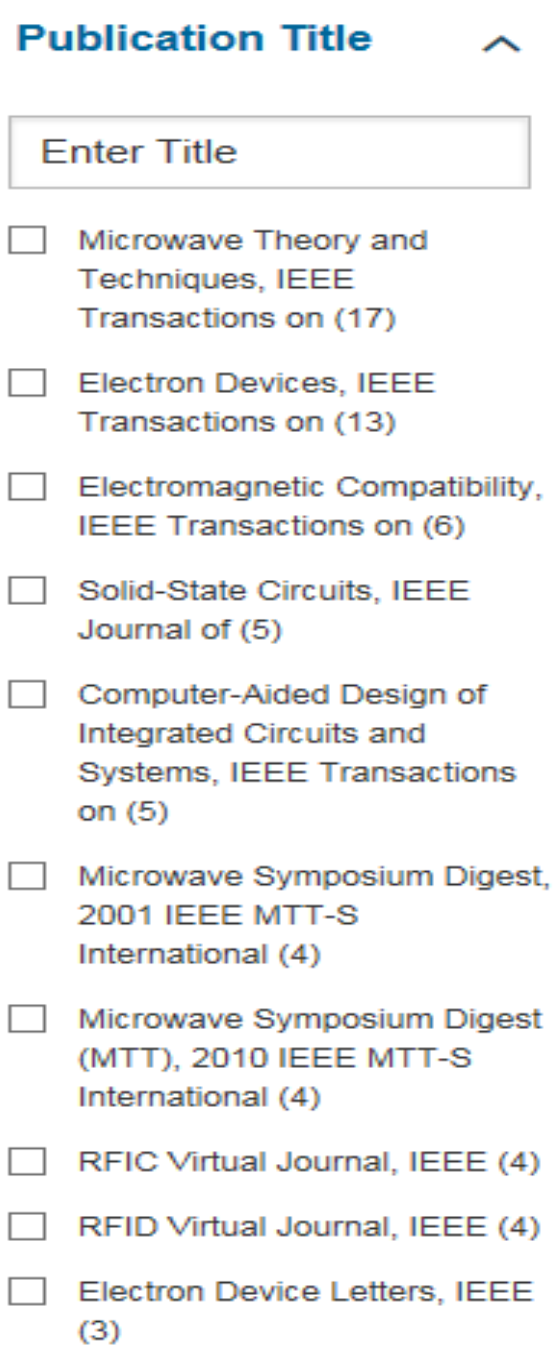
定位核心期刊和會議

了解哪些期刊、會議可能是投稿對象



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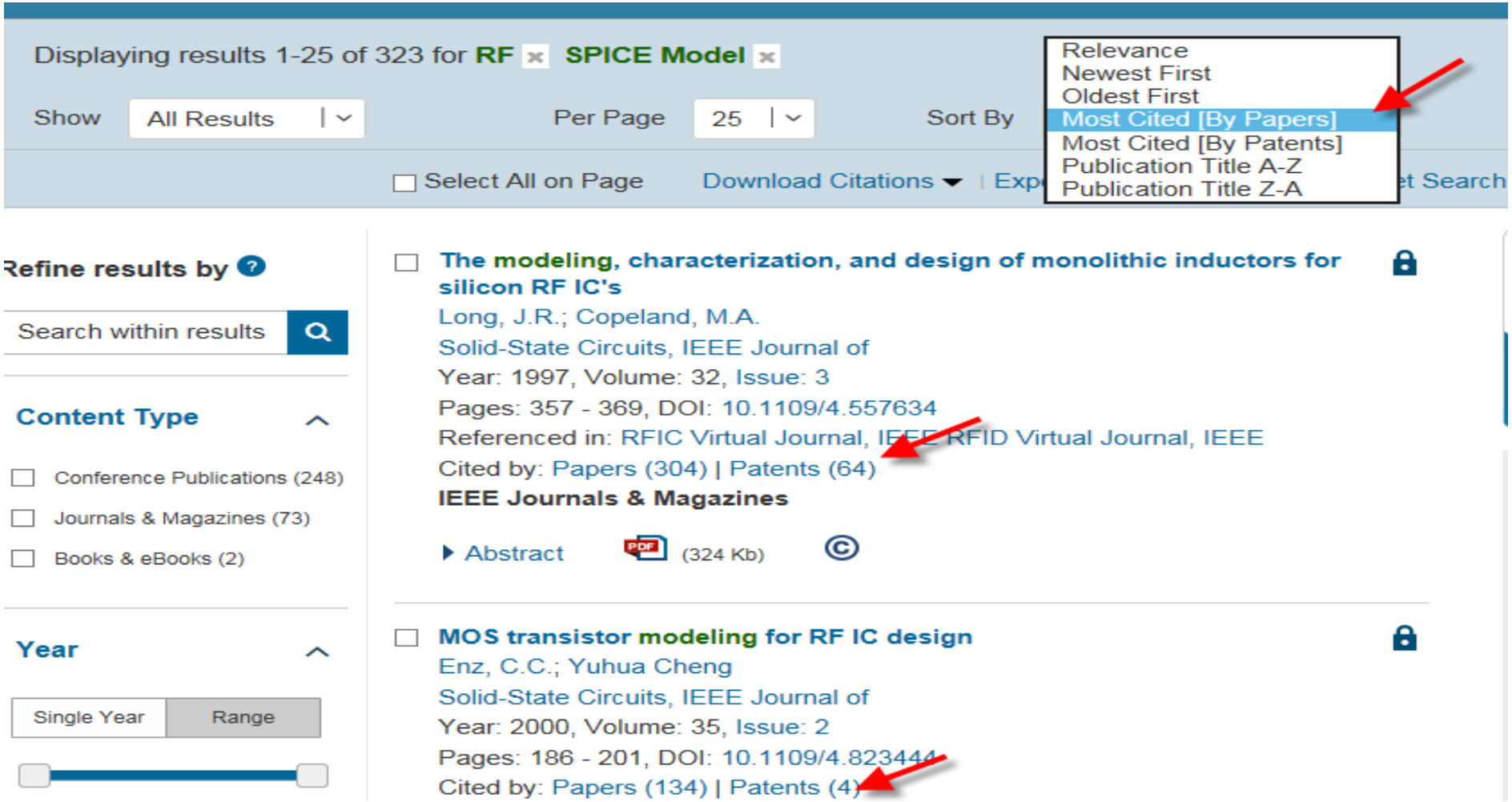
查詢權威文獻



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查找綜述文獻/專家推薦

虛擬期刊為IEEE在特定領域的出版前文獻和技術學科，內文裡科技專家的評述值得一看!

