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· 認識IEEE

課程目標

· IEEE Xplore® 提供了哪些資源?

課程目標

· IEEE Xplore® 如何協助我作研究?

課程目標

• 提高文獻檢索、閱讀和使用效率的小工具



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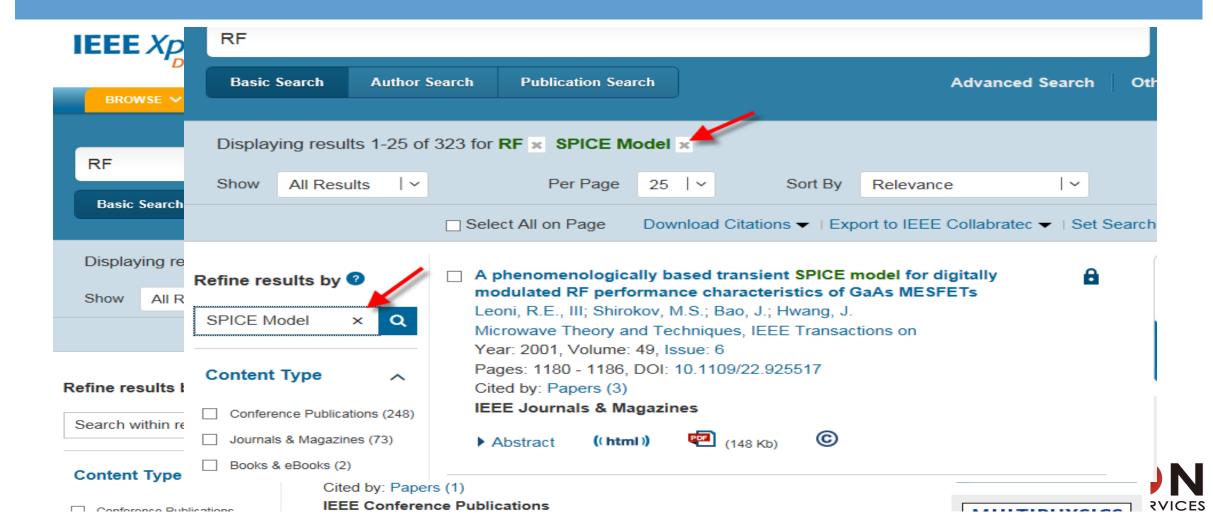
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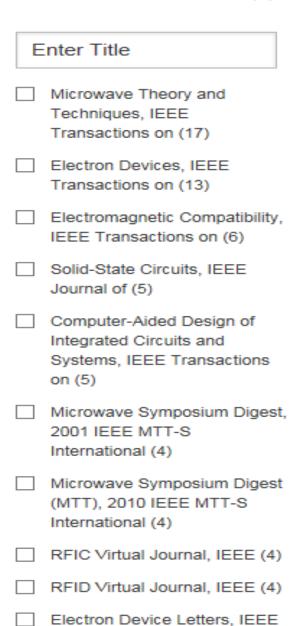
