IEEE Electronic Library線上教育訓練

學術講師: 鄭琳祺 Sylvia

IEEE
Advancing Technology for Humanity


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LightPDF
你開始使用AI工具來輔助作研究了嗎?

公視新聞網

博士論文遭控AI虛構參考文獻 政大下架並啟動學倫調查

AI可以讓你更快開始
但不能保證你找到的是正確、完整、可引用的研究證據。

the Institute of Electrical and Electronics Engineers

(美國)電子電機工程師學會

IEEE, pronounced "Eye-triple-E"

39個專業協會
IEEE Societies

- IEEE Aerospace and Electronic Systems Society
- IEEE Antennas and Propagation Society
- IEEE Broadcast Technology Society
- IEEE Circuits and Systems Society
- IEEE Communications Society
- IEEE Computational Intelligence Society
- IEEE Computer Society
- IEEE Consumer Elect
- IEEE Control System
- IEEE Dielectrics and
- IEEE Education Soci
- IEEE Electron Device
- IEEE Electronics Packaging Society
- IEEE Electromagnetic Compatibility Society
- IEEE Engineering in Medicine and Biology Society
- IEEE Geoscience and Remote Sensing Society
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- IEEE Industry Applications Society
- IEEE Information Theory Society
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- IEEE Intelligent Transportation Systems Society
- IEEE Magnetics Society
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- IEEE Power Electronics Society
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- IEEE Signal Processing Society
- IEEE Society on Social Implications of Technology
- IEEE Solid-State Circuits Society
- IEEE Systems, Man, and Cybernetics Society
- IEEE Technology and Engineering Management Society
- IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society
- IEEE Vehicular Technology Society

IEEE

IEEE 涵蓋各個科技領域

More than just electrical engineering & computer science

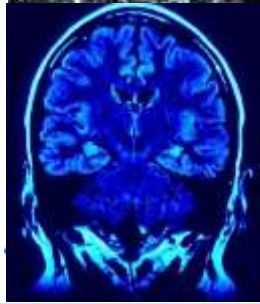
- Aerospace & Defense
- Automotive Engineering
- Biomedical Engineering
- Biometrics
- Circuits & Systems
- Cloud Computing
- Communications
- Computer Software
- Electronics
- Energy
- Engineering
- Imaging

- Information Technology
- Medical Devices
- Nanotechnology
- Optics
- Photonics
- Power Electronics
- Power Systems
- Robotics & Automation
- Semiconductors
- Smart Grid
- Wireless Broadband

and many more

出版電機電子工程和電腦領域

佔全世界 1/3 的文獻



IEEE期刊在眾多先進技術領域保持領先

Base your research on a quality resource you can trust.
Latest studies reinforce that IEEE has the **top cited publications** and **more top quartile publications** in IEEE fields of interest than any other publisher.

Journal Impact Factor™ (JIF) is one of several metrics used in the technical community to compare the impact of scholarly research journals. In the most recent JCR, a wide range of IEEE publications were among the most-cited journals in multiple categories.

Citation Ranking by Journal Impact Factor:

- 24 of the top 30 journals in **Electrical and Electronic Engineering**
- 23 of the top 30 journals in **Telecommunications**
- 9 of the top 20 journals in **Computer Science, Artificial Intelligence**
- 5 of the top 10 journals in **Computer Science, Information Systems**
- 3 of the top 5 journals in **Imaging Science**
- 3 of the top 5 journals in **Automation and Control systems**
- 3 of the top 5 journals in **Computer Science, Cybernetics**
- 3 of the top 5 journals in **Computer Science, Hardware & Architecture**

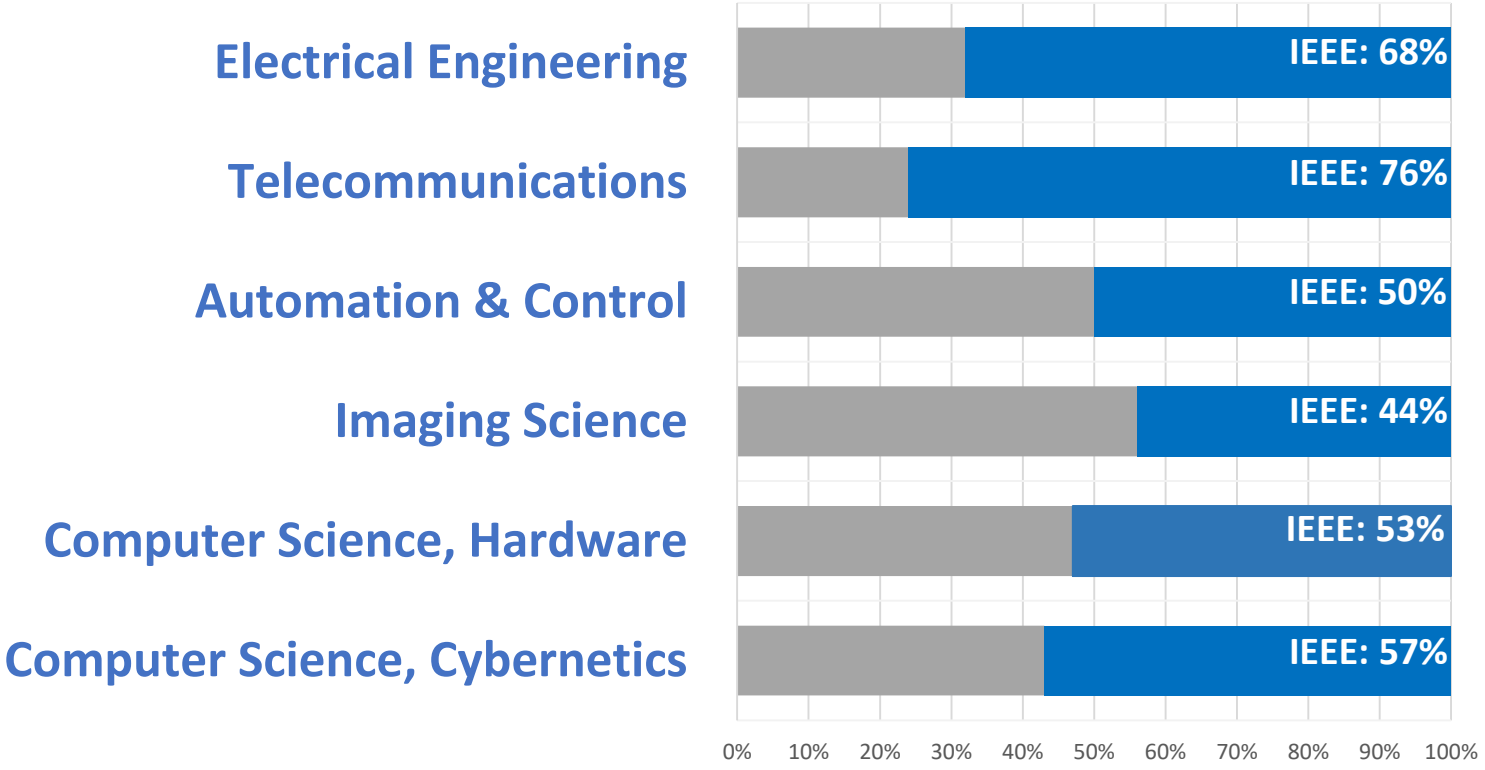
For more details, visit: **www.ieee.org/citations**

IEEE

Source: Journal Citation Reports (Clarivate Analytics, 2025)

頂尖期刊（Q1）佔比表現上, IEEE領先其他出版社

IEEE as a percentage of top quartile publications across key fields of Interest*



*資料來源：根據 Clarivate 發布之《Journal Citation Reports》2024 年期刊引用報告（Journal Impact Factor 四分位排名），於 2025 年 6 月公布。

Source: 2024 Journal Citation Reports from Clarivate, released June 2025

2025 & 2026 年新出版的刊物

New titles accessible via an IEEE subscription:

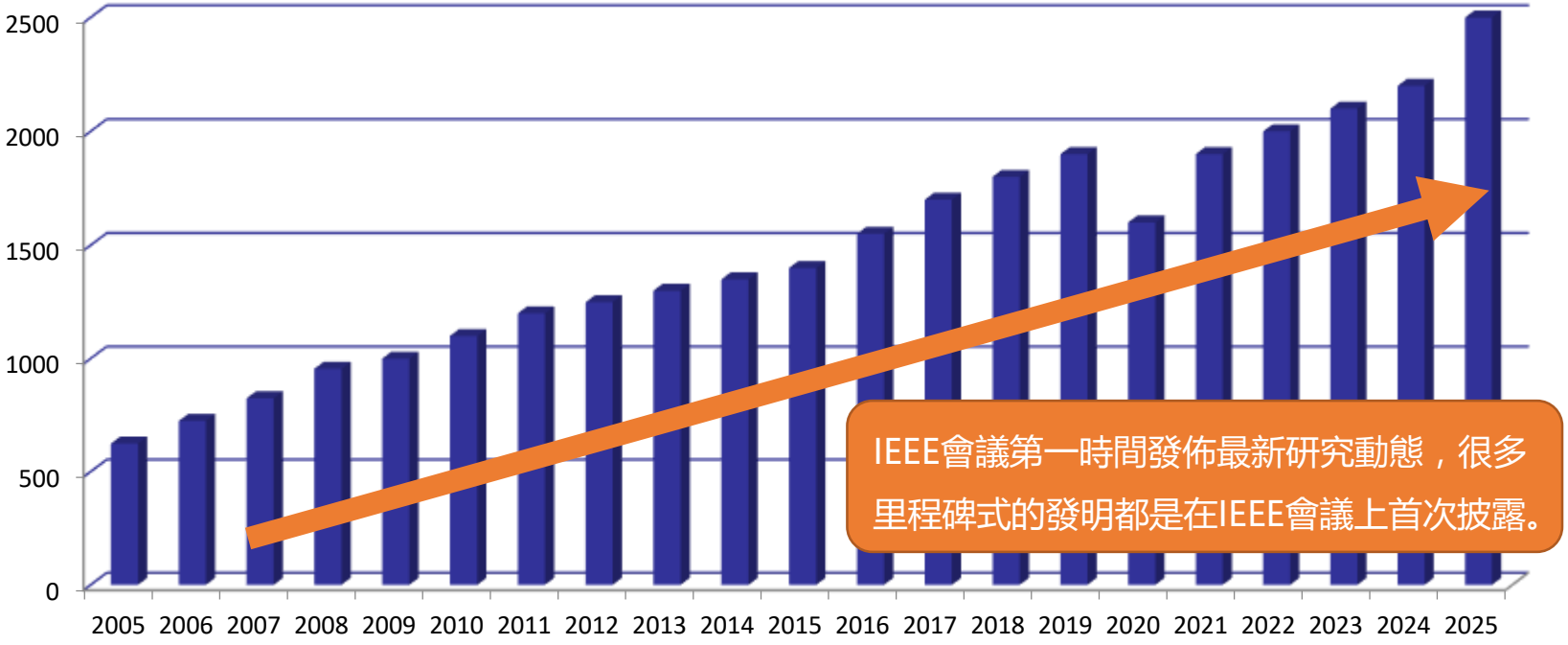
- *IEEE **Sensors** Magazine (coming in 2026)*
- *IEEE Journal on **Wireless Power Technologies** (coming in 2026)*
- *IEEE Transactions on **Robot Learning** (coming in 2026)*
- *IEEE **Computational Intelligence** Letters (coming in 2026)*
- *IEEE **Robotics and Automation Practice** (launched in Late 2025/Early 2026)*
- *IEEE **Energy Sustainability** Magazine (launched in 2025)*

New Fully OA titles:

- *IEEE Journal of Selected Topics in **Electromagnetics, Antennas and Propagation** (launched in 2025)*

*Please note this is a tentative list and is subject to change.

IEEE學術研討會逐年增加



IEEE技術標準協會

IEEE Standards Association (IEEE-SA)

Vision 願景

成為全球首選的高品質，市場驅動標準制訂平臺

Mission 使命

通過標準活動推動技術合作和經濟發展

IEEE標準涵蓋範圍：

- Electromagnetic Compatibility
- Green Technology
- Ethernet/Wi-Fi
- Medical Device Communications
- Nanotechnology
- Organic Components
- Portable Battery Technology
- Power Electronics
- Power & Energy
- Radiation/Nuclear
- Reliability
- Transportation Technology

IEEE

IEEE 技術標準

A Sample of Recently Added Standards:

- IEEE 1012-2024—**IEEE Standard for System, Software, and Hardware Verification and Validation**
- IEEE C57.12.44-2024—**IEEE Standard Requirements for Secondary Network Protectors**
- IEEE 2247.4—**IEEE Recommended Practice for Ethically Aligned Design of Artificial Intelligence (AI) in Adaptive Instructional Systems**
- IEEE Std 1680.2-2024—**IEEE S**
- IEEE P3130/D8, Jun 2024—**IEE** **stems in Connected Vehicles**
- IEEE 2413.3—**IEEE Guide for**
- IEEE 2418.5—**IEEE Guide for**
- IEEE 2840-2024—**IEEE Standa**
- IEEE P2686/D9.4, Aug 2024— **orage Applications**
- IEEE Std 7009-2024—**IEEE Sta**
- IEEE Std 7014-2024—**IEEE Sta** **gent Systems**
- IEEE P1857.11/D3, Jun 2024—**IEEE Draft Standard for Neural Network-Based Image Coding**
- IEEE P3345/D7.1, Jun 2024—**IEEE Draft Guide for Terminology and Classification of Electric Vehicle Charging Robots**
- IEEE 2894-2024—**IEEE Guide for an Architectural Framework for Explainable Artificial Intelligence**
- IEEE 2861.3-2023—**IEEE Standard for Haptic Interface Enhancement for Mobile Gaming**

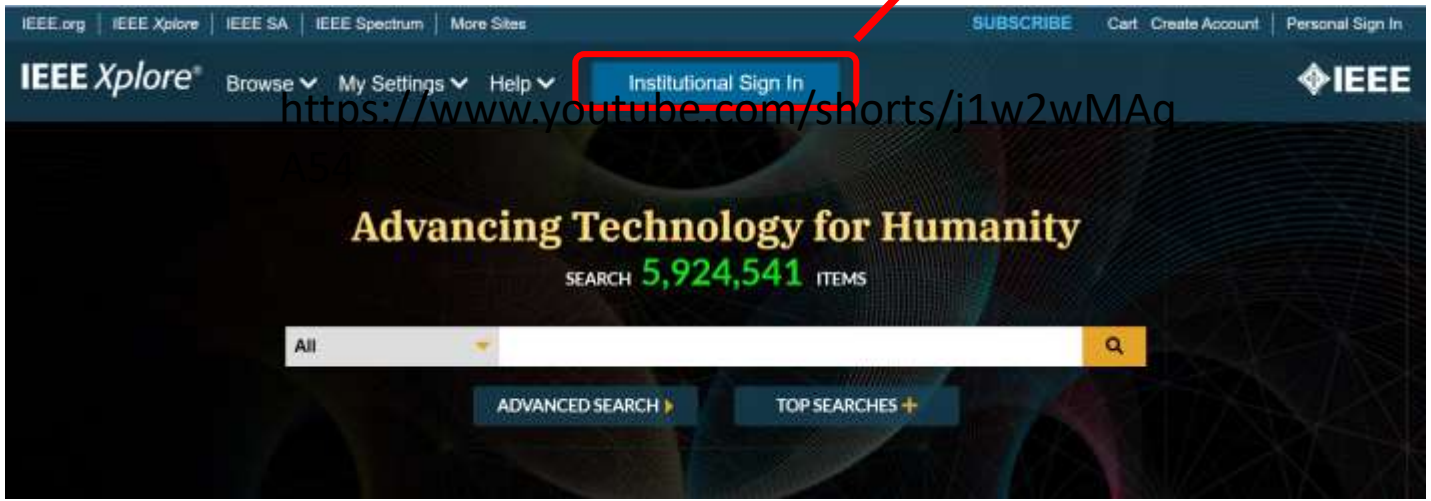
Draft : 尚未正式核准發布
Active：目前仍在維護
Superseded：已有新版取代
Inactive-Reserved：多半是超過 10 年未完成修訂而轉為非現行
Inactive-Withdrawn：經投票決議撤回

Note: This is a partial listing of new standards and is not all-inclusive or final. Information is subject to change.