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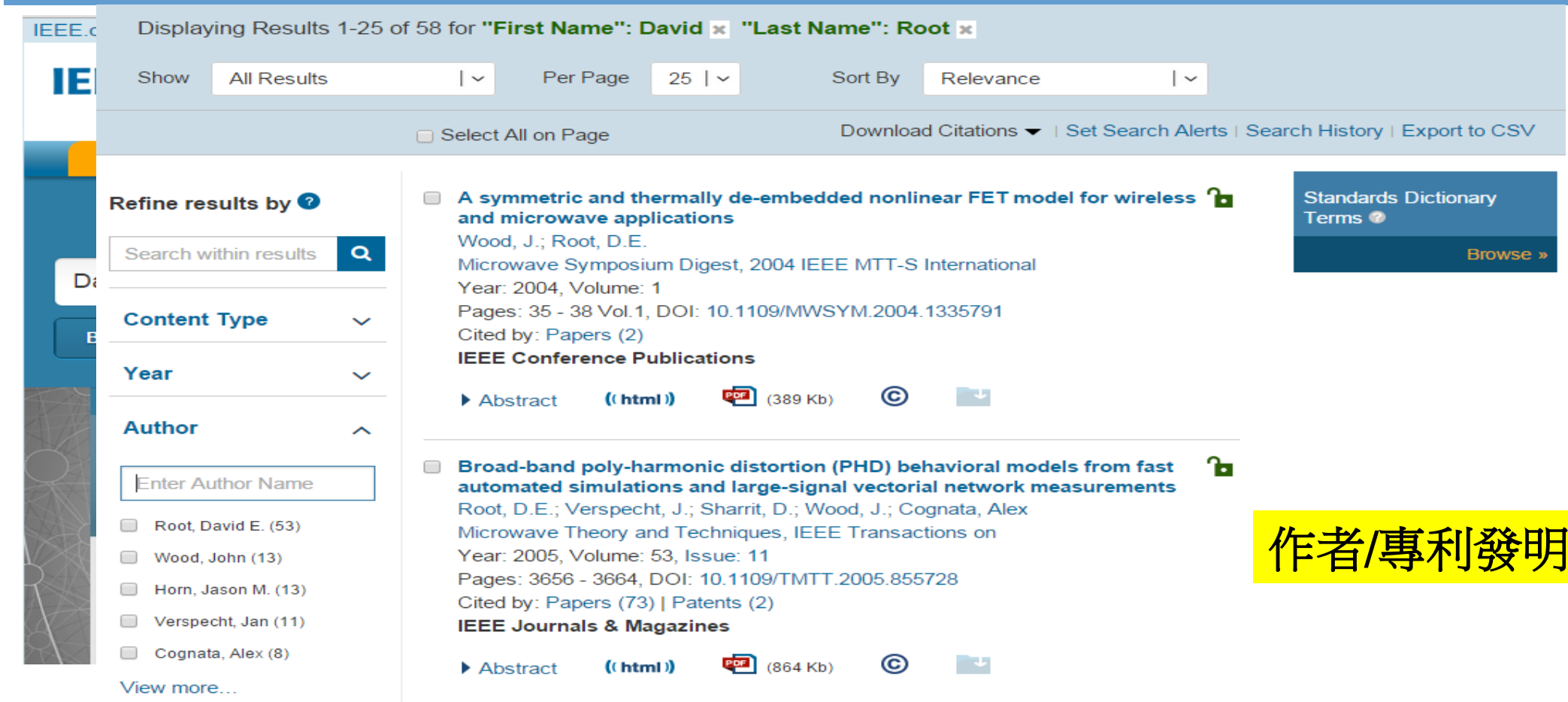
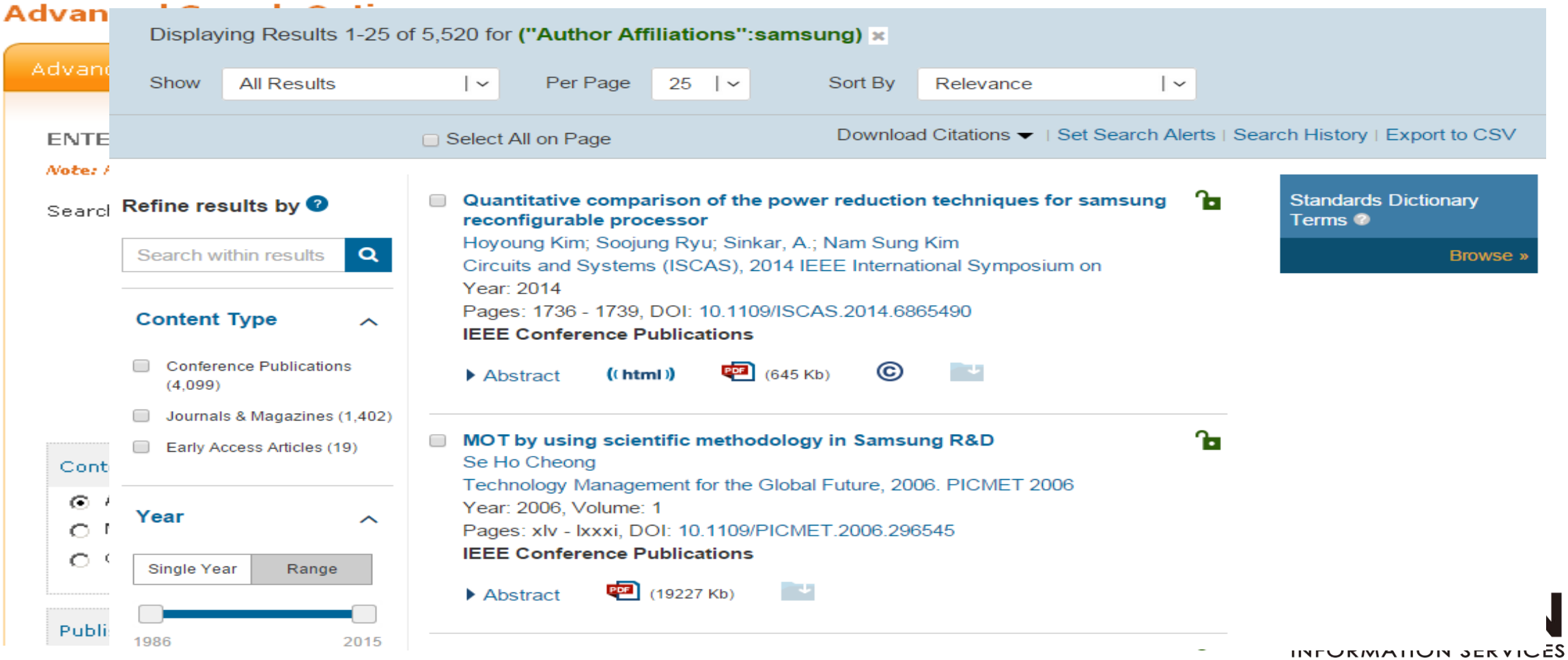
了解學術界或業界的研發情況