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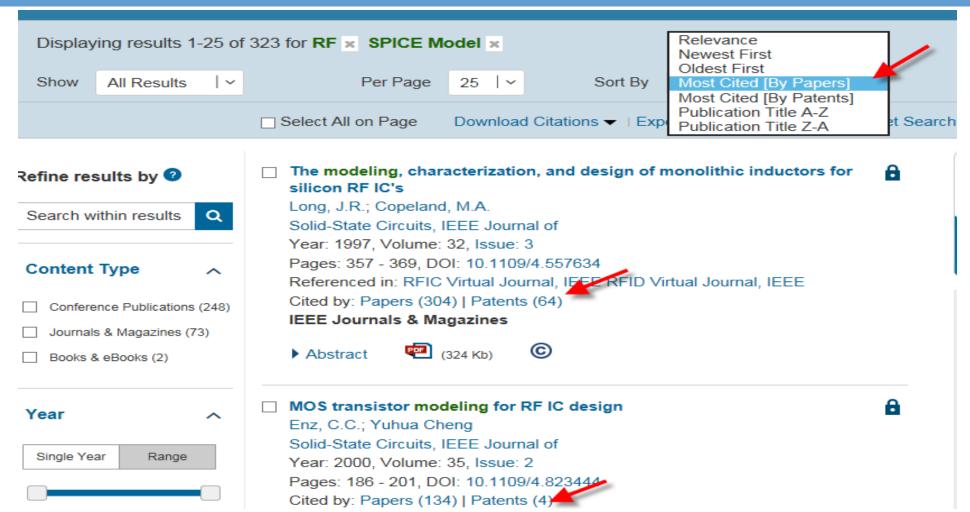
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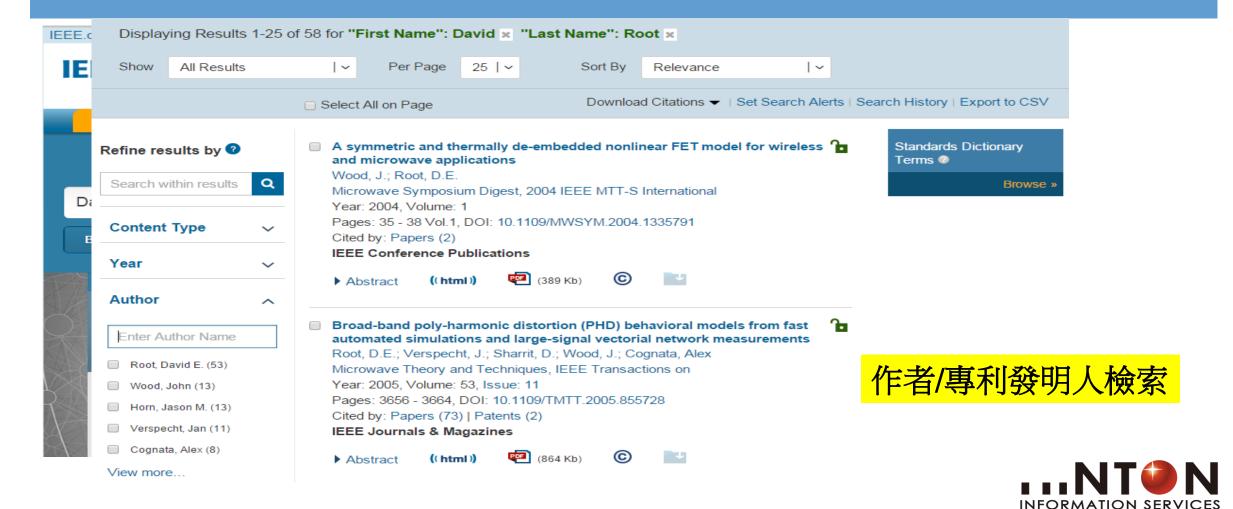
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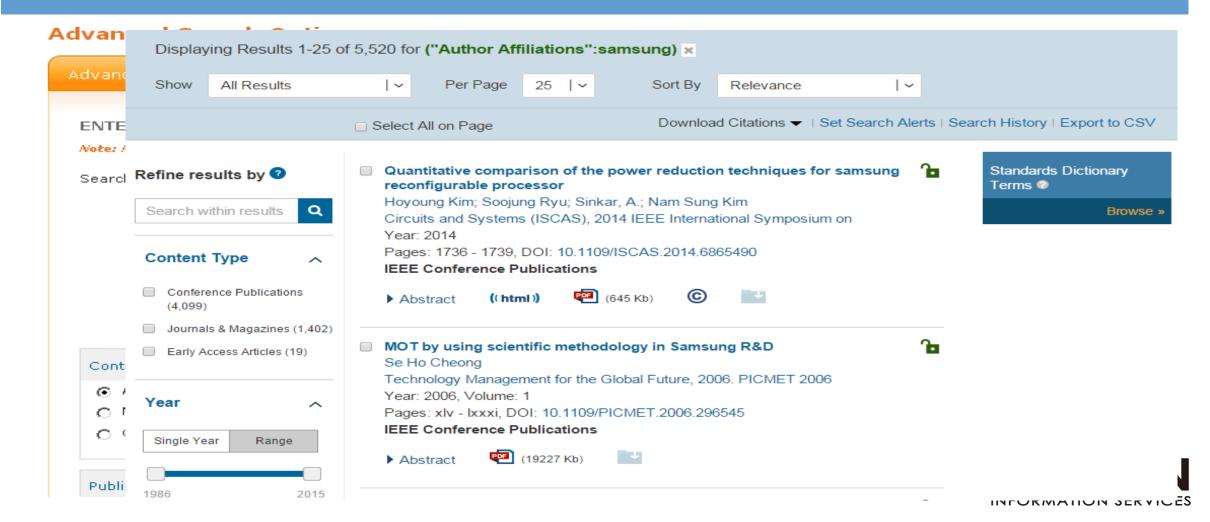