IEEE資料庫位址

校內IP範圍內可自動登入 (英文校名National Chin Yi University of Technology)

- IEEE所有文獻均上傳到 IEEE Xplore平臺
- https://ieeexplore.ieee.org



IEEE Xplore 全文資料庫

核心研究資源：

- ✓ IEEE Journals
- ✓ IEEE Conference Proceedings
- ✓ IEEE Standards (Except Draft)

- ➢ 採IP連線設定
- ➢ 無同時上線人數

延伸研究資源：

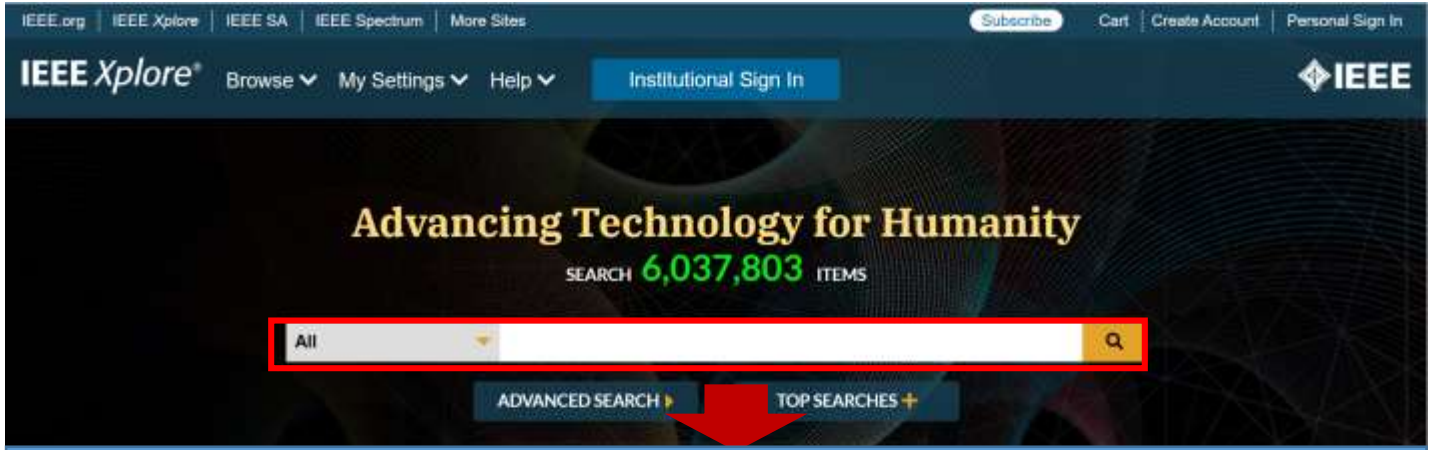
- ✓ IET Conference Proceedings
- ✓ Bell Lab Tech Journals
- ✓ VDE Conference Proceedings

- ☐ eBooks (Wiley Telecom, Artech House, River, Packt,Manning, Princeton etc.)
- ☐ eLearning course programs
- ☐ **ISSCC courses and tutorials**
- ☐ **IEEE CertifAIEd™ AI Ethics Professional Certification Program**

IEEE Xplore integrates research, standards, and learning resources in one platform.

IEEE

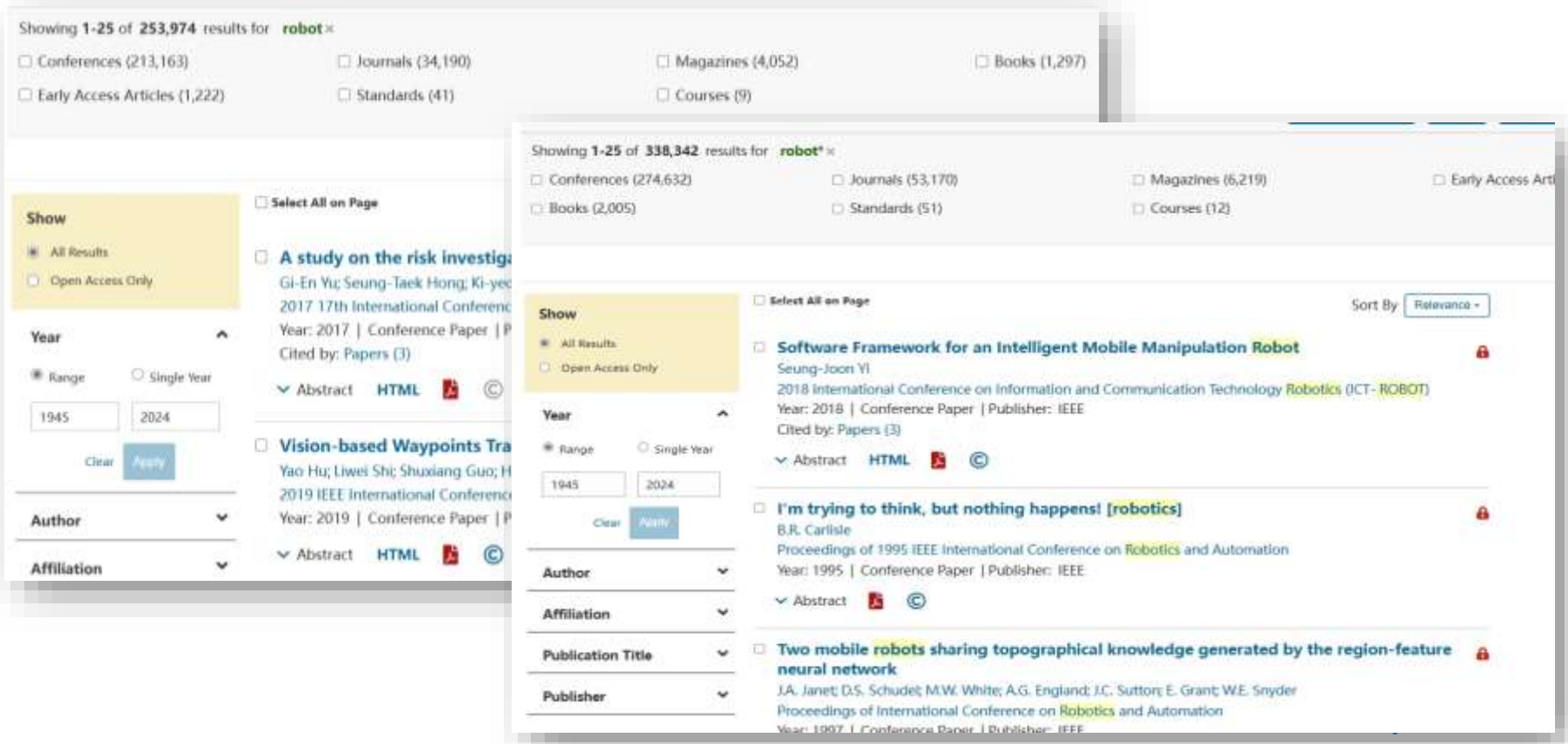
文獻檢索：簡易檢索規則



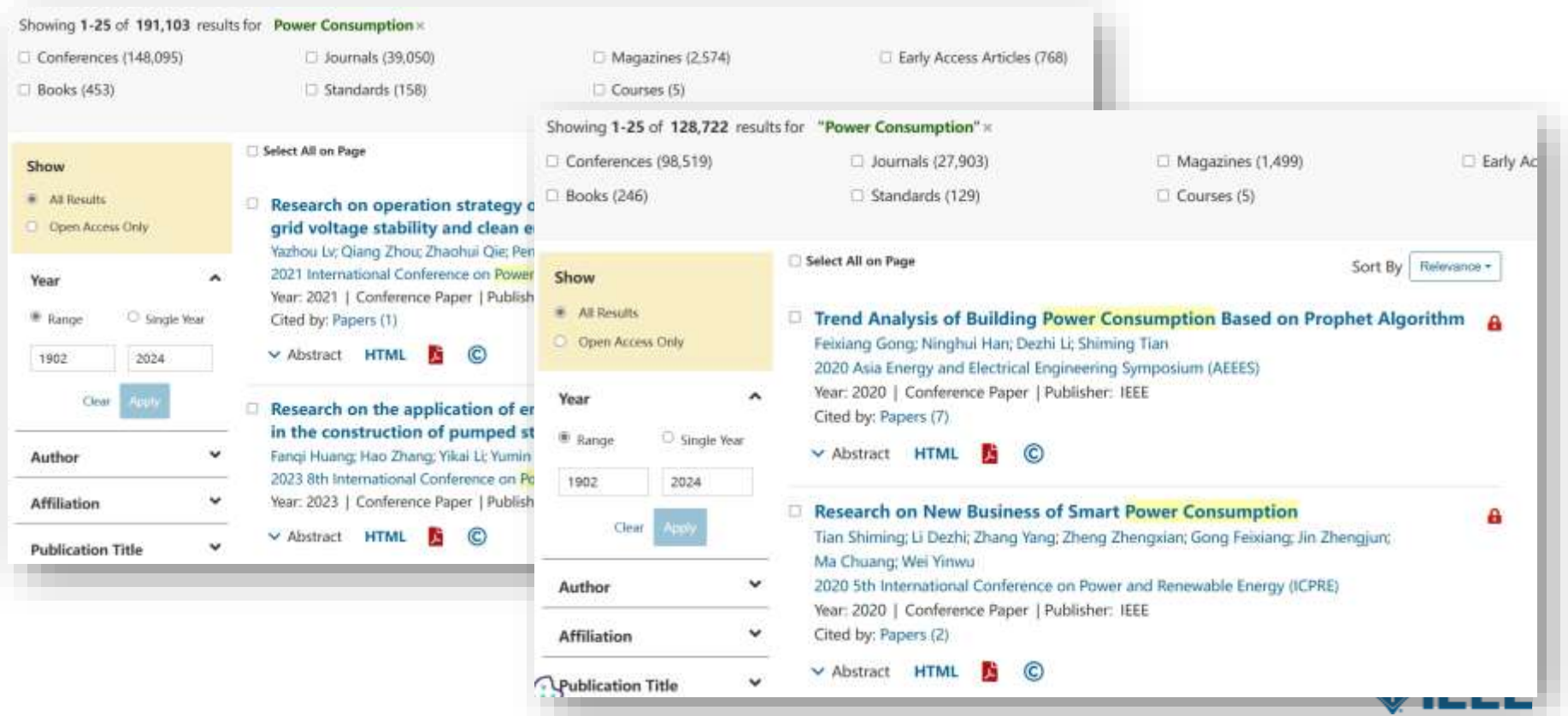
一框式檢索(Global Search)

1. 預設檢索內容：metadata only
2. 檢索詞之間的默認關係：AND　　ie. smart grid= smart AND grid
3. 精確檢索使用雙引號：　　ie. “Power Consumption”
4. 自動獲取詞根：pluralized nouns, verb tenses, and British/American spelling variations
5. 模糊檢索使用*和？　　ie. robot*（**robot、robots、robotic、robotics)**
   ie sens?r（**sensor、senser)**
6. 檢索詞不區分大小寫，檢索運算元(AND. OR. NOT) 全部大寫

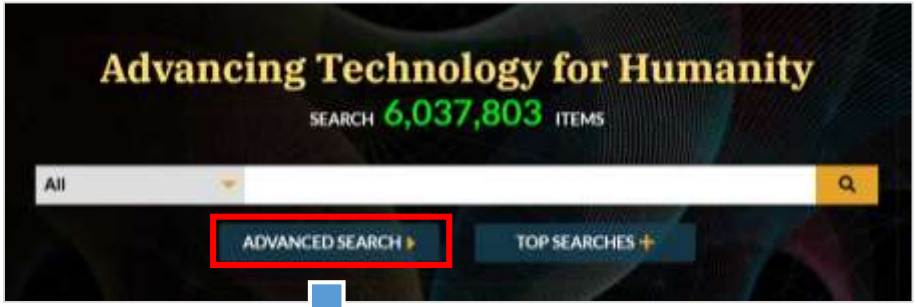
文獻檢索： robot vs robot*

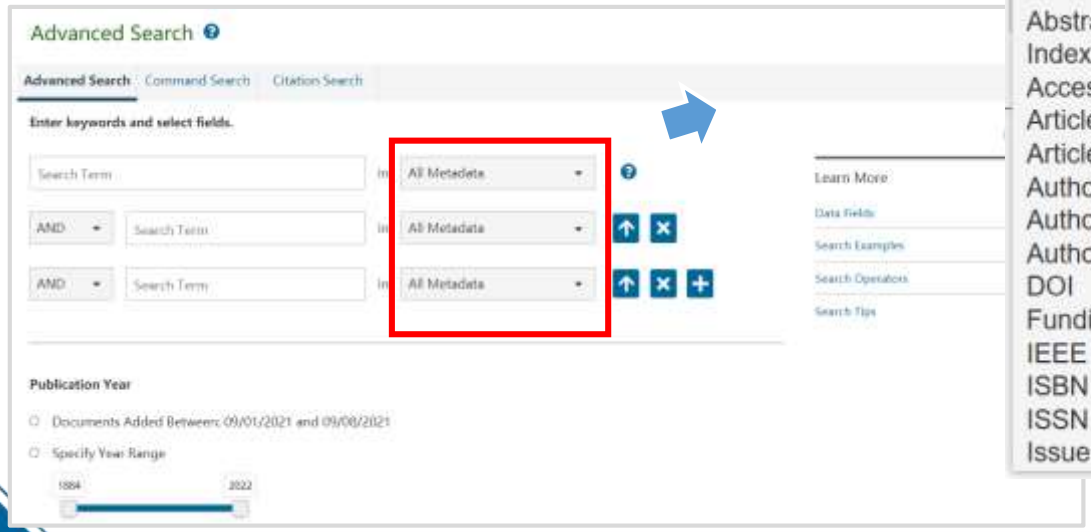


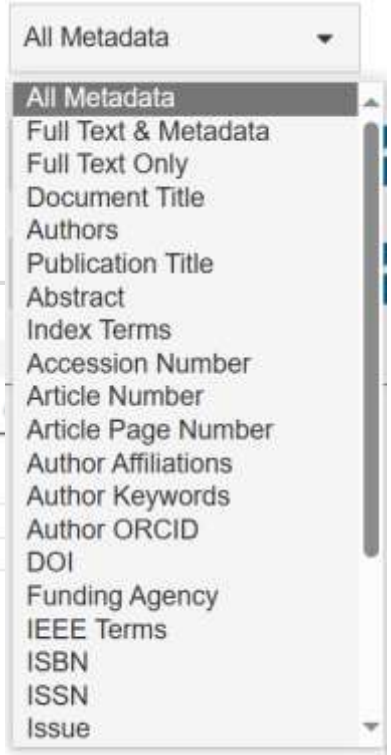
文獻檢索：Power Consumption vs "Power Consumption"