作者/專利發明人檢索

...NTON INFORMATION SERVICES

研究所屬機構/專利發明機構檢索



3.2 IEEE XPLORE® 如何協助我
尋找技術難點解決方案，掌握相關專利概況

- ✓ 瀏覽期刊來追踪核心文獻
- ✓ 利用引文搜尋同類技術最新進展

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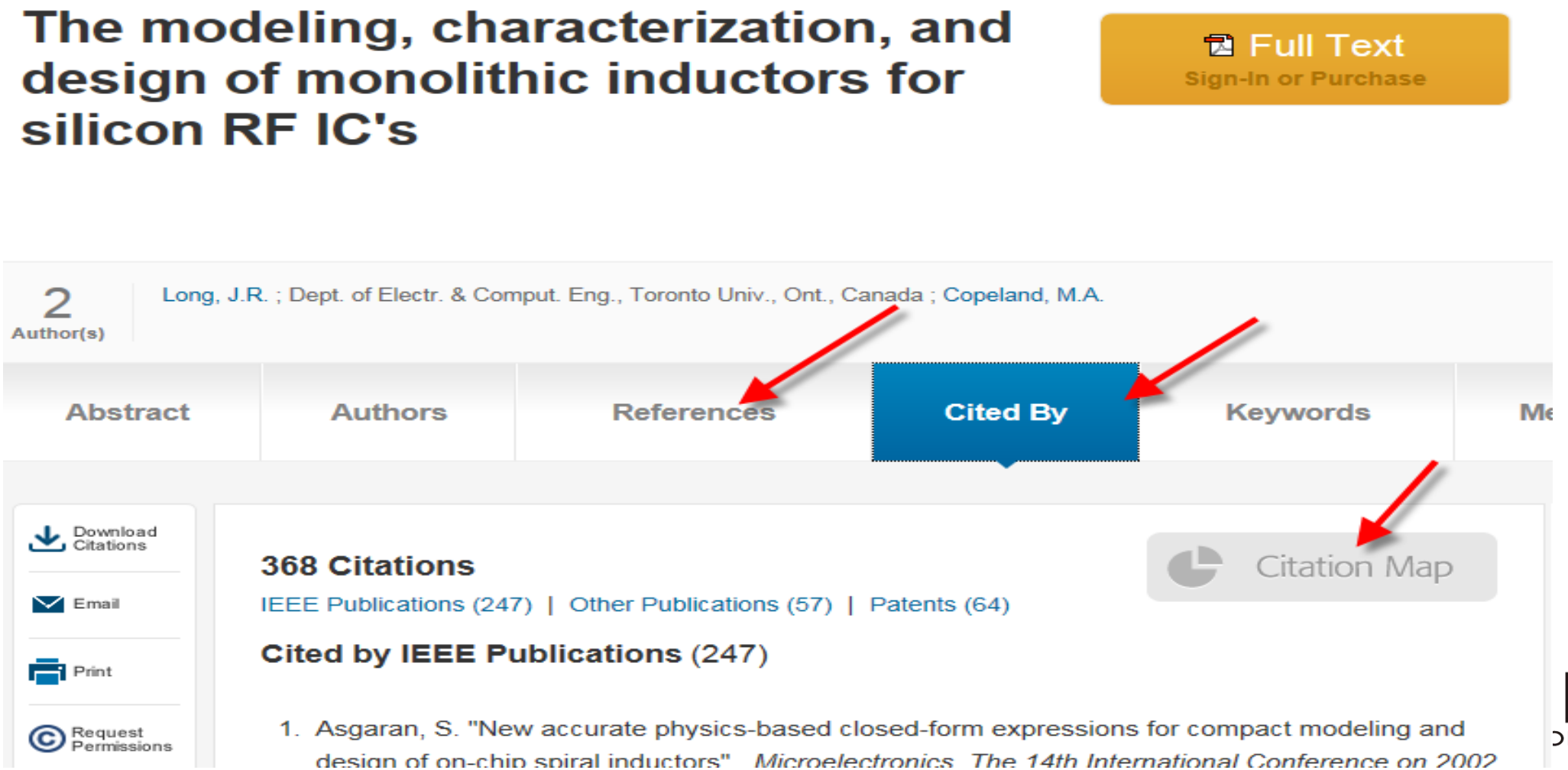
瀏覽期刊來追踪核心文獻(1/2)



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瀏覽期刊來追踪核心文獻(2/2)

課程目標3.3　IEEE XPLORE® 如何協助我追踪及掌握最新技術動態

- ✓ IEEE Xplore個人帳號設定
- ✓ Collaboratec- 全球頂尖工程師社交網絡

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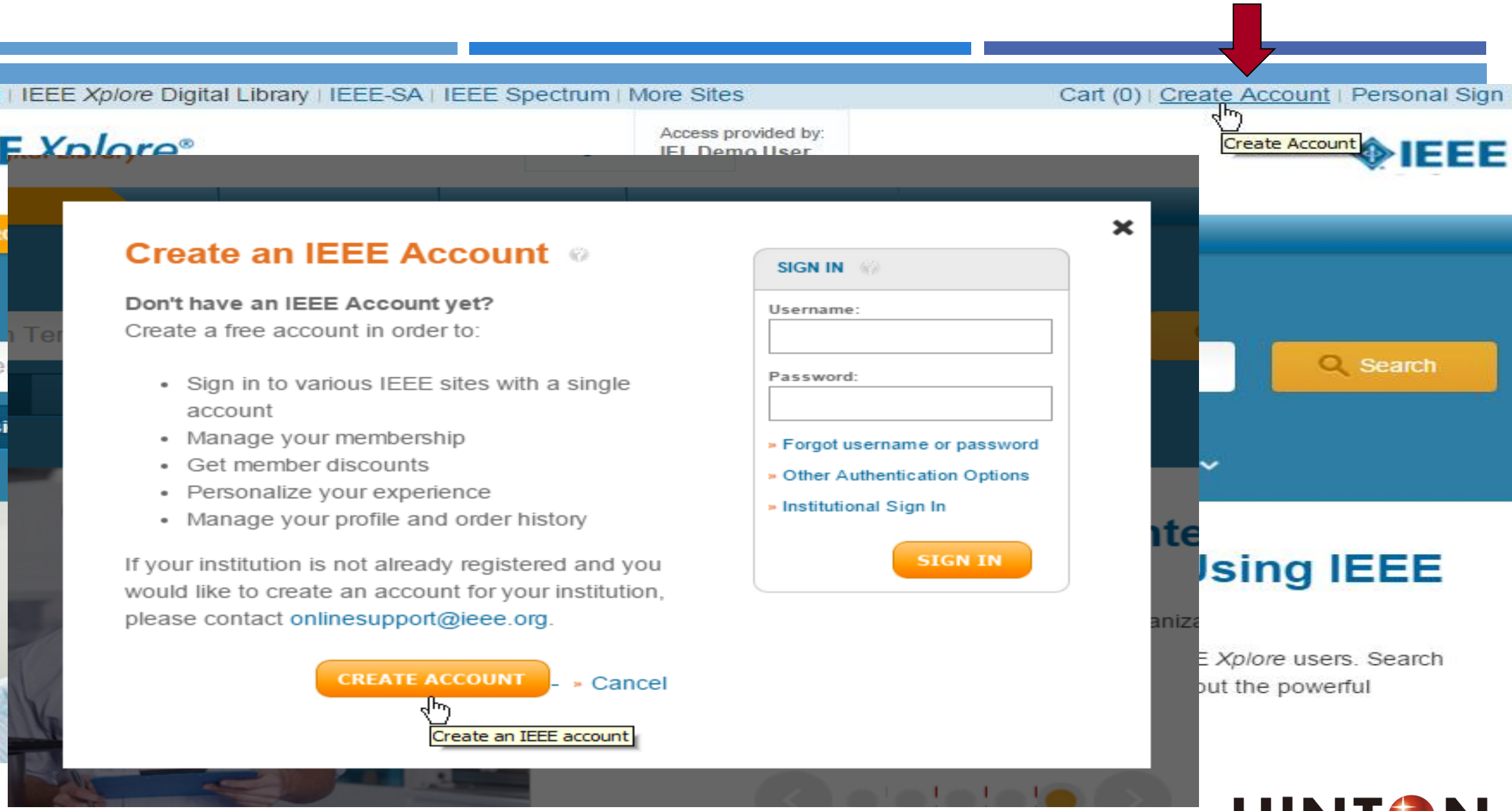

註冊IEEE Xplore個人帳號

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Create an IEEE Account

*Required fields

Provide your personal information

*Given/First name:

*Last/Family/Surname:

Enter e-mail address & password

The e-mail address provided here will be the username of your account

*E-mail address:

*Re-enter e-mail address:

*Password:

What is a valid password?