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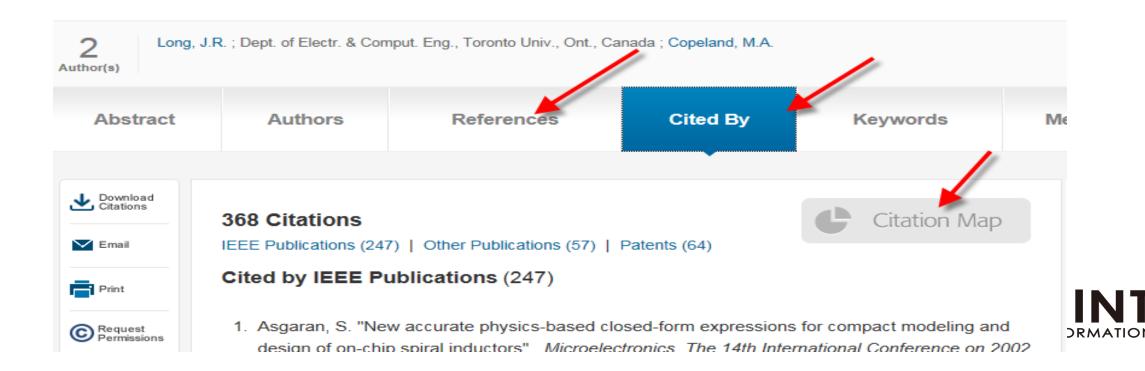
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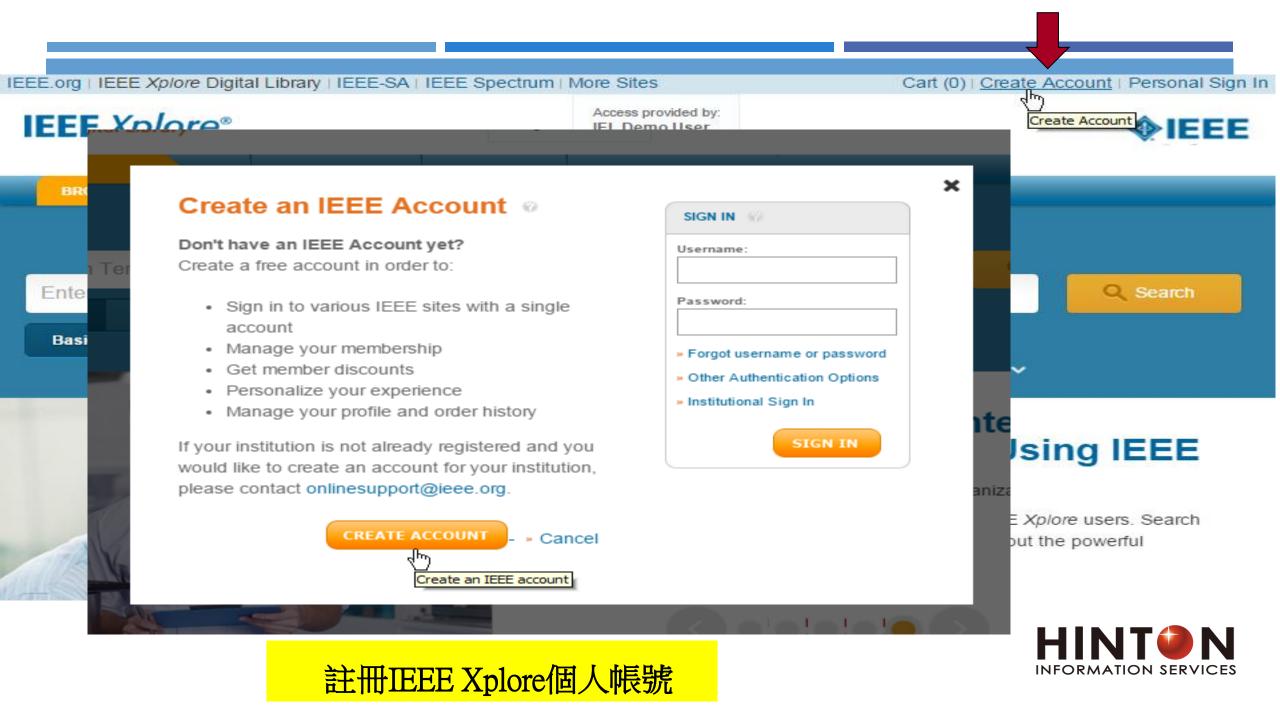