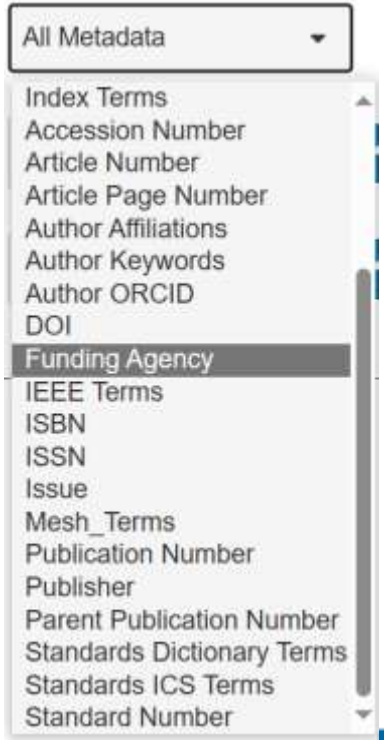


文獻檢索：進階檢索，精準設定檢索條件

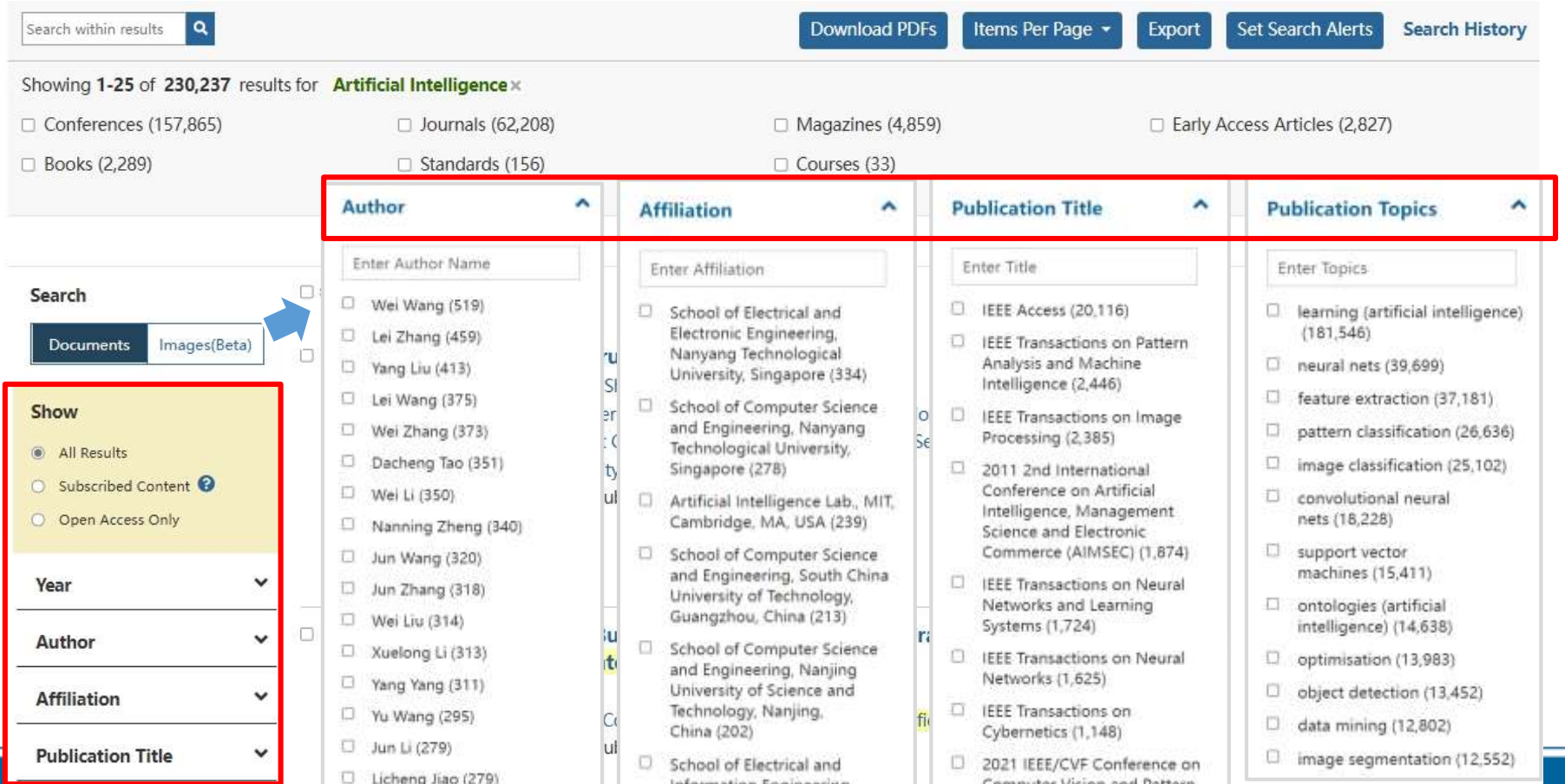




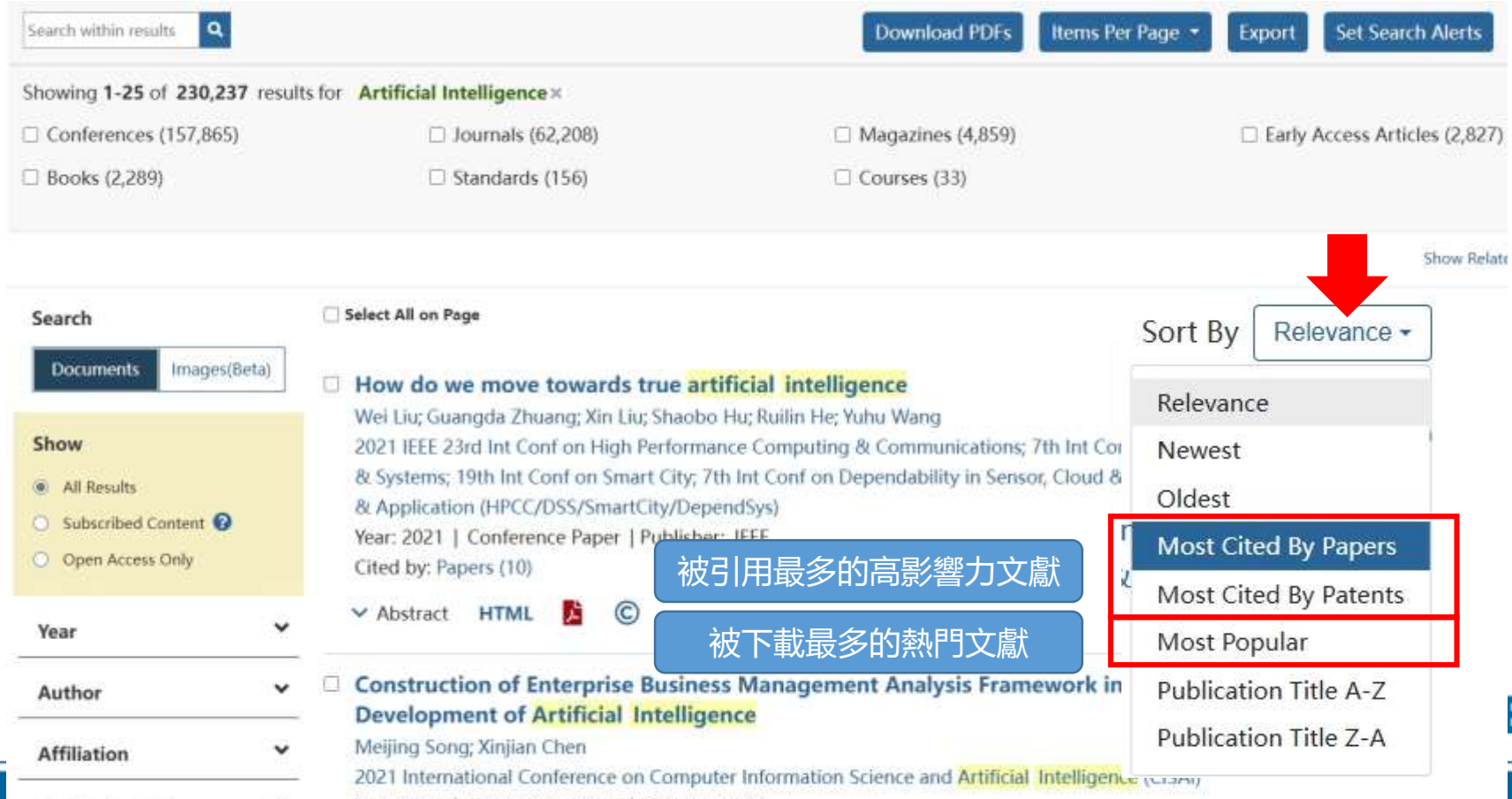




檢索結果頁面：瞭解技術整體研發情況



檢索結果頁面：尋找權威/熱門文章



文章細節頁面

Robust Face Recognition via Sparse Representation

John Wright; Allen Y. Yang; Arvind Ganesh; S. Shankar Sastry; Yi Ma

IEEE Transactions on Pattern Analysis and Machine Intelligence

Year: 2009 | Volume: 31, Issue: 2 | Journal Article | Publisher: IEEE

Cited by: Papers (6914) | Patents (47)

▸Abstract HTML Media

Robust Face Recognition via Sparse Representation

Publisher: IEEE | Cite This | PDF

John Wright ; Allen Y. Yang ; Arvind Ganesh ; S. Sha

6914 Paper Citations	47 Patent Citations	54935 Full Text Views

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Abstract

Document Sections

1 Introduction

2 Classification Based on Sparse Representation

3 Two Fundamental Issues in Face Recognition

4 Experimental Verification

5 Conclusions and Discussions

Authors

Figures

References

Citations

Keywords

Metrics

Media

Footnotes

Abstract:

We consider the problem of automatically recognizing human faces from frontal views with varying expression and illumination, as well as occlusion and disguise. We cast the recognition problem as one of classifying among multiple linear regression models and argue that new theory from sparse signal representation offers the key to addressing this problem. Based on a sparse representation computed by C ^{1} -minimization, we propose a general classification algorithm for (image-based) object recognition. This new framework provides new i… face recognition: feature extraction and robustness to occlusion. For feature extracti… recognition problem is properly harnessed, the choice of features is no longer critica… whether the number of features is sufficiently large and whether the sparse representation is correctly computed. Unconventional features such as downsampled images and random projections perform just as well as conventional features such as eigenfaces and Laplacianfaces, as long as the dimension of the feature space surpasses certain threshold, predicted by the theory of sparse representation. This framework can handle errors due to occlusion and corruption uniformly by exploiting the fact that these errors are often sparse with respect to the standard (pixel) …on the recognition algorithm can handle …n. We conduct extensive experiments on …m and corroborate the above claims.

推薦文獻

HTML互動式線上閱讀

Published in: IEEE Transactions on Pattern Analysis and Machine Intelligence (Volume: 31 , Issue: 2, Feb. 2009)

Page(s): 210 - 227

INSPEC Accession Number: 10370800

Date of Publication: 03 April 2008

DOI: 10.1109/TPAMI.2008.79

▸**ISSN Information:**

Publisher: IEEE

PubMed ID: 19110489

SECTION 1
Introduction

Parsimony has a rich history as a guiding principle for inference. One of its most celebrated instantiations,

More Like This

Sparse regression analysis for object recognition
2011 18th IEEE International Conference on Image Processing
Published: 2011

Robust feature extraction for face recognition based on ultrasonic sensing
2017 Eleventh International Conference on Sensing Technology (ICST)
Published: 2017

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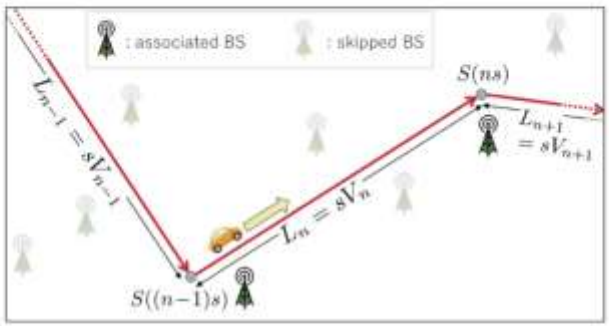
文章細節頁面- HTML互動式線上閱覽

Figures



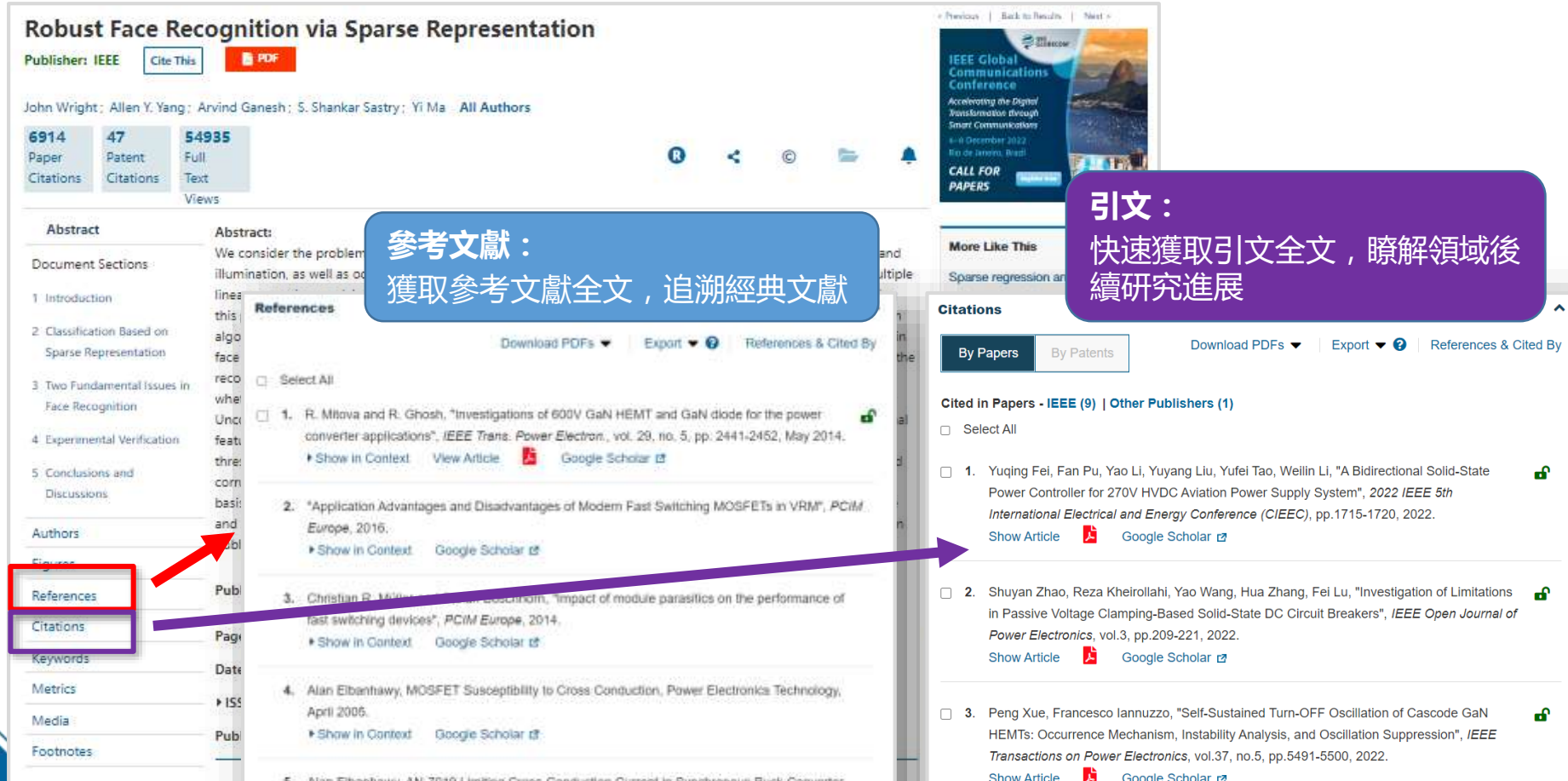
A path of the typical UE in the random walk mobility model.