Password Strength

*Confirm Password:

Set security questions

For your security, IEEE Accounts are required to have two security questions and answers.

*Security question 1:

Select

*Type Your Answer:

*Security question 2:

Select

*Type Your Answer:

只需要輸入姓名, email, 密碼設定及二個安全問題

» Privacy & Opting Out of Cookies

CREATE ACCOUNT

» Cancel

Create Account ILKER

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IEEE.org | IEEE *Xplore* Digital Library | IEEE-SA | IEEE Spectrum | More Sites

Welcome Jalyn Kelley | Cart(0)

IEEE *Xplore*® Digital Library

Access provided by:
IEL Demo User
» Sign Out

IEEE

BROWSE | MY SETTINGS | GET HELP | WHAT CAN I ACCESS?

- Content Alerts
- My Projects
- Search Alerts
- Preferences
- Purchase History
- Search History
- What can I access?

rch **3,670,279** items

Enter Search Term

Search

Basic Search | Author Search

Advanced Search

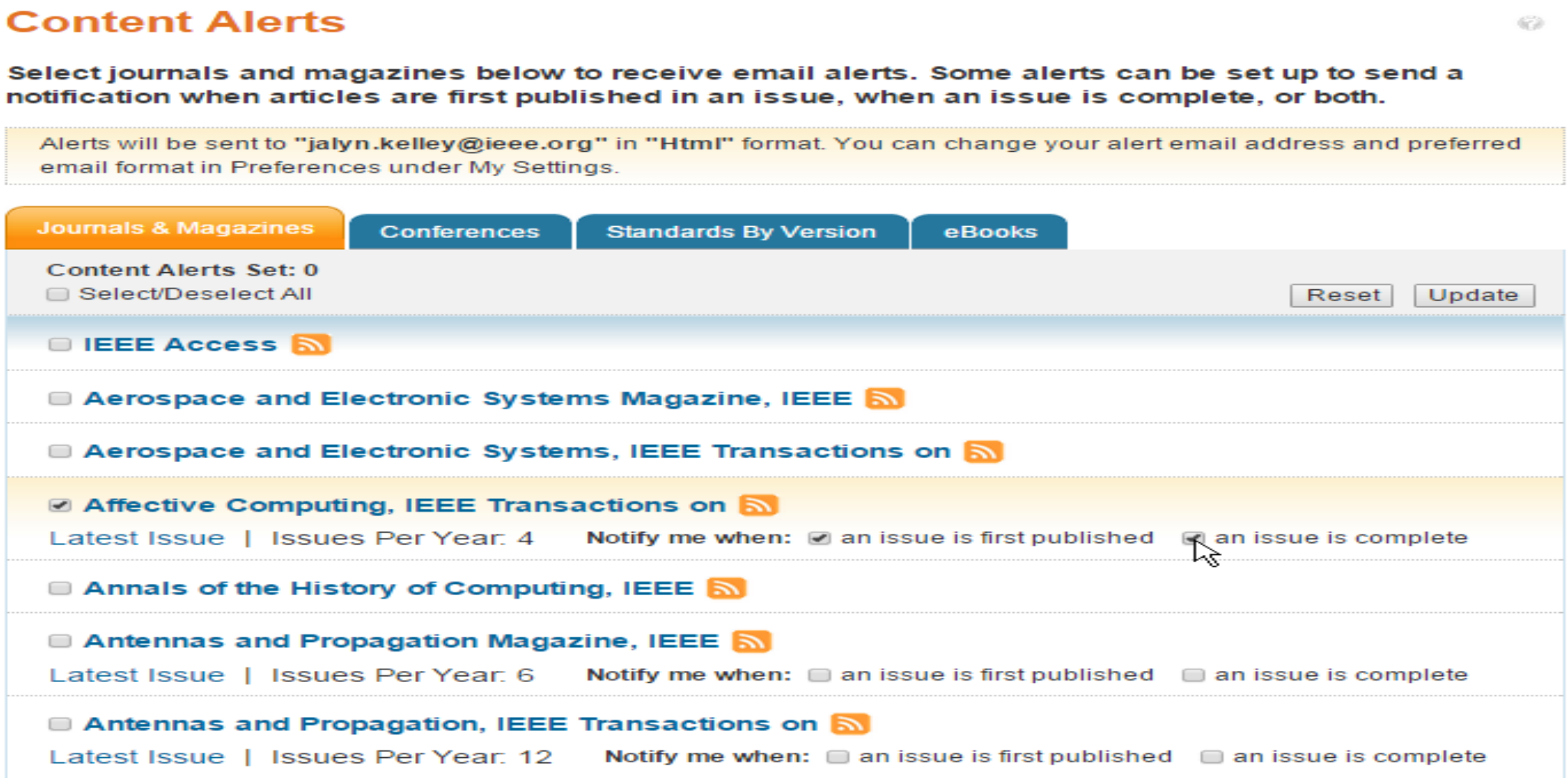
Other Search Options

Tips and Tricks for Using IEEE *Xplore*

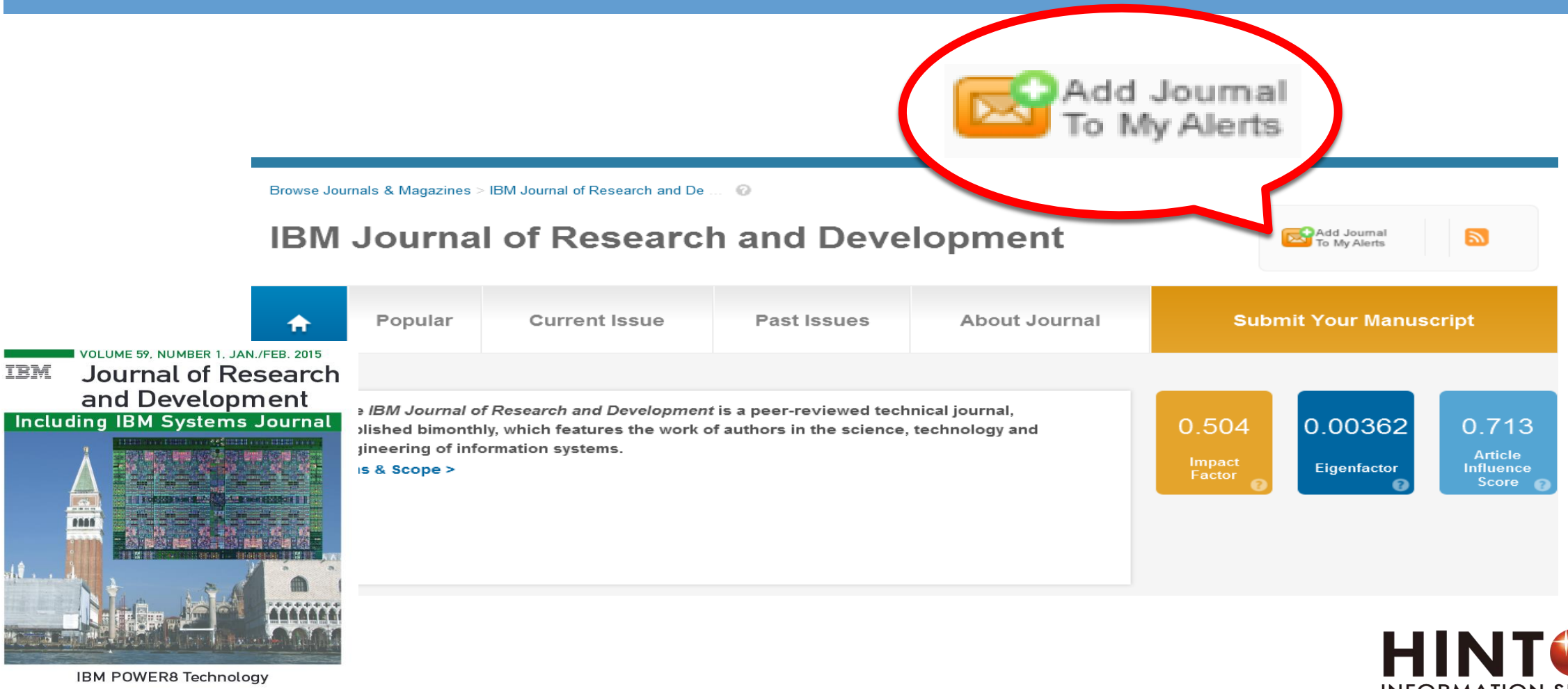
IEEE Client Services provides training to IEEE *Xplore* users. Search faster with better results by learning more about the powerful features of IEEE *Xplore*.

» Learn more about training and tutorials

CONTENT ALERT: 設定最新出版消息推送通知(1/2)



CONTENT ALERT: 設定最新出版消息推送通知(2/2)



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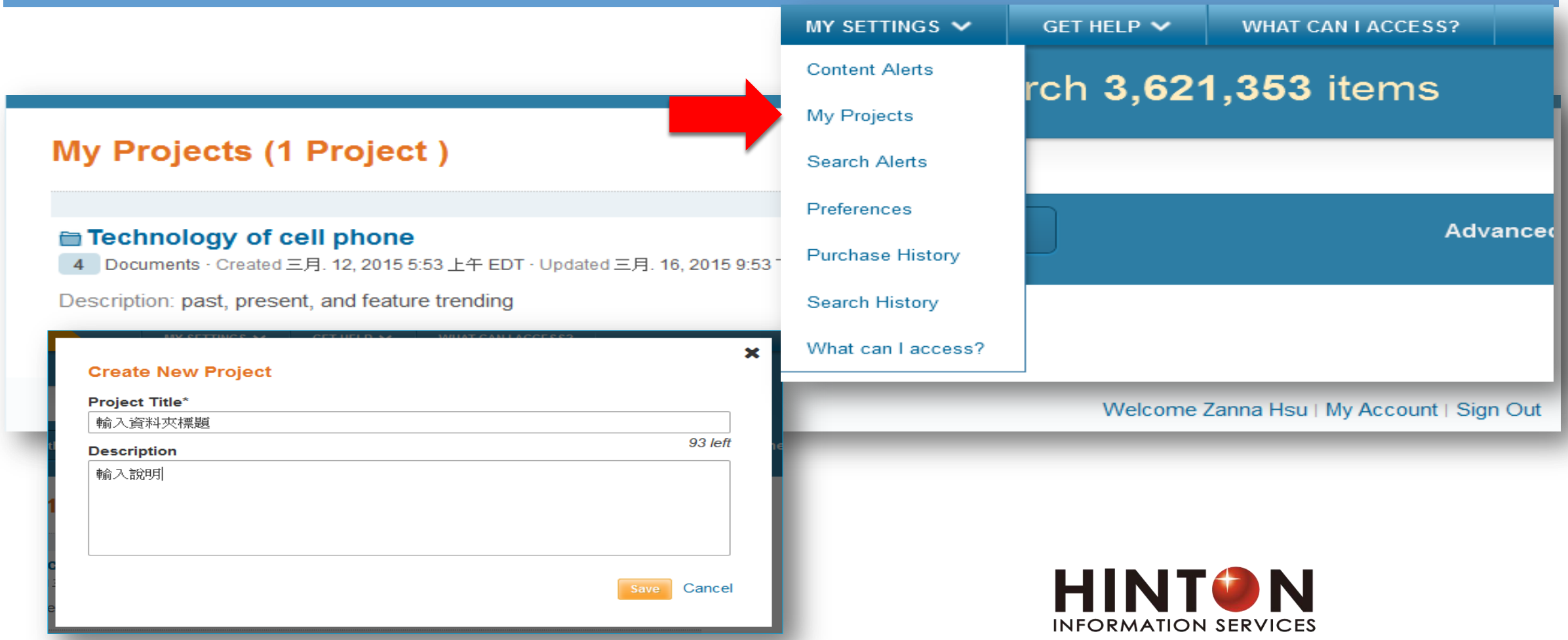
MY PROJECTS: 個人專屬資料夾(1/2)



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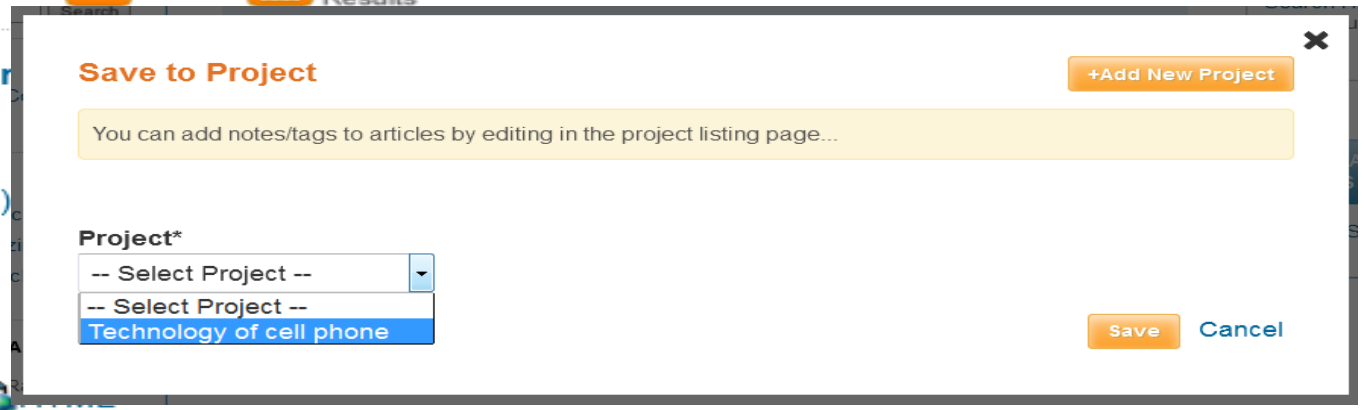
MY PROJECTS: 個人專屬資料夾(2/2)