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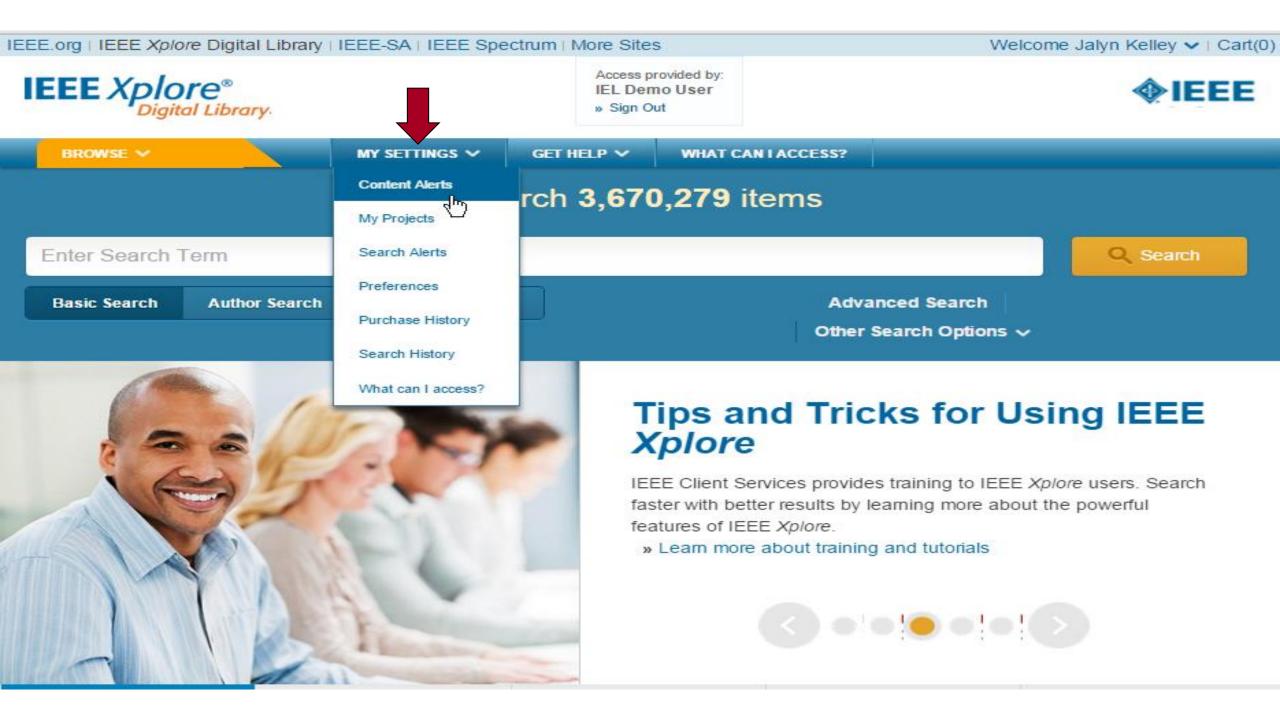
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