Show in Context

Figure 1 of 9

快速流覽圖表，並可快速跳轉至原文位置

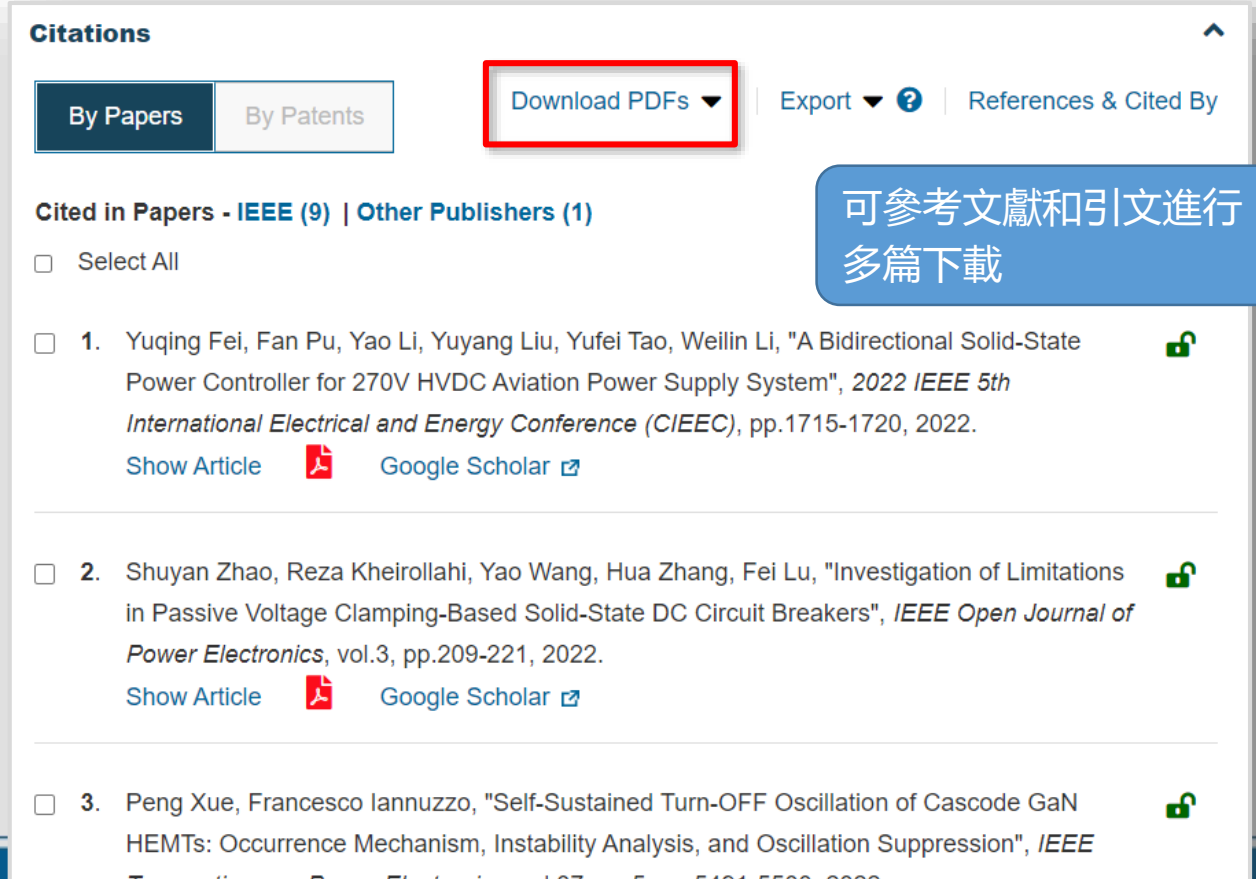
文章細節頁面– 參考文獻 & 引文



參考文獻：
獲取參考文獻全文，追溯經典文獻

引文：
快速獲取引文全文，瞭解領域後續研究進展

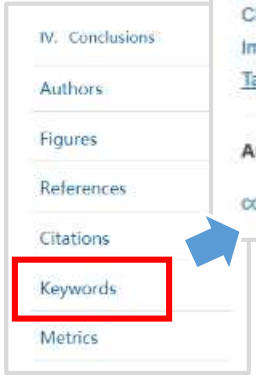
文章細節頁面– 參考文獻&引文

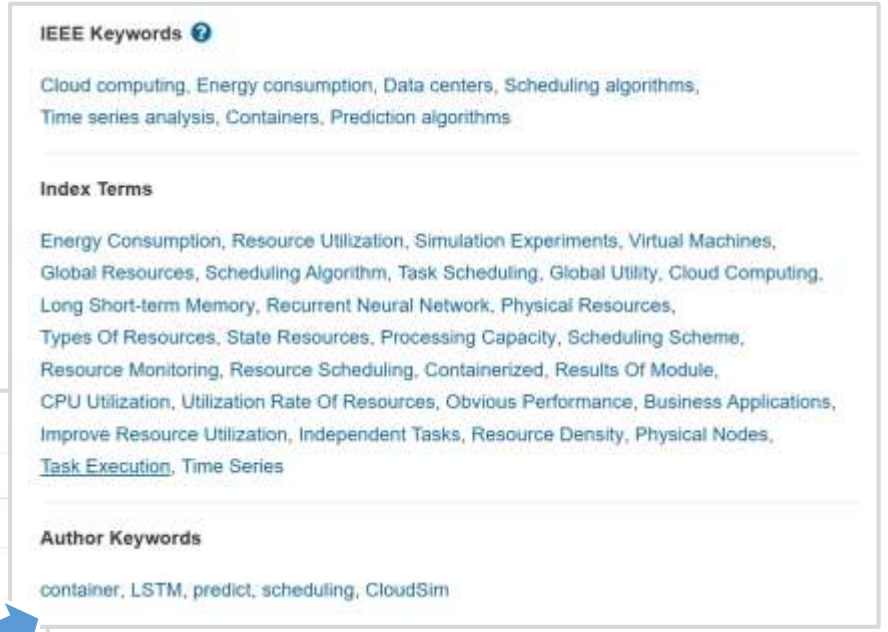


可參考文獻和引文進行多篇下載

文章細節頁面– 關鍵字

- IEEE Xplore引入全新的**人工智慧動態索引**工具，以提升用戶的使用體驗。
- 隨著IEEE Xplore平臺內容的不斷更新，該工具將實現即時索引，並能夠連結到IEEE的全庫內容，從而更精確、快速地檢索到目標文獻。
- 動態索引詞與現有的作者關鍵字和IEEE關鍵字並行，優化檢索體驗
- 主要優勢包括:
  - 即時索引
  - 加快識別新興技術
  - 連結相關概念，增強檢索關聯性





文章細節頁面– 作者介紹


瞭解作者詳情
Enabling AI in Future Wirele
rspective
Publisher: IEEE
Cite This
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Dinh C. Nguyen ; Peng Cheng
20
Paper
Citations
2494
Full
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Abstract
Document Sections
I. Introduction
II. AI Technology: State of the Art
III. Sensing AI
IV. Network Device AI
V. Access AI
Show Full Outline
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Figures
References
Citations
Keywords
Metrics
Authors
Dinh C. Nguyen
School of Engineering, Deakin University, Geelong, VIC, Australia
Dinh C. Nguyen (Graduate Student Member, IEEE) is c
Engineering, Deakin University, Geelong, VIC, Australi
reinforcement learning, mobile edge/cloud computin
privacy. He is currently working on machine learning,
and 5G networks. He has been a recipient of the prest
Peng Cheng
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Peng Cheng (Member, IEEE) received the B.S. and M.S.
information systems from the University of Electronic
and 2009, respectively, and the Ph.D. degree from Shanghai Jiao Tong University, Shanghai, China, in 2013. From
Dinh C. Nguyen
Affiliation
School of Engineering
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Waurn Ponds, VIC, Australia
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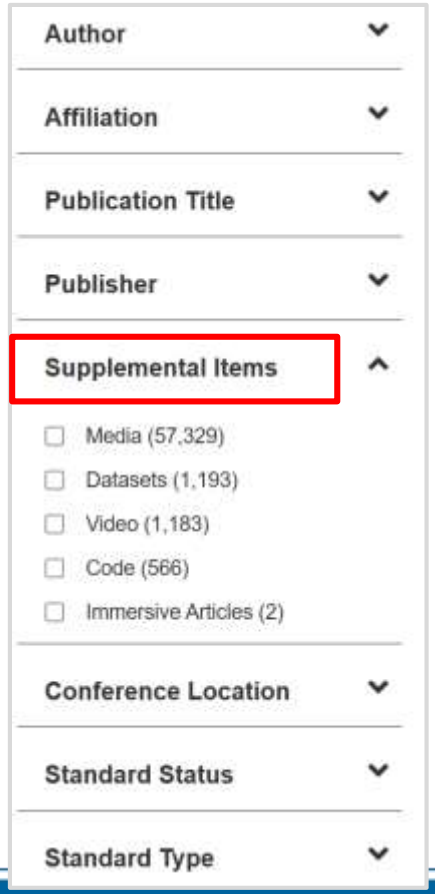
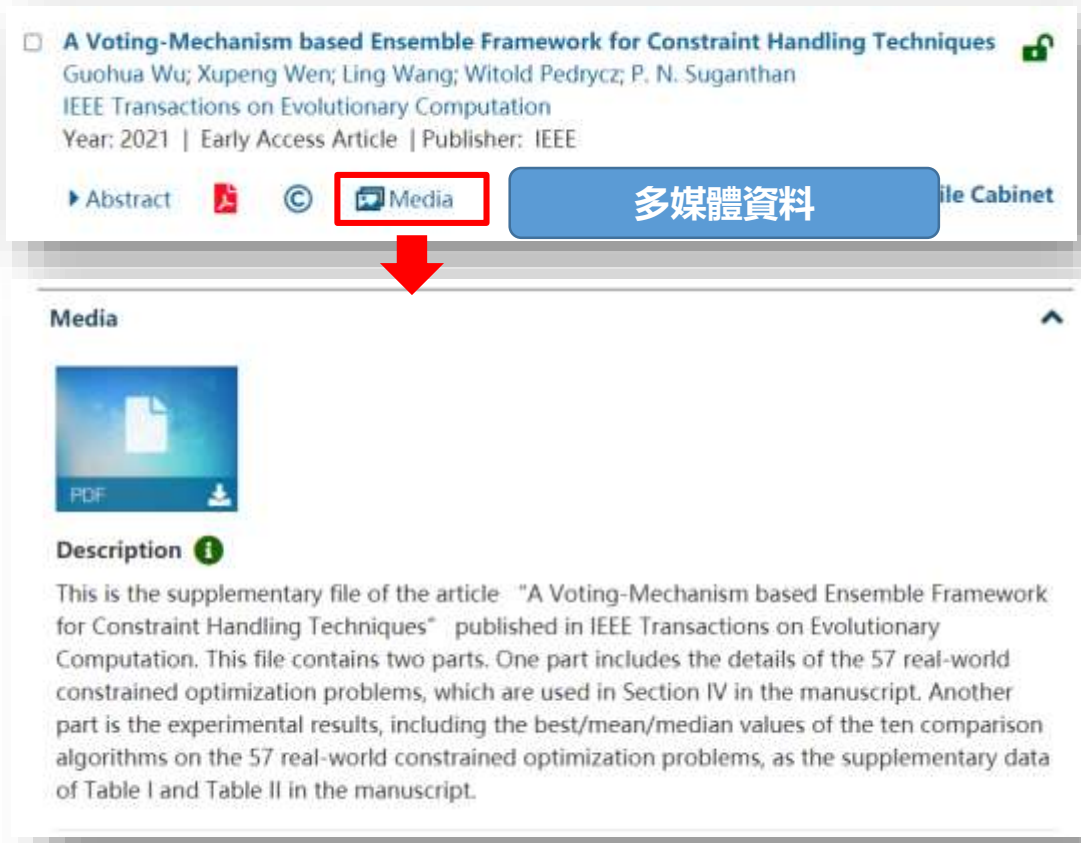
Publish Open Access with IEEE

補充資料：多媒體、會議錄影、代碼、數據和沉浸互動文章





IEEE

補充資料：多媒體、會議錄影、代碼、資料和沉浸互動文章

Author

Affiliation

Publication Title

Publisher

Supplemental Items

- Media (57,329)
- Datasets (1,193)
- Video (1,183)
- Code (566)
- Immersive Articles (2)

Conference Location

Standard Status

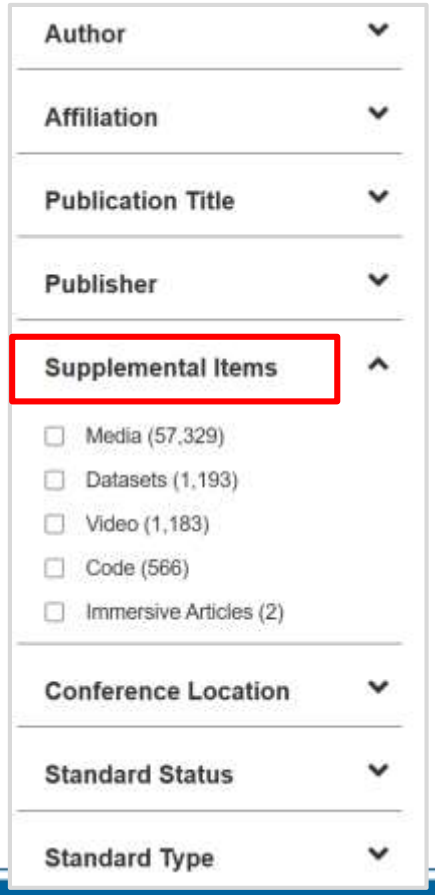
Standard Type

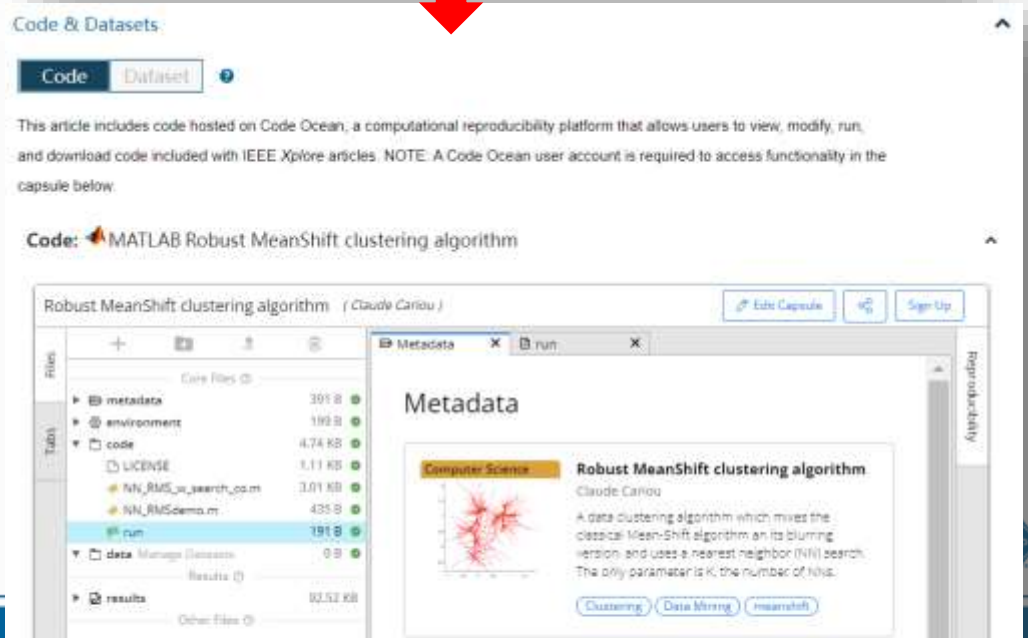
SR Latch: The Wrong Introduction to Digital Memory
Abdulhadi Shoufan
2020 IEEE International Symposium on Circuits and Systems (ISCAS)
Year: 2020 | Conference Paper | Publisher: IEEE