勾選指定文獻，並點選「Save To Project」即可把文獻儲存至您的資料夾中。

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SEARCH ALERTS: 熱門技術資訊即時通知

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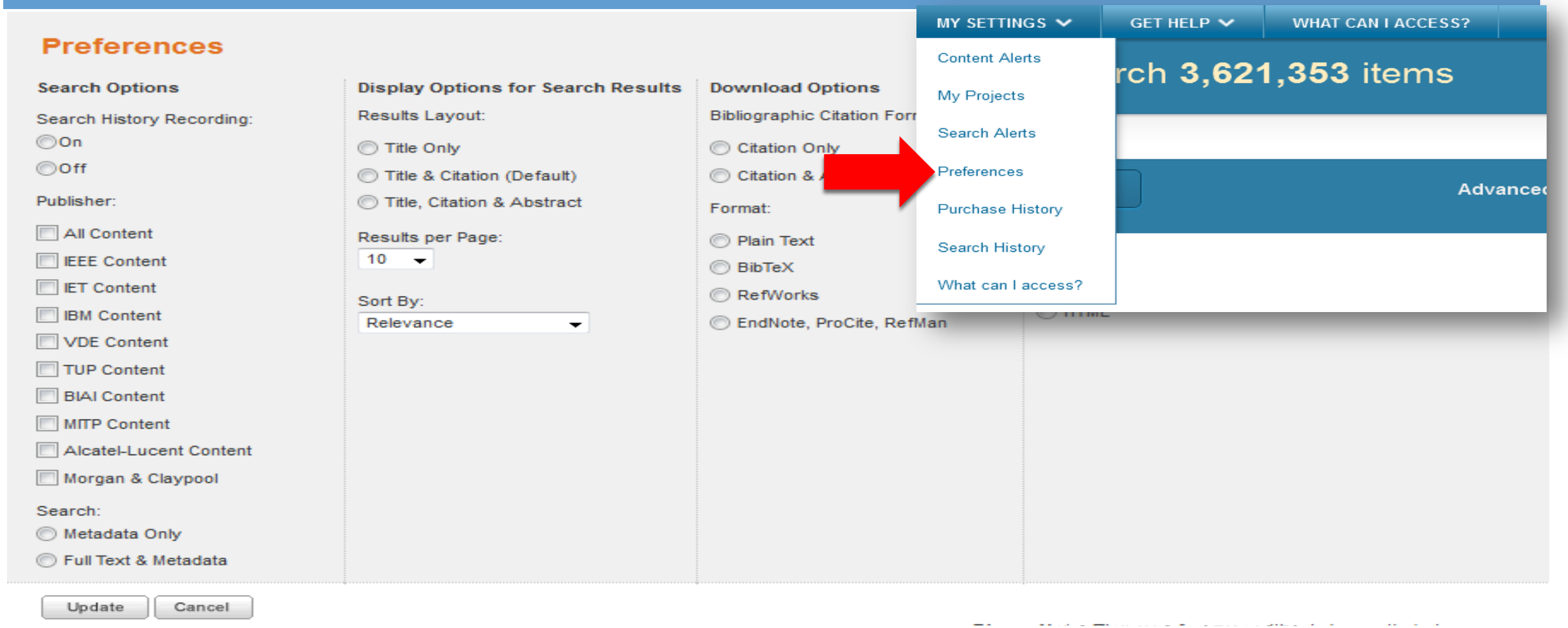
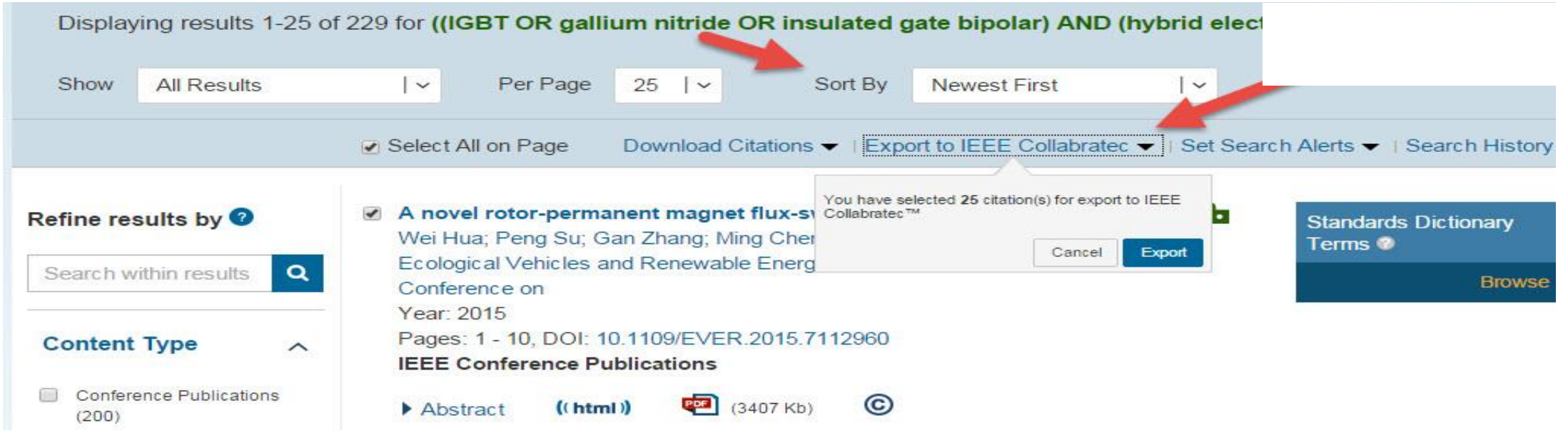
PREFERENCE (檢索結果通知)偏好設定



Collaboratec- 全球頂尖工程師交流網絡(1/3)