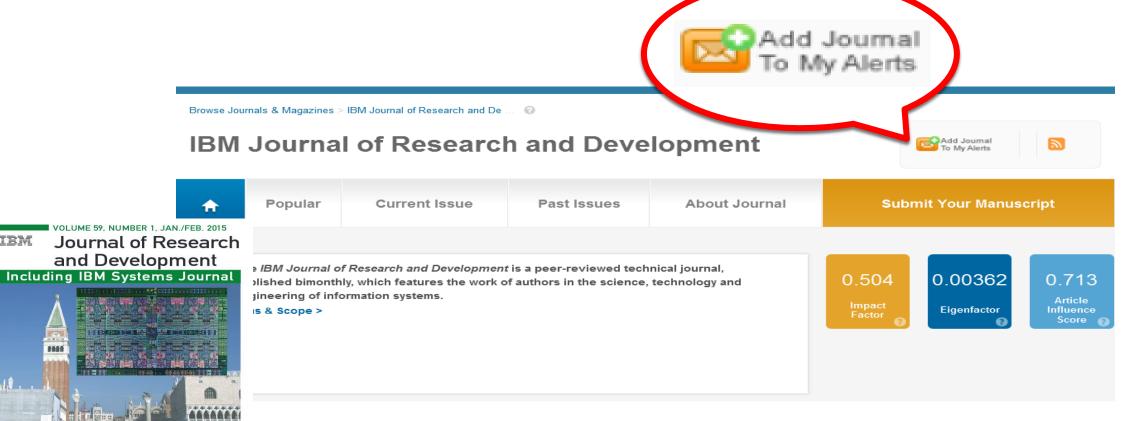
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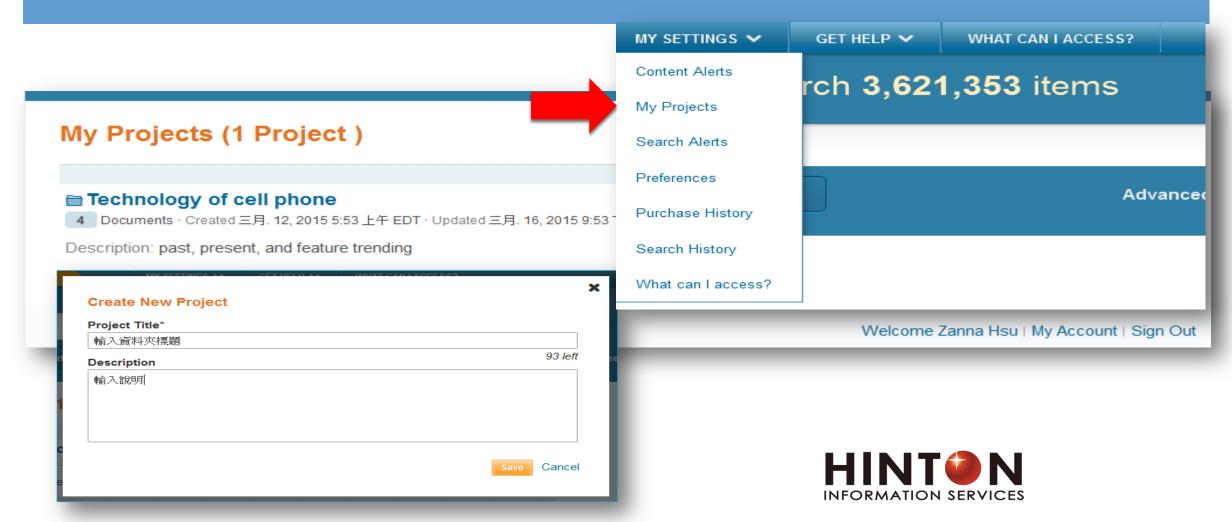