Abstract (html) (128 Kb) Video

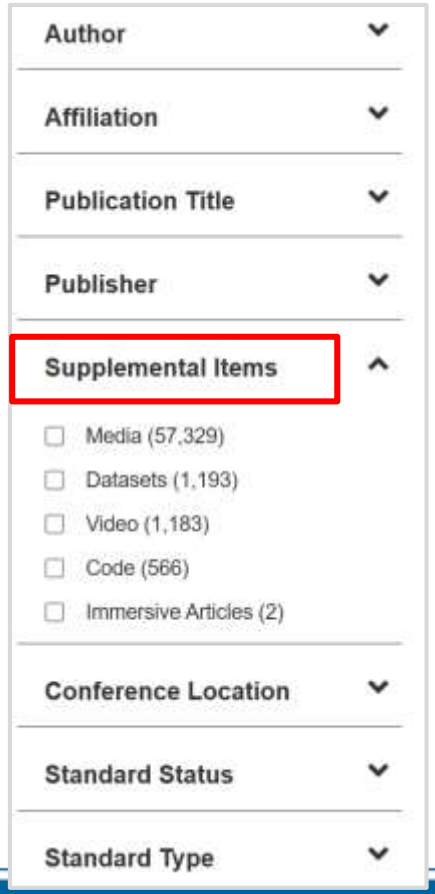
會議視頻

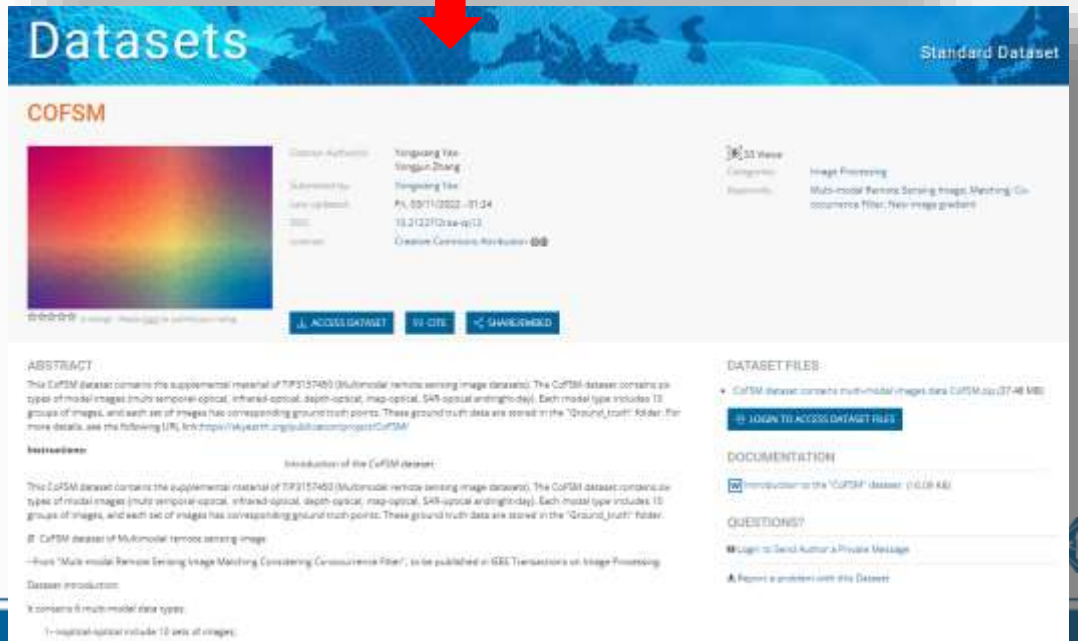
補充資料：多媒體、會議錄影、代碼、數據和沉浸互動文章





補充資料：多媒體、會議錄影、代碼、數據和沉浸互動文章





補充資料：多媒體、會議錄影、代碼、資料和沉浸互動文章

Author

Affiliation

Publication Title

Publisher

Supplemental Items

- Media (57,329)
- Datasets (1,193)
- Video (1,183)
- Code (566)
- Immersive Articles (2)

Conference Location

Standard Status

Standard Type

Type-1 and Interval Type-2 Fuzzy Systems [AI- eXplained]

Dongrui Wu; Ruimin Peng; Jerry M. Mendel

IEEE Computational Intelligence Magazine

Year: 2023 | Volume: 18, Issue: 1 | Magazine Article | Publisher: IEEE

Cited by: Papers (8)

Abstract HTML

沉浸互動模式

Try to drag the blue or green dot to change the membership interval of x.

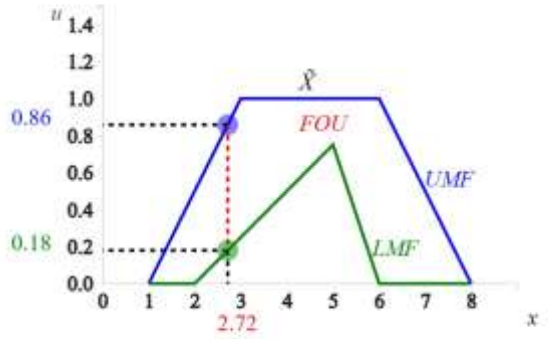
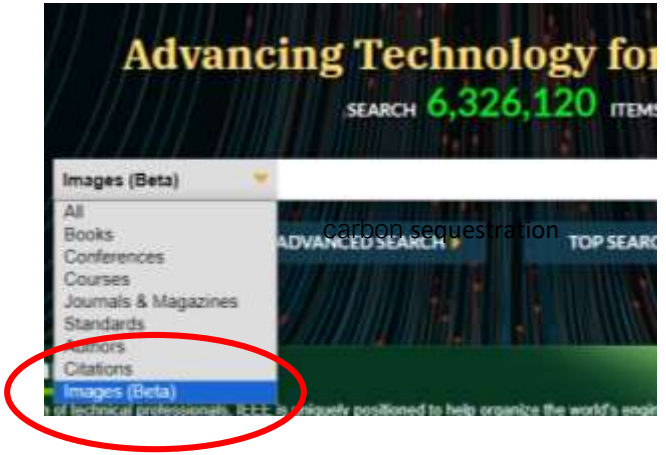


Figure 7:
Example of an IT2 fuzzy set. When the input x= 2.72, the membership interval is [0.18, 0.86], represented by the red dashed line.

IEEE

Image Search (Beta)

- 圖像搜索是IEEE *Xplore* 的一項新功能，可獲取期刊和會議論文中的相關圖像、圖表、原理圖、流程圖等。
- 使用者可以對圖像中繼資料進行關鍵字搜索。
- 搜索結果頁面將顯示圖像。



NOTE: The initial beta release will be accessible to IEL subscribers only.

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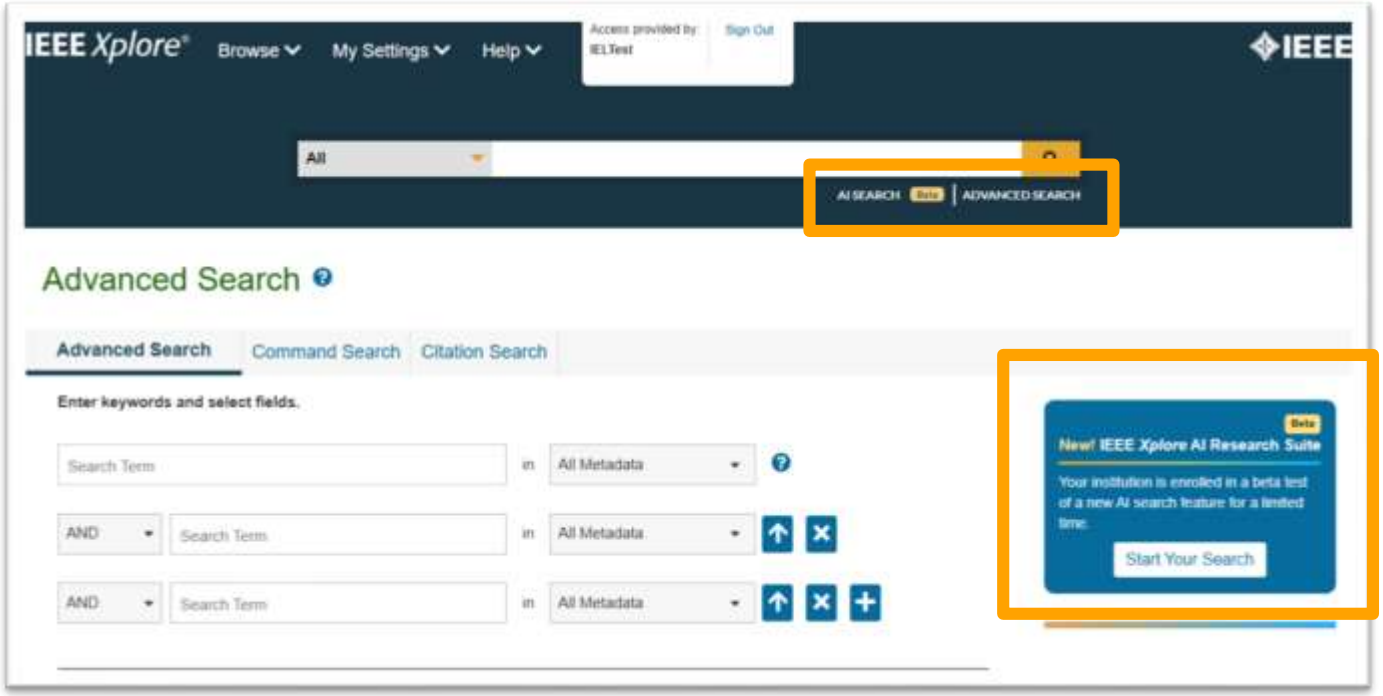
Image Search (Beta)

IEEE AI: Research Navigator

Alternatively, you can click on “AI Search” from the global header or select the link from Advanced Search.



Initiating a Search from IEEE Research Navigator

From the IEEE Research Navigator page, you can begin your search by leveraging the large search box provided.

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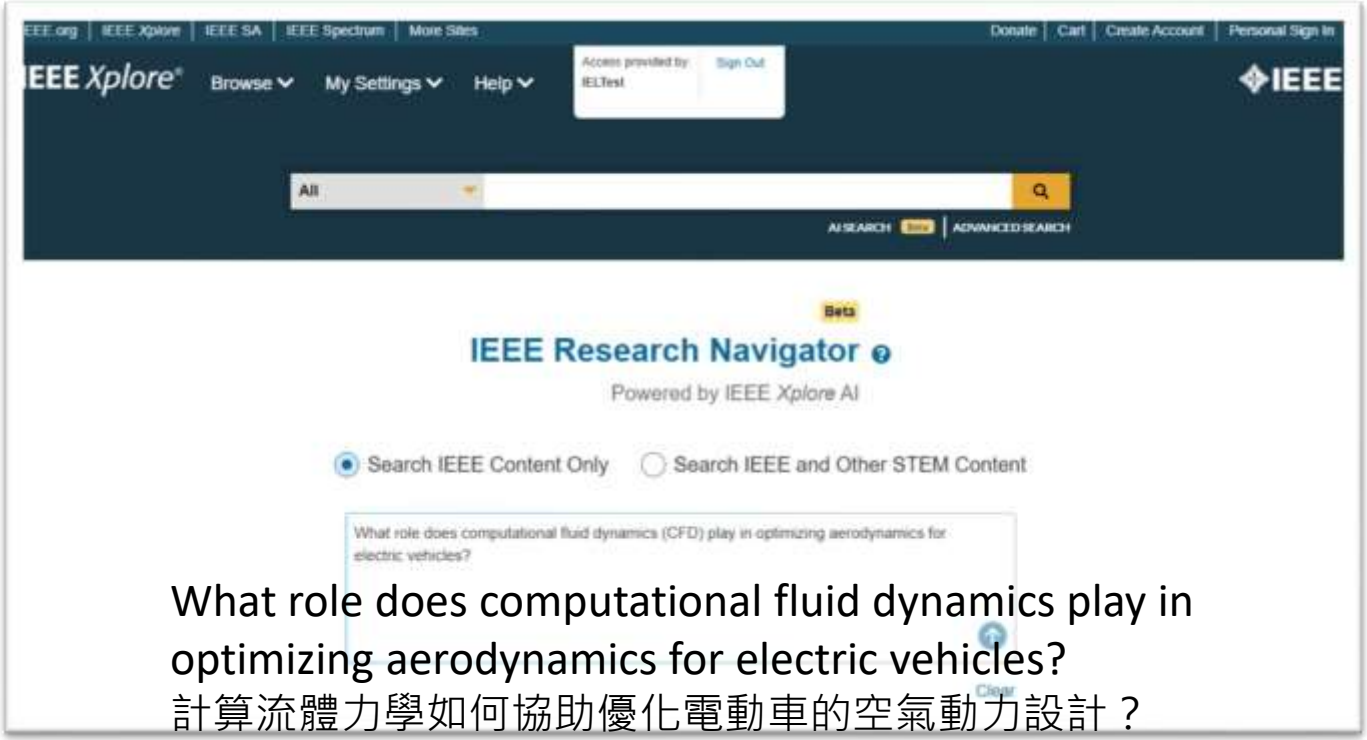


What role does computational fluid dynamics play in optimizing aerodynamics for electric vehicles?