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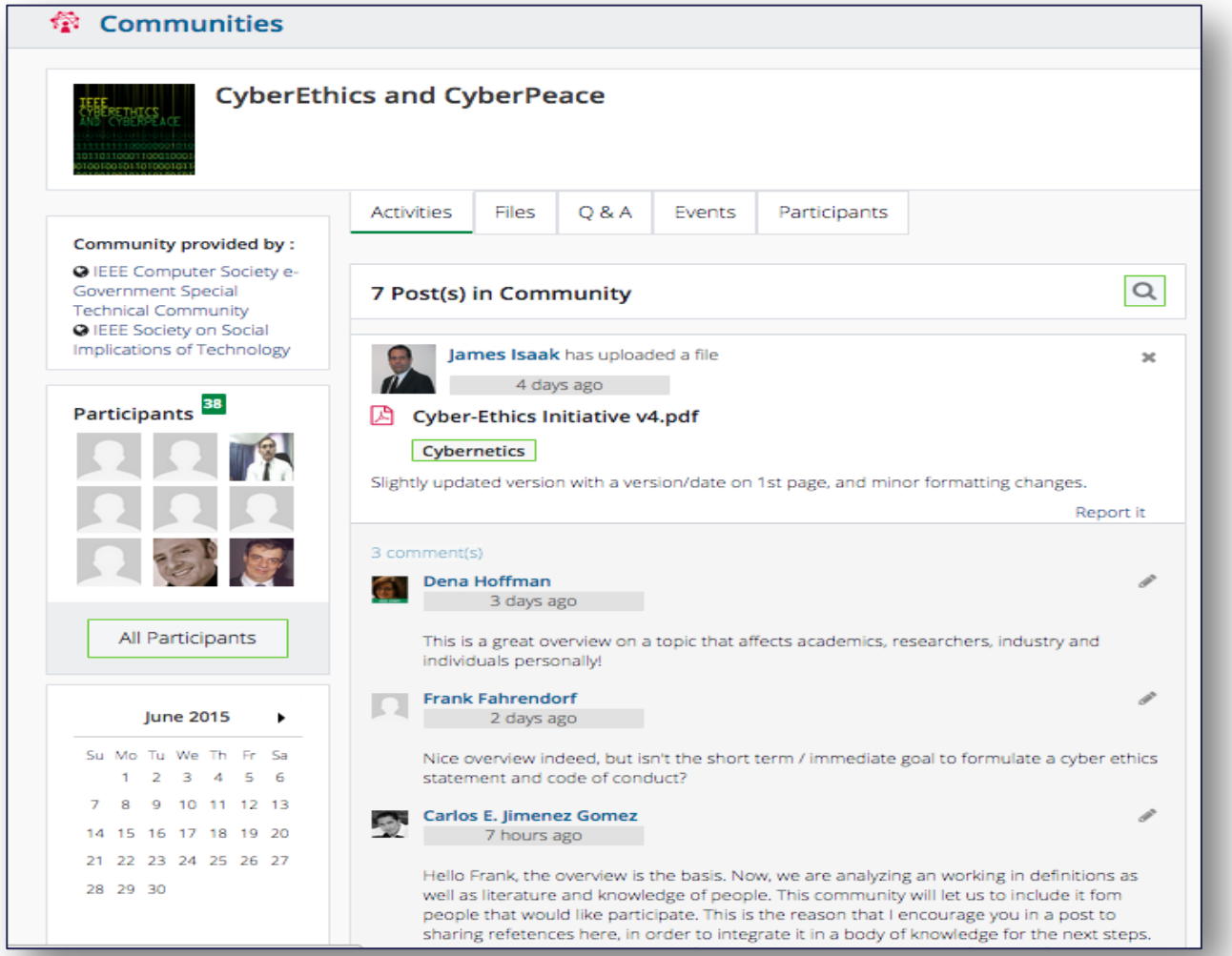
Collaboratec- 全球頂尖工程師交流網絡(2/3)



- 透過線上問&答作專業知識交流
- 可下載檔案來收集大家對最新科技/研究的意見

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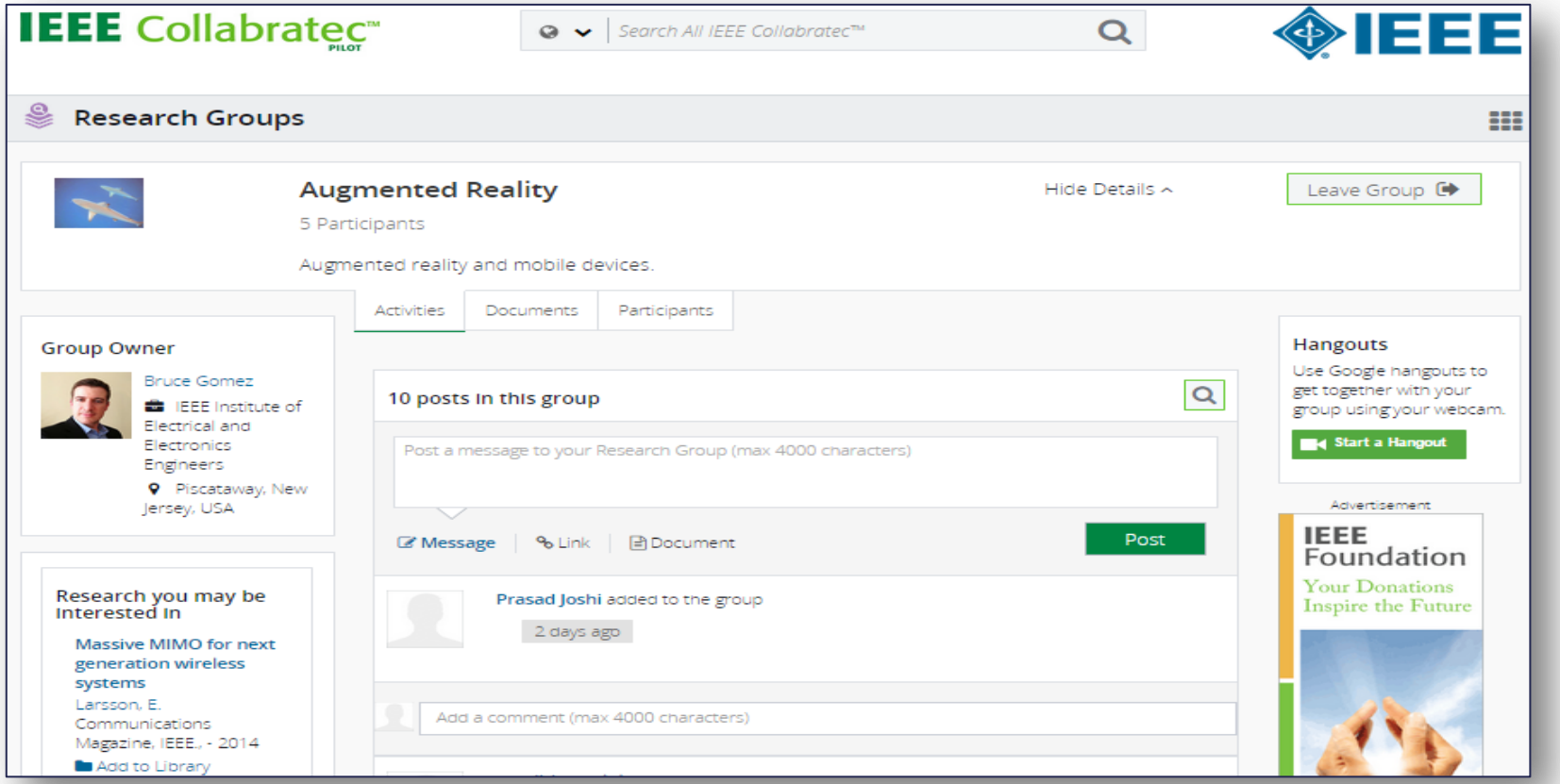
Collaboratec- 全球頂尖工程師交流網絡(3/3)



- 提供個人群組的功能，不是群組裡的人無法搜尋到
- 可促進協同合作

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課程目標4: 提高文獻檢索、閱讀和使用效率的小工具 -互動式HTML-

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Software-Defined Networking: A Comprehensive Survey

Kreutz, D. ; Ramos, F.M.V. ; Esteves Verissimo, P. ; Esteve Rothenberg, C. ; Azodolmolky, S. ; Uhlig, S.