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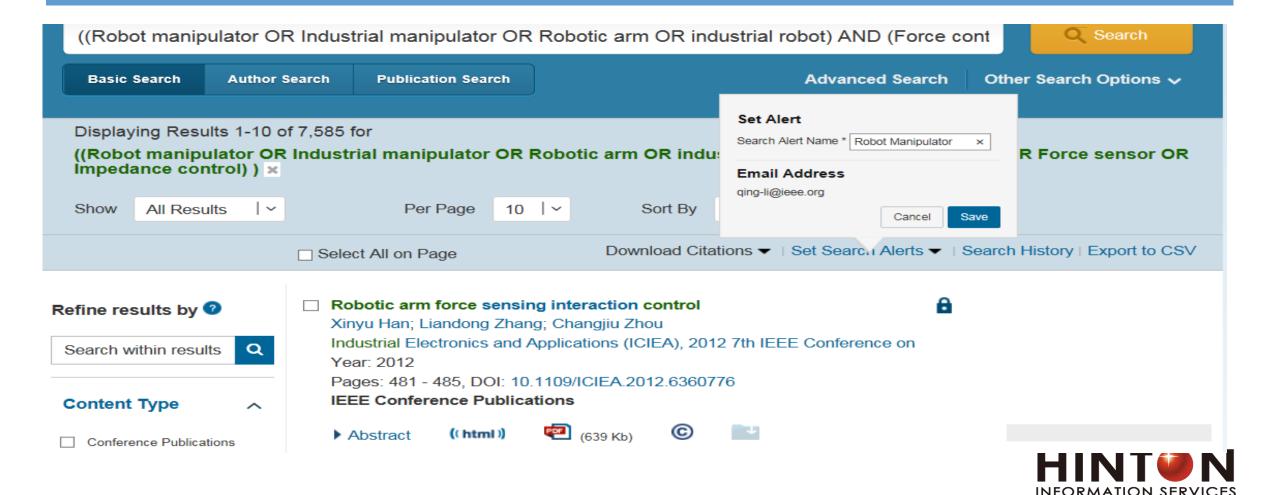
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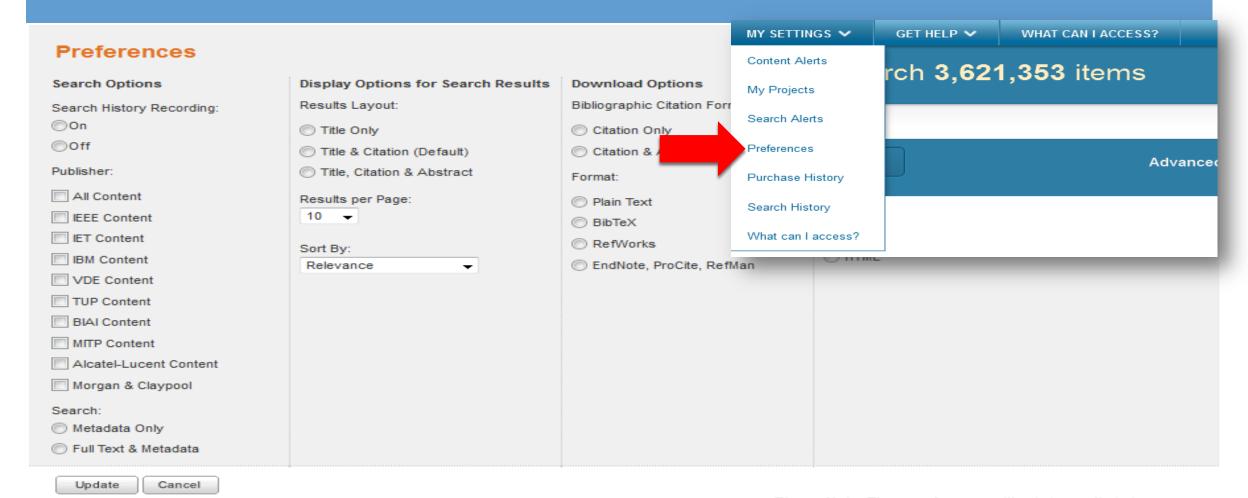