計算流體力學如何協助優化電動車的空氣動力設計？

IEEE Research Navigator

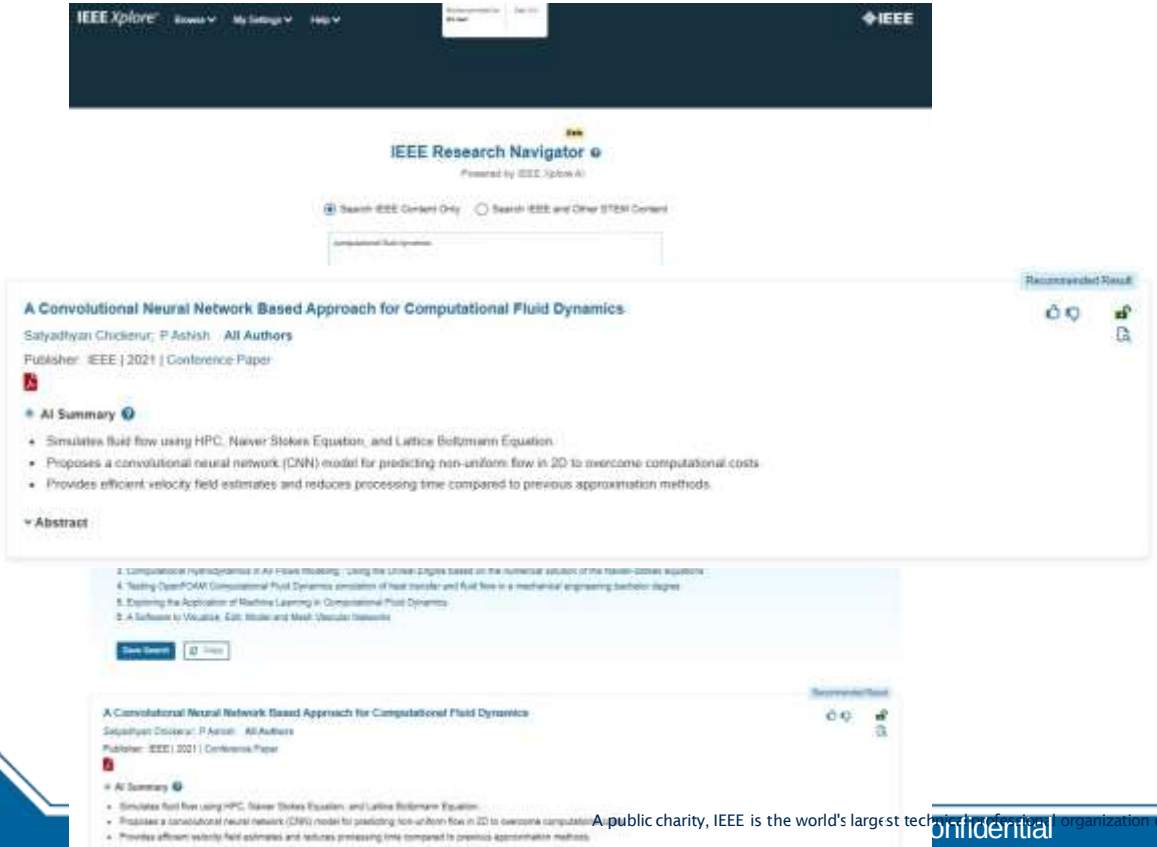
IEEE AI Overview

在搜尋結果的最上方，會顯示一個名為「**IEEE AI Overview**」的面板，呈現 IEEE 大型語言模型（LLM）針對使用者查詢所產生的回應。

這份摘要會根據排名最相關的前幾筆搜尋結果中擷取出的內容，動態產生，目的是直接回應使用者的查詢問題。

IEEE Research Navigator

AI Summary of Article



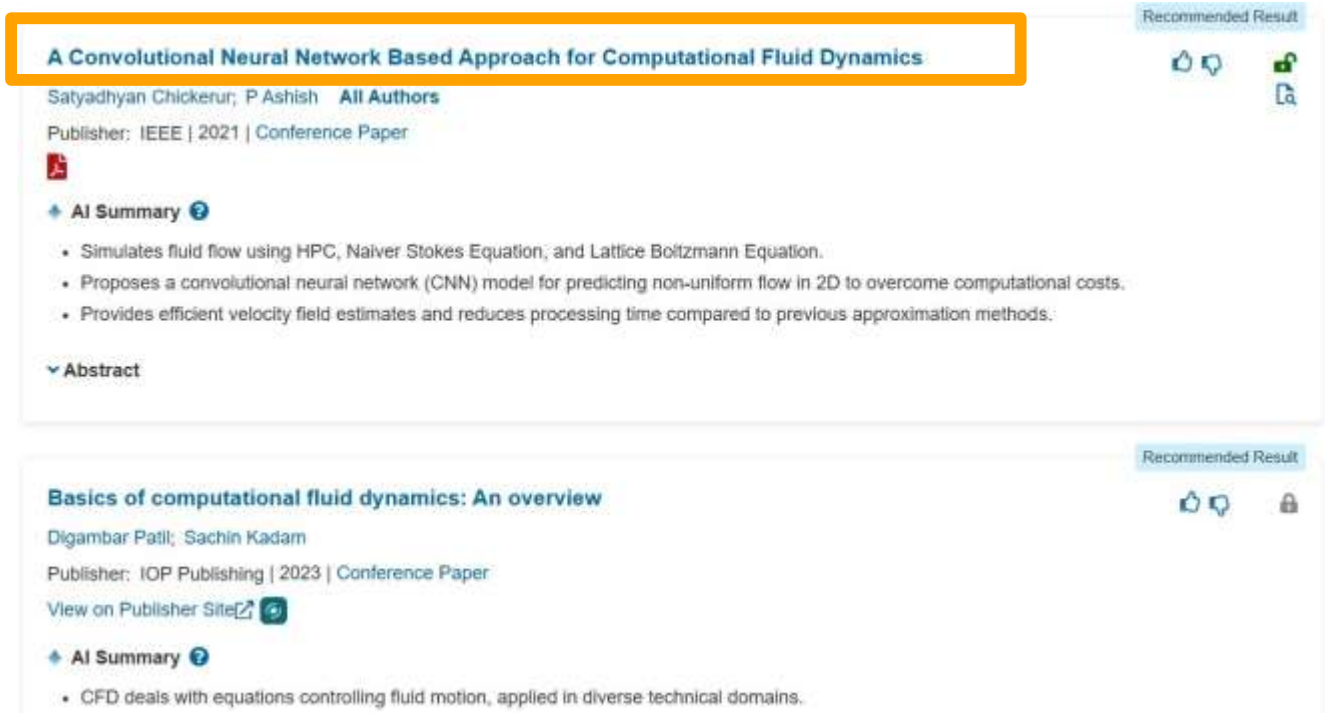
在每一筆搜尋結果下方，都可以看到該文章的 **AI 生成摘要**。

每一則摘要會顯示文章的 **三個重點**，這些重點是根據文章的全文與摘要所整理出來的。

AI 摘要會提供文章的簡短概述，讓使用者能快速了解這篇文章為什麼會被檢索出來，並判斷是否要繼續閱讀完整文章。

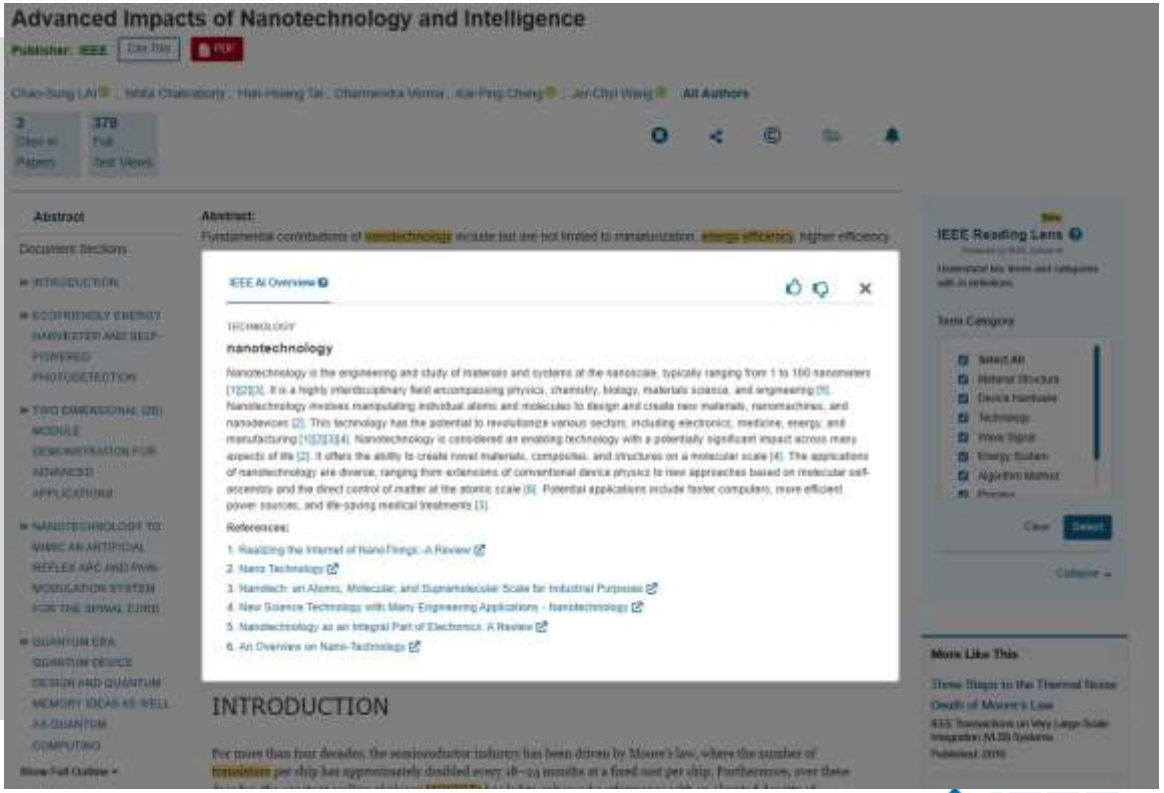
Navigating to IEEE Reading Lens

- 在 **Research Navigator** 的搜尋結果頁面中，點選文件標題即可開啟 **Reading Lens**。
- **Reading Lens** 適用於 IEEE 內容。
- 部分 IEEE 文件若沒有可供 Reading Lens 標示的術語，系統會連結至該文件的摘要頁面。



IEEE Reading Lens

- 透過在摘要與全文中標示術語，並依上下文提供定義，加速讀者閱讀與理解文章。
- 讀者在閱讀文章時，可以直接查看術語定義，進一步了解相關概念，不需要另外開啟外部網頁查詢。
- 術語會被歸類到 **50 多種分類**，例如演算法、硬體、程式語言等；這些分類也可以用來篩選內容，提升資料發現的效率。



Highlight Toggle Panel

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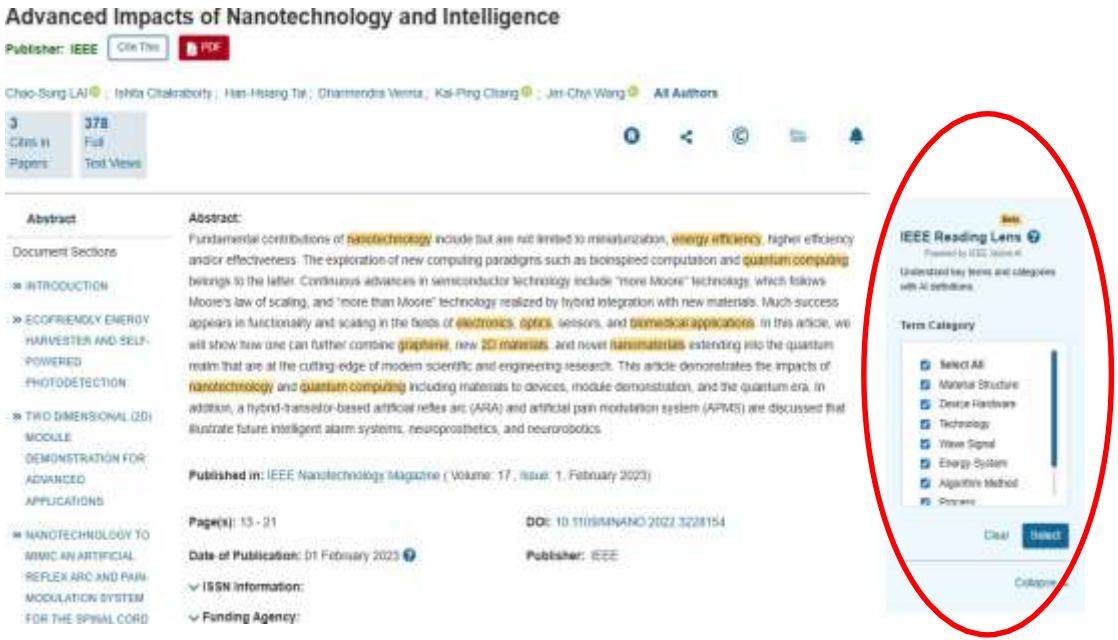
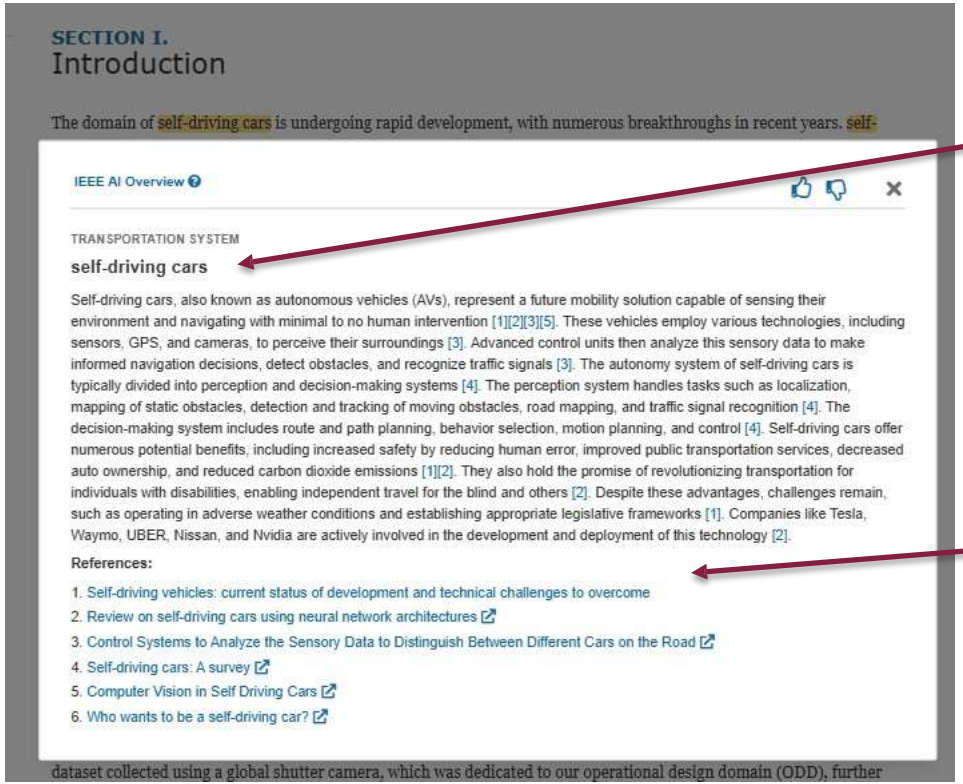


頁面側邊的面板可讓使用者瀏覽可用的分類、依分類篩選已標示的術語，或關閉所有術語的標示功能

IEEE Reading Lens

Highlighted Key Terms - AI definition



針對每一個被標示的關鍵字，系統會提供一段 **AI 生成的定義**；這些定義是由以 IEEE 文章訓練的 **IEEE 大型語言模型（IEEE LLM）**所產生。

在生成文字的最後，也會提供 **6 筆 IEEE 參考文獻**，讓使用者可以進一步閱讀原始來源資料。

Use Keyword Search For:

- 尋找文件標題、摘要等欄位中的**精確符合結果**。.
- 搜尋非常特定的內容。
- 使用萬用字元與布林邏輯運算式，輸入結構化的詞彙檢索式。

Use AI Search For:

- 根據**語意相似度**尋找相關內容。
- 當使用者對自己要找的內容還沒有明確想法時使用。
- 可發現使用不同關鍵字與片語變化描述的相關文章。

Research Navigator 主要是在幫讀者「**更快看懂、篩選與掌握文獻重點**」。
Reading Lens 主要是在協助讀者「**快速讀懂文章中的專業詞彙與概念**」。

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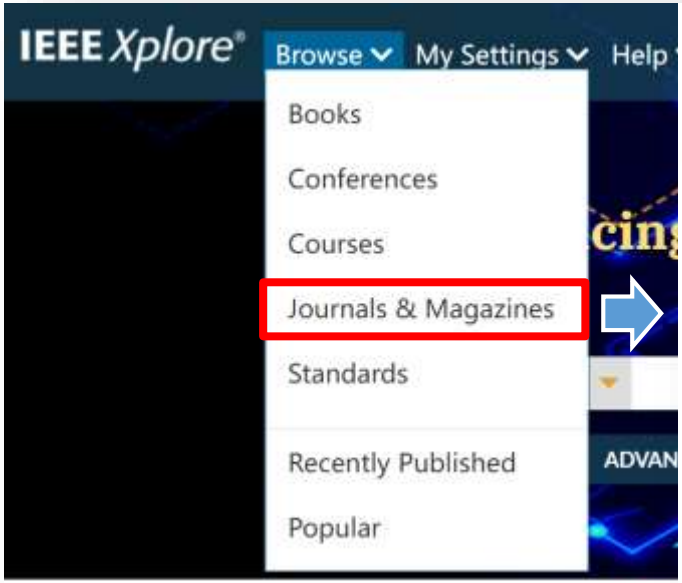