Publication Year: 2015 , Page(s): 14 - 76

Quick Abstract | PDF (14200 KB) | HTML

全新互動式閱讀，提升工作效率。

- IEEE期刊雜誌及會議論文
- 標準規範HTML模式即將登場

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QUICK PREVIEW

Abstract | Authors | Figures | Multimedia | References | Cited By | Keywords

Search Algorithms for Regression Test Case Prioritization

Regression testing is an expensive, but important, process. Unfortunately, there may be insufficient resources to allow for the reexecution of all test cases during regression testing. In this situation, test case prioritization techniques aim to improve the effectiveness of regression testing by ordering the test cases so that the most beneficial are executed first. Previous work on regression test case prioritization has focused on greedy algorithms. However, it is known that these algorithms may produce suboptimal results because they may construct results that denote only local minima within the search space. By contrast, metaheuristic and evolutionary search algorithms aim to avoid such problems. This paper presents results from an empirical study of the application of several greedy, metaheuristic, and evolutionary search algorithms to six programs, ranging from 374 to 11,148 lines of code for three choices of fitness metric. The paper addresses the problems of choice of fitness metric, characterization of landscape modality, and determination of the most suitable search technique to apply. The empirical results replicate previous results concerning greedy algorithms. They shed light on the nature of the regression testing search space, indicating that it is multimodal. The results also show that genetic algorithms perform well, although greedy approaches are surprisingly effective, given the multimodal nature of the landscape

This paper appears in: Software Engineering, IEEE Transactions on , Issue Date: April 2007 , Written by: Li, Zheng; Harman, Mark; Hierons, Robert M.

- 輕鬆瀏覽文章的每個章節
- 毫不費力地找到文中的圖表、圖像、數學公式、引用文獻 、 關鍵字以及各種多媒體檔案

QUICK PREVIEW

Abstract | Authors | Figures | Multimedia | References | Cited By | Keywords

Zheng Li

Zheng Li received the degree in computer science in 2004 from the Beijing University of Chemical Technology, China, where healso worked from 1996-2004. In 2005, he joined the software engineering group in the Department of Computer Science at King's College London. Currently, he is a research associate and PhD student, working on the EPSRC project ConTRACTs. His present research interests include search-based ...

▸ More About this Author

Mark Harman

Mark Harman is a professor of software engineering and the head of the Software Engineering Group in the Department of Computer Science, at King's College London, where he also directs the work of the Centre for Research on Evolution, Search and Technology (CREST). He has worked extensively on program slicing, transformation, and testing and more recently, he was instrumental in founding the field ...

▸ More About this Author

Robert M. Hierons

Robert M. Hierons received the BA degree in mathematics (Trinity College, Cambridge) and the PhD degree in computer science (Brunel University). He then joined the Department of Mathematical and Computing Sciences at Goldsmiths College, University of London, before returning to Brunel University in 2000. He was promoted to full professor in 2003.

▸ More About this Author

View All

HINTON INFORMATION SERVICES

QUICK PREVIEW

Abstract | Authors | Figures | Multimedia | References | Cited By | Keywords

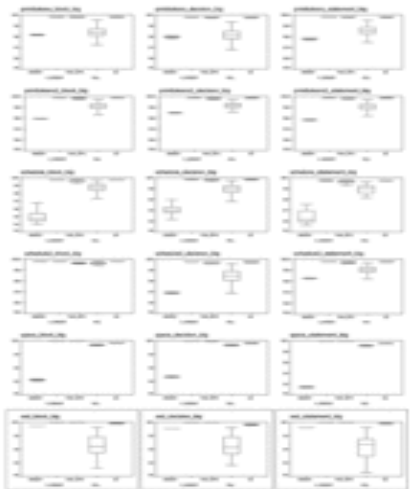

Fig. 4. Boxplots of APBC, APDC, and APSC for all programs with large test suites (vertical axis is AP*C score) by program and coverage criteria.

- View in Context
- View Hi-Res Image
- View All Figures

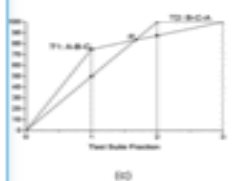

Fig. 5.

View All

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This paper appears in:
Software Engineering, IEEE Transactions on

Issue Date:
April 2007

On page(s):
undefined - undefined

ISSN:
0098-5589

INSPEC Accession Number:
9402254

Digital Object Identifier:
10.1109/TSE.2007.38

Date of Current Version:
2007-03-12

Date of Original Publication:
No Data Available

Text Size
Normal | Large

SECTION 1
Introduction

JUMP

1Introduction
2Algorithms
3Empirical Study
4Related Work
5Conclusions and Future Work
Appendix

Regression testing is a frequently applied but
to (re)verify modified software. Many approa
processes have been investigated. Test case p
approaches, which orders test cases so that t
according to some criterion (a ?fitness metric

Rothermel et al. [18] define the test case prio
issues relevant to its solution. The test case p
Rothermel et al.) as follows:

The Test Case Prioritization Problem.

Given: T , a test suite; PT , the set of permutations of T ; f , a function from PT to the real numbers.

Problem: Find $T' \in PT$ such that

$$(\forall\, T''\ (T'' \in PT)\ (T'' \neq T')\ [f(T') \geq (T'')].$$

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Here, PT represents the set of all possible prioritizations (orderings) of T and f is a function that, applied to any such ordering, yields an award value for that ordering.

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SECTION 1
Introduction

JUMP

Regression testing is a frequently applied but expensive maintenance process that aims to (re)verify modified software. Many approaches for improving the regression testing processes have been investigated. Test case prioritization [17] [18] [22] is one of these ...with highest priority, ...ted first.

...blem and describe several ...roblem is defined (by

18. G. Rothermel, R. Untch, C. Chu, M.J. Harrold, "Prioritizing Test Cases for Regression Testing", IEEE Trans. Software Eng., no.10, pp.929-948, Oct., 2001

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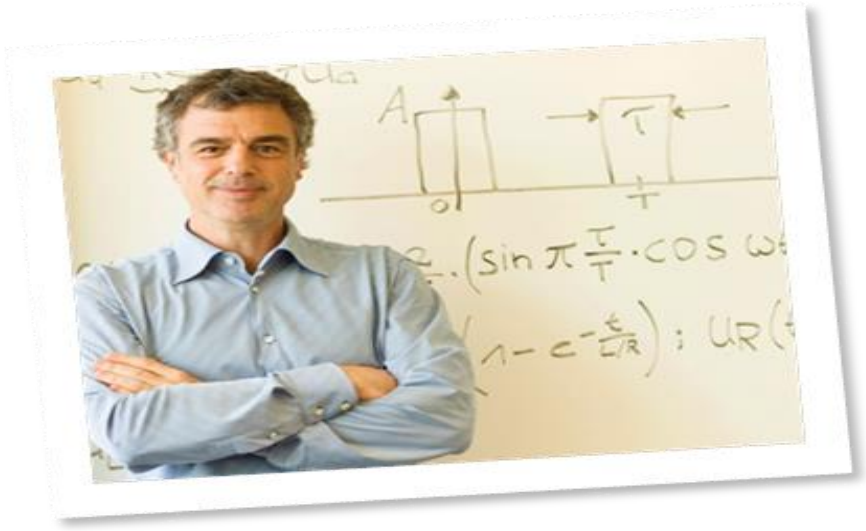
小小提醒

- 請勿使用機器人程式作大量下載，以維護學校聲譽及其他師生的使用權益
- 若有任何使用問題，請提供畫面及連結的完整截圖，以協助原廠盡快查明原因



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