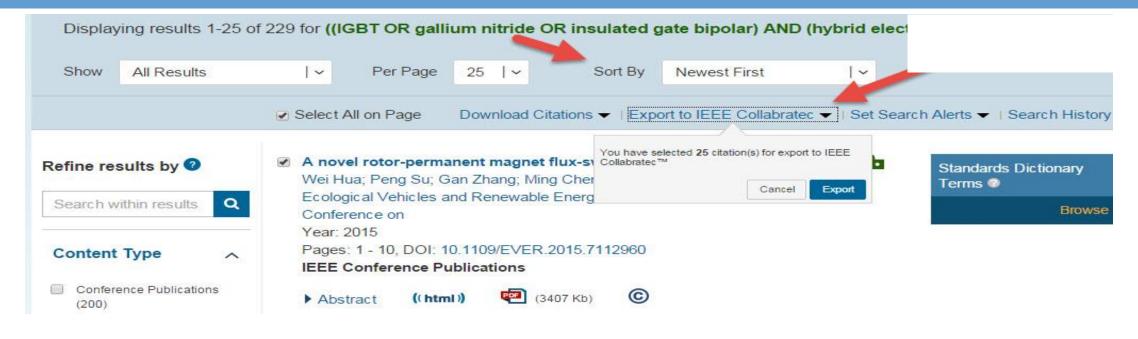
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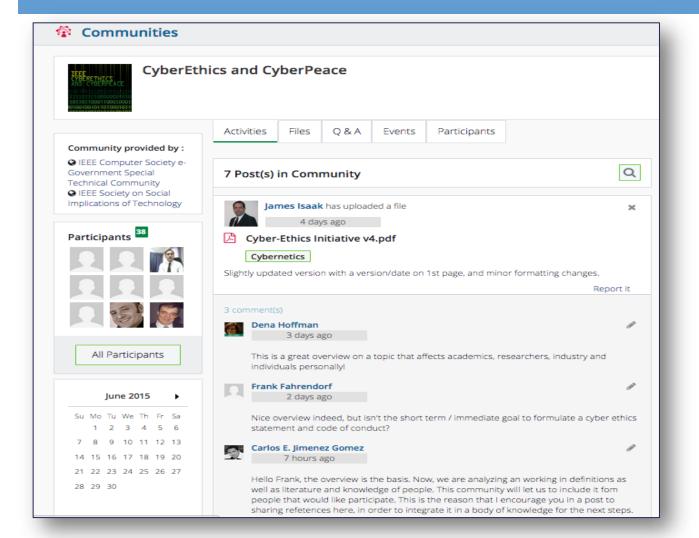
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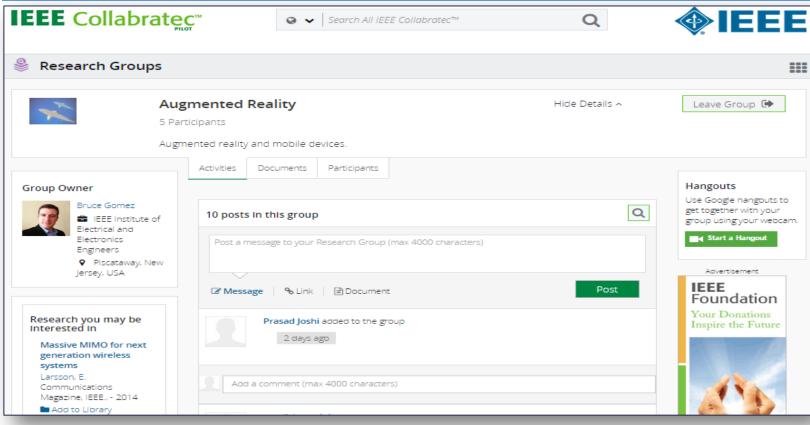
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Software-Defined Networking: A Comprehensive Survey