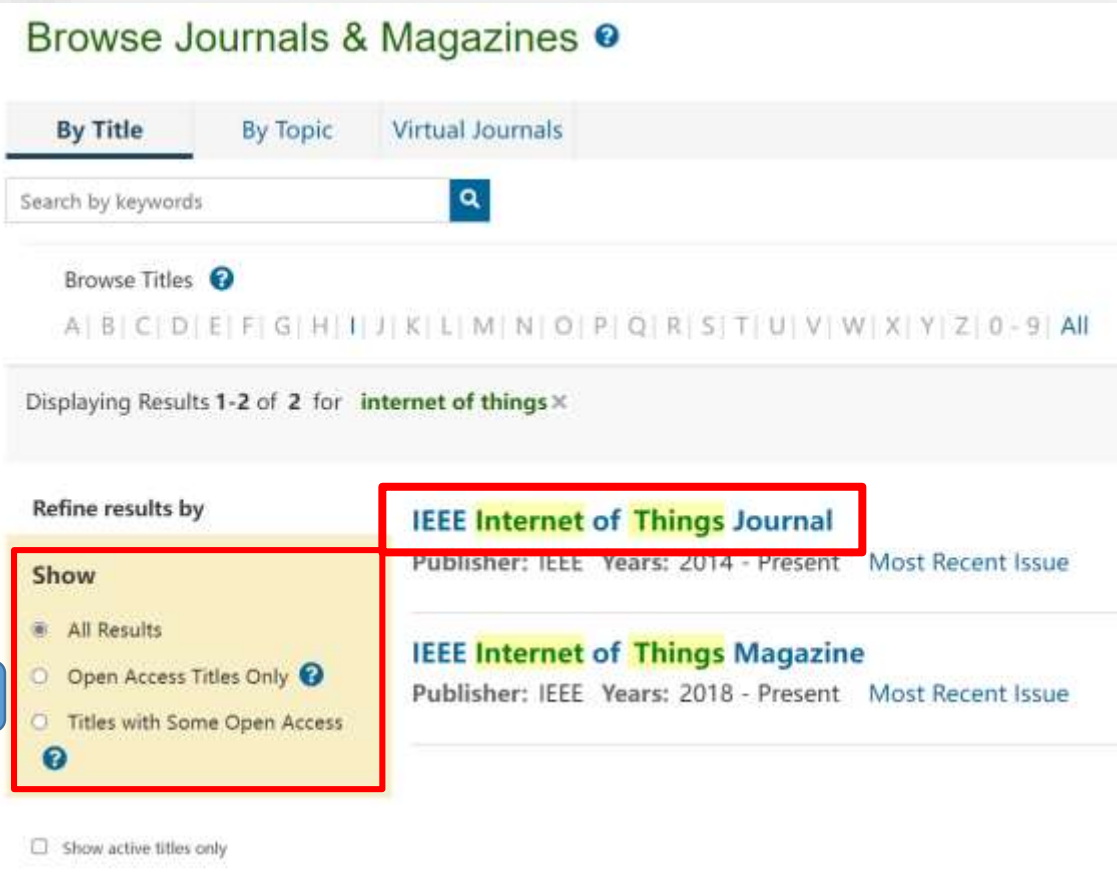

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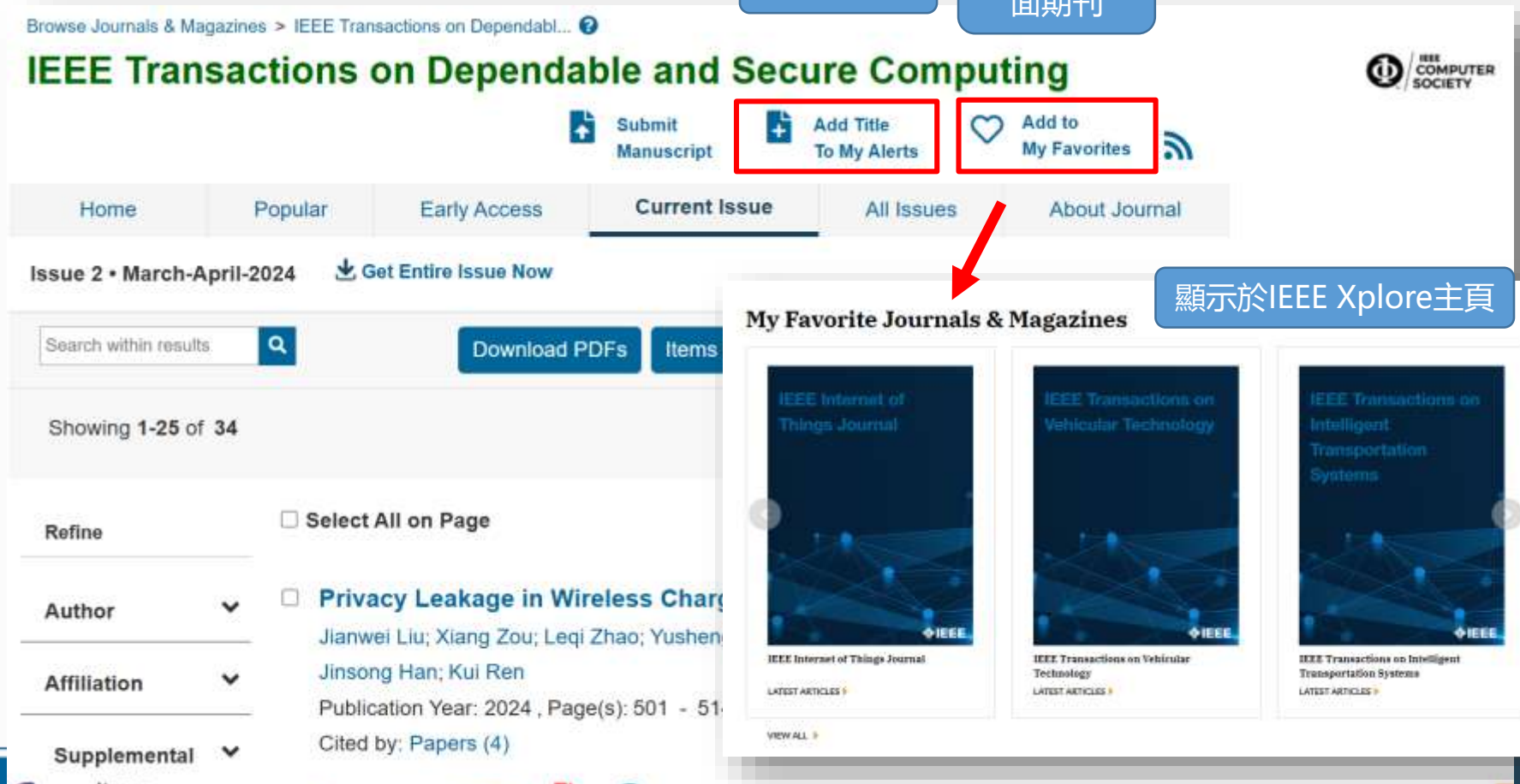

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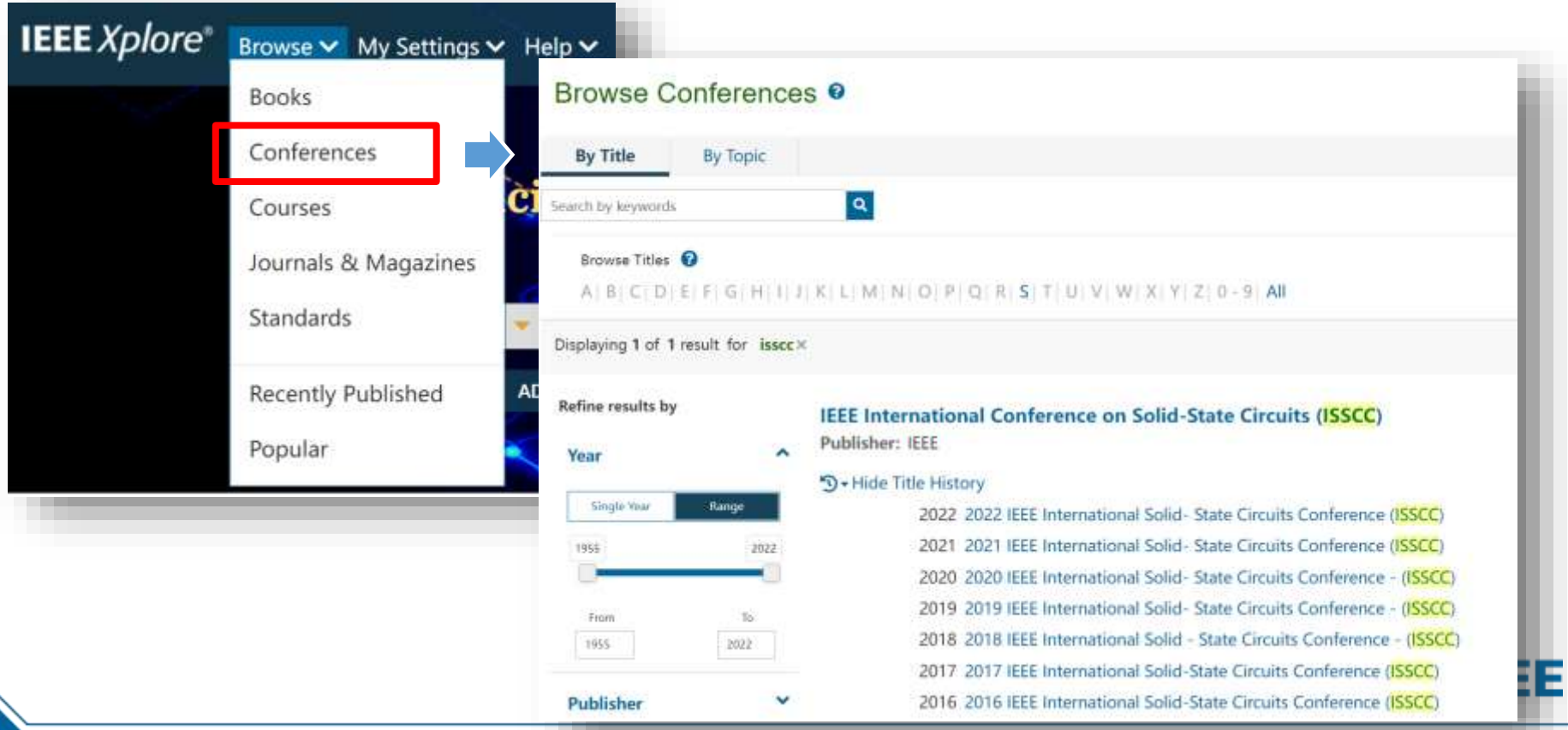
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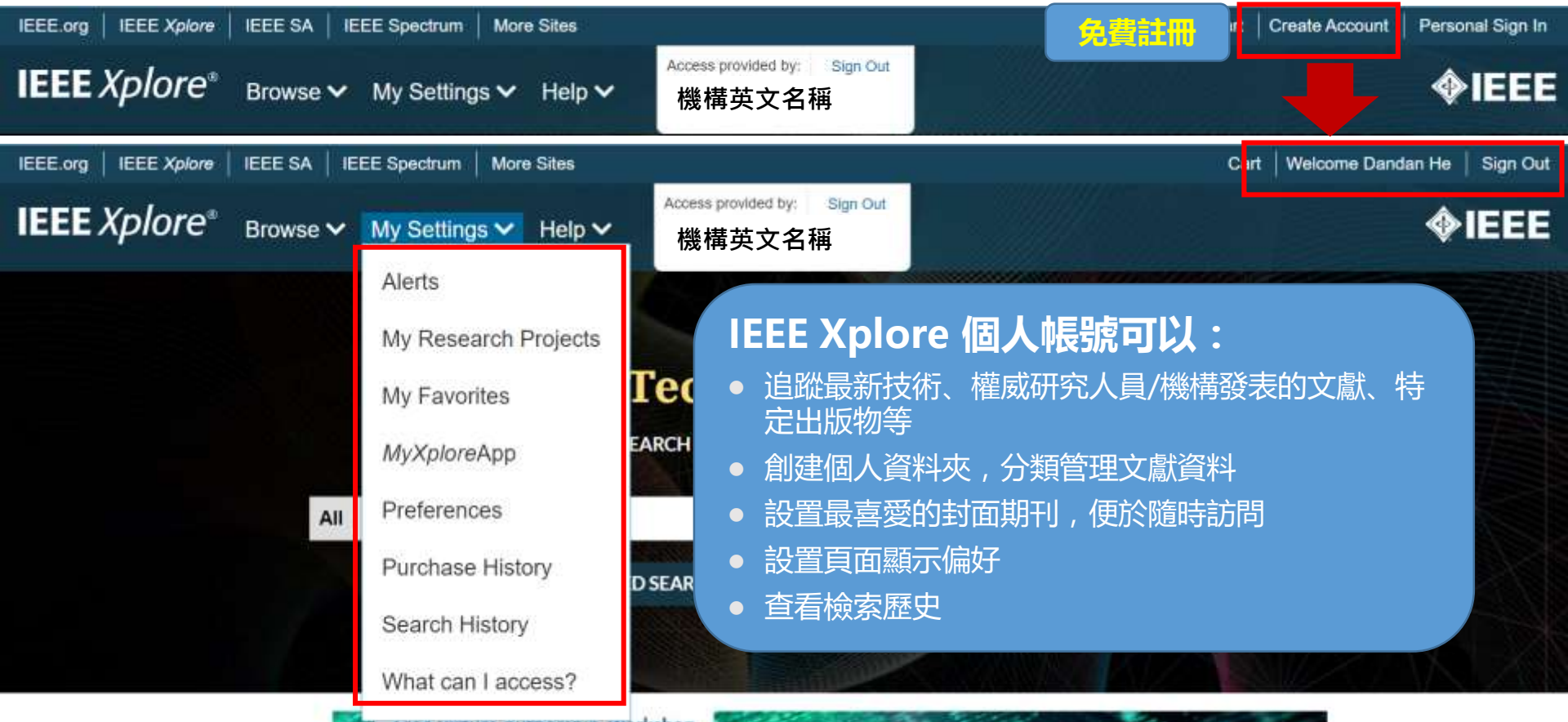

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- 創建個人資料夾，分類管理文獻資料
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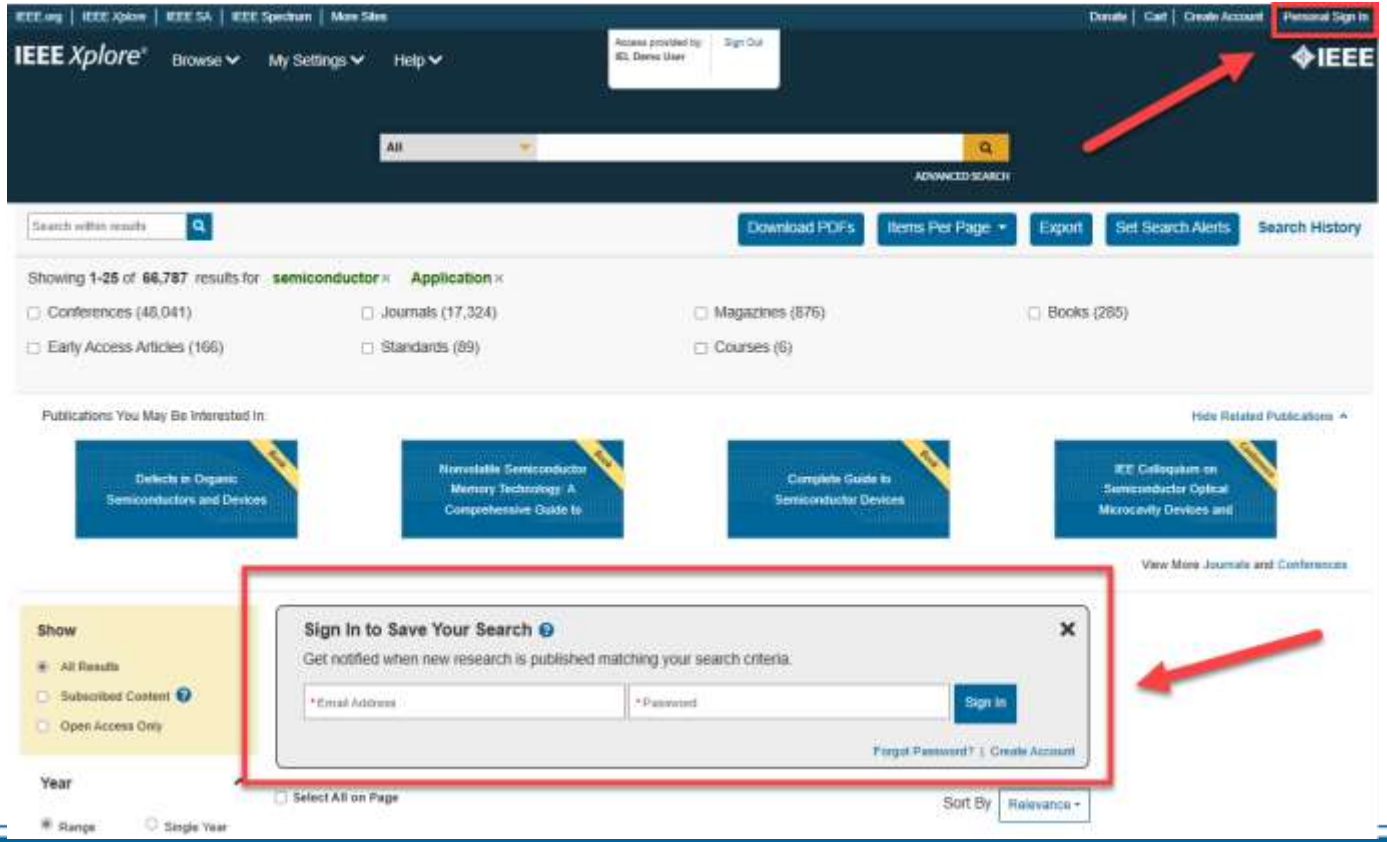