Kreutz, D.; Ramos, F.M.V.; Esteves Verissimo, P.; Esteve

Rothenberg, C.; Azodolmolky, S.; Uhlig, S.

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













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Abstract

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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

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



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



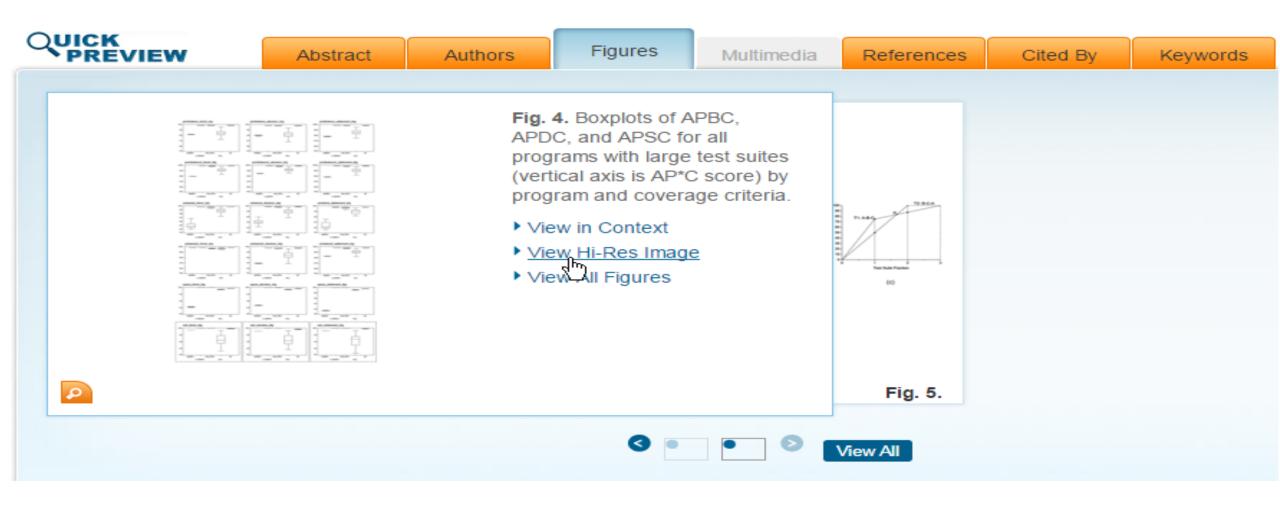
Robert M. Hierons

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.

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SECTION 1 Introduction

JUMP

Appendix

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

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

1Introduction

2Algorithms

3Empirical Study

4Related Work

5Conclusions and Euture Work

The Test Case Prioritization Problem.

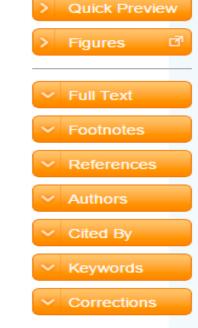
Given: T , a test suite; PT , the set of permutations of T ; f , a function from PT to the real numbers.

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

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> Figures

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Corrections

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

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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The Test Case Prioritization Problem.

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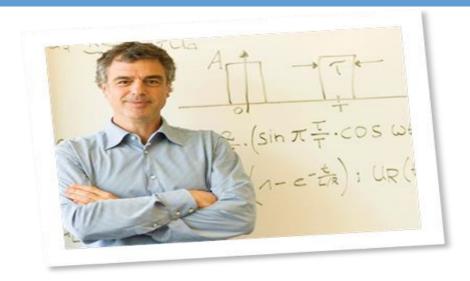
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