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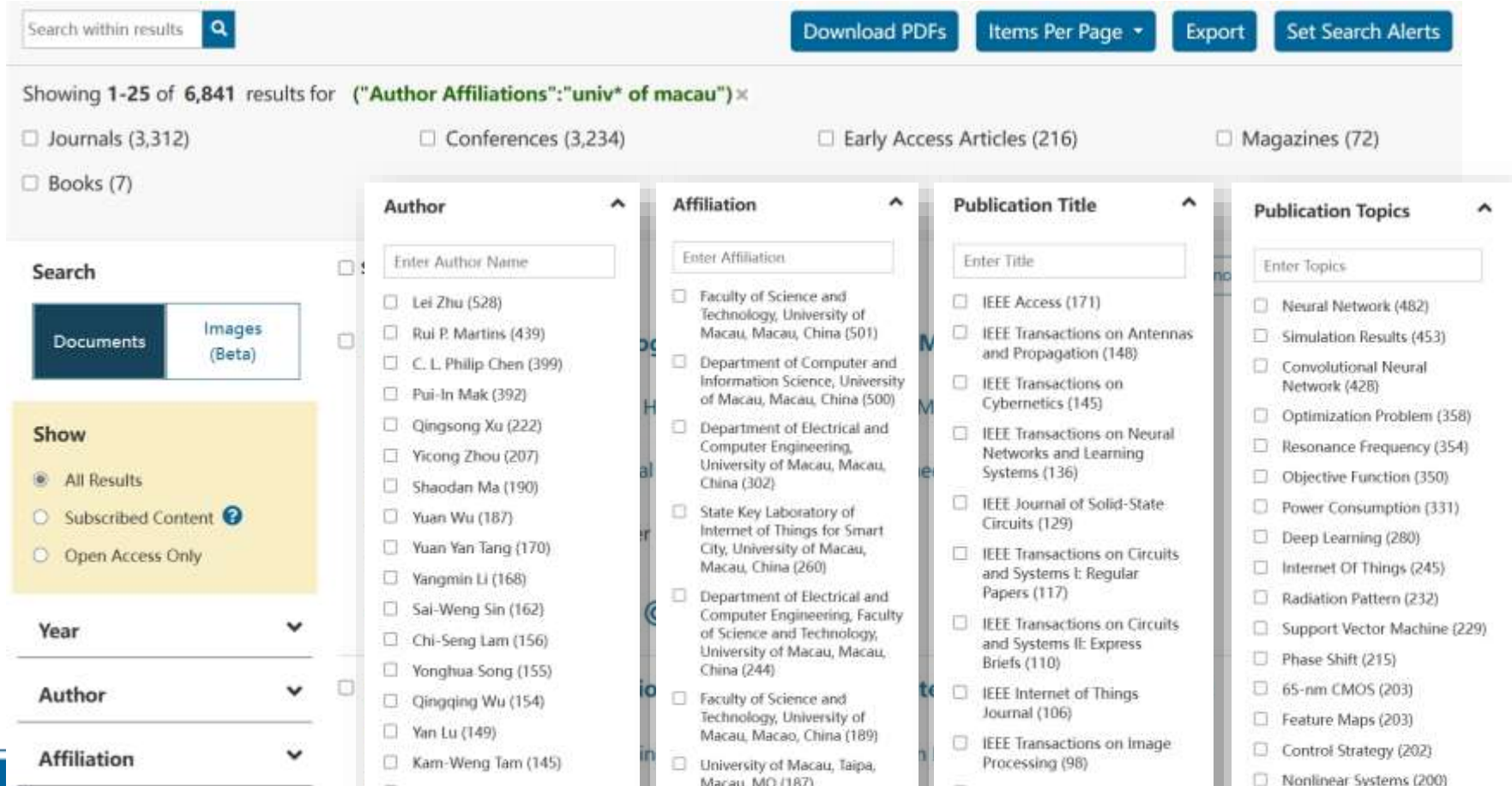

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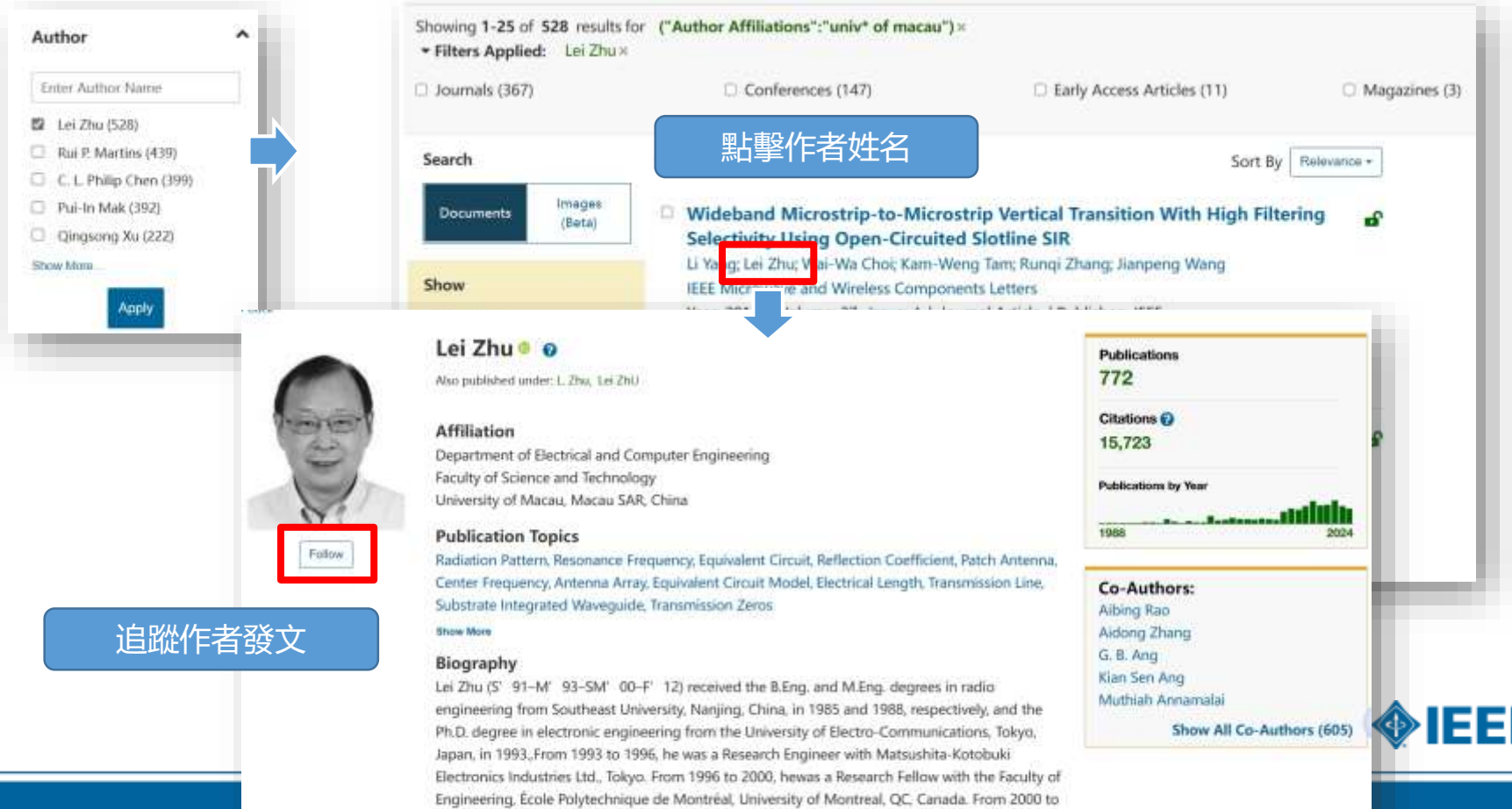

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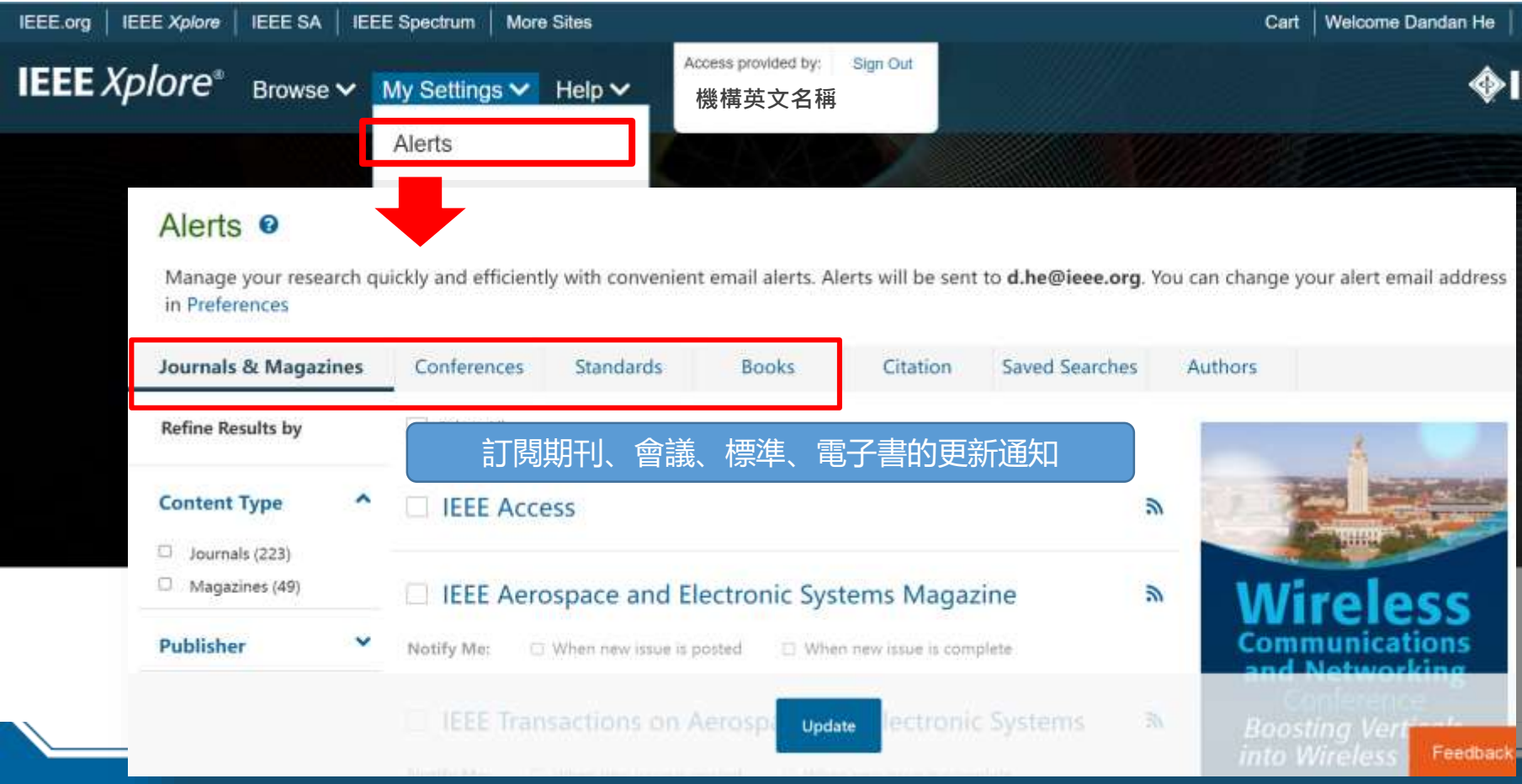

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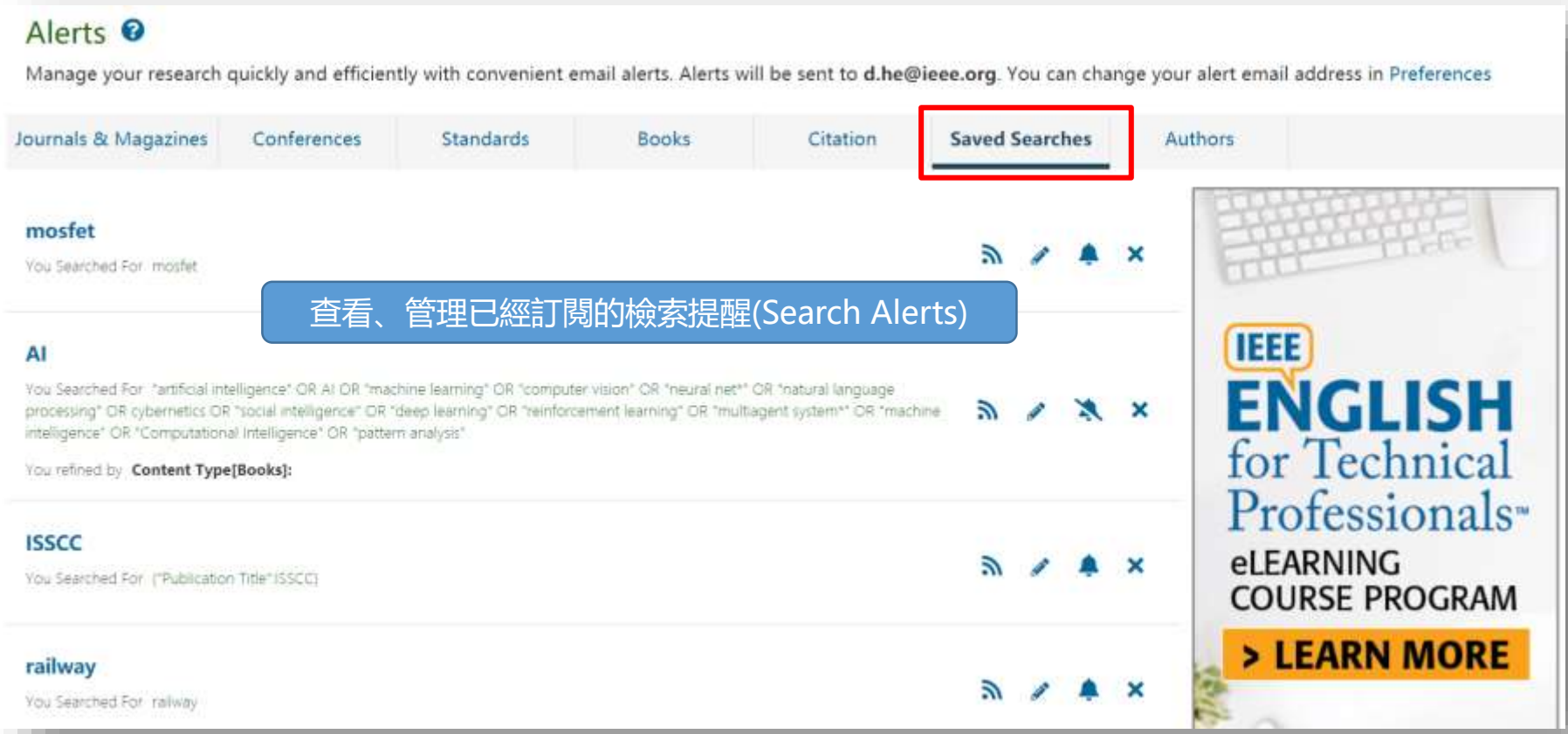

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