

## Overview

AcademTech is a people search engine which has a novel faceted search interface. It uses modern expert search techniques to allow searching for appropriate expertise in academia. The faceted interface facilitates search and browse behaviour.

### 1. Introduction

- **Expert search** is an important problem in academia. People often require to identify relevant **persons for topics** (e.g. for forming collaborations).
- We deploy the Voting Model [1] expert search approach for this application.
- **Faceted search** is a common feature in shopping websites where search results are grouped into a number of **categories** to facilitate a **search and browse** behaviour.
- Facets help the users decide whether to contact a given expert by allowing to filter on the required features of appropriate people.

### 2. Profiling Candidates

- Expertise profiles are built from several sources:
  - Candidate persons and their **homepages** are mined from university contact lists, and through other heuristics.
  - **Publications** are mined from public digital libraries (e.g. DBLP).
  - **Related expertise evidence** from the web (e.g. using a search engine API).

### 3. Retrieval

- The Terrier IR platform is used to rank **documentary evidence of expertise**.
- The expCombMNZ **voting technique** (from the **Voting Model [1]**) converts this into a ranking of candidates.
- Pre-defined facets are used (e.g. location, conference, total publications).

Showing 1-10 of 20 results for **constraint programming**

#### Patrick Prosser

 University: University of Glasgow, Glasgow  
 Publications: 36  
 Publication Period: 1988-2008  
 Co-Authors: 21

#### Maria Fox

 University: University of Strathclyde, Glasgow  
 Publications: 49  
 Publication Period: 1993-2009  
 Co-Authors: 36

#### Derek Long

 University: University of Strathclyde, Glasgow  
 Publications: 52  
 Publication Period: 1988-2009  
 Co-Authors: 50

#### Stuart Chalmers

 University: University of Glasgow, Glasgow  
 Publications: 13  
 Publication Period: 2002-2008  
 Co-Authors: 32

Refine Search

#### BY LOCATION

- [-] Glasgow
  - University of Glasgow (11)
  - University of Strathclyde (9)

#### BY CONFERENCES

- Any (20)
- ECDL (4)
- SIGIR (4)
- ICAPS (4)
- [+] More

#### BY JOURNALS

- Any (20)
- Theor. Comput. Sci. (5)
- Comput. J. (4)
- SIGIR Forum (4)
- [+] More

#### BY TOTAL PUBLICATIONS

- At Least 1

#### BY CO-AUTHORS

- More Than 10

[\[Reset Criteria\]](#)

### 4. User Interface

- Search results suggesting possible candidate experts (Figure 1).
  - Facets permit **search and browse behaviour** to identify interesting candidates.
- A profile page provides evidence about a candidate in a comprehensively structured, interactive display using AJAX (Figure 2).
  - **Supporting evidence** about the candidate's likely relevance.
  - Photo/images related to the expert.
  - Term Cloud of frequent terms in the expert's profile.

#### Craig Macdonald

University: University of Glasgow, Glasgow  
 Homepage: <http://dcs.gla.ac.uk/people/craigm/>  
 Publications: 30  
 Publishing Period: 2005-2009  
 Co-Authors: 19

#### Publications

- Most Relevant: All
- Voting techniques for expert search. Knowl. Inf. Syst., 16, 3, 2008 [\[Link\]](#)  
 Craig Macdonald, Iadh Cunnis
  - Using Relevance Feedback in Expert Search. ECIR, 2007 [\[Link\]](#)  
 Craig Macdonald, Iadh Cunnis
  - High Quality Expertise Evidence for Expert Search. ECIR, 2006 [\[Link\]](#)  
 Craig Macdonald, David Hamish, Iadh Cunnis
  - Expert Search Evaluation by Supporting Documents. ECIR, 2008 [\[Link\]](#)  
 Craig Macdonald, Iadh Cunnis
  - Voting for candidates: adapting data fusion techniques for an expert search task. CIKM, 2006 [\[Link\]](#)  
 Craig Macdonald, Iadh Cunnis
  - Expertise drift and query expansion in expert search. CIKM, 2007 [\[Link\]](#)  
 Craig Macdonald, Iadh Cunnis
  - Searching for expertise using the terrier platform. SIGIR, 2006 [\[Link\]](#)  
 Craig Macdonald, Iadh Cunnis
  - University of Glasgow at TREC 2006: Experiments in Terabyte and Enterprise Tracks with Terrier. TREC, 2006 [\[Link\]](#)  
 Christina Lioma, Craig Macdonald, Vassilis Plachouras, Jie Peng, Ben He, Iadh Cunnis

#### Most Collaborated Co-Authors

- Iadh Cunnis (28)
  - Ben He (14)
  - Vassilis Plachouras (7)
  - Jie Peng (6)
  - Ian Soberton (3)
- [\[All Authors\]](#)

#### Most Popular Terms

development evidence experiments  
 expert testimony map measure  
 model performance query  
 retrieval score sigir system task term  
 terrier track trec web

[\[More\]](#)

#### Related Academics

- Iadh Cunnis
- Ben He
- Jie Peng
- Fabio Crestani
- Ian Ruffroy

#### Related Images



#### Related Web Results

[Terrier Team](#)  
 ... is managed by several members of the Terrier Team at the University of Glasgow. ... Craig Macdonald, Terrier Team  
 © Glasgow, P.J. Blogg we are reading.  
[Dr Craig Macdonald - Information Retrieval Researcher](#)  
 Information Retrieval Researcher in the Department of Computing Science, University of Glasgow. ... I am a post  
 doctorate researcher at the University of Glasgow. ...  
[Craig Macdonald - Department of Computing Science, University of Glasgow](#)  
 Craig Macdonald, email: craigm (at) dcs (dot) gla (dot) ac (dot) uk, organization: Department of Computing Science,  
 University of Glasgow, http://www.dcs.gla.ac.uk ...

Figure 2: The profile page of an academic selected from the search results page of the query 'expert search'. The Publications section lists the publications related to this query.

### 5. Conclusions

- Faceted expertise search facilitates identifying appropriate experts.
- The scope of the system is being expanded to other fields.
- Future research will involve the identification of further facets which reflect quality aspects of academics, and the automatic selection of appropriate facets on a per-query basis.

### Reference

[1] Craig Macdonald, The Voting Model for People Search, PhD thesis, University of Glasgow, 2009.

Figure 1: Results for the query 'constraint programming'. The user has refined the query to experts located in Glasgow, those who have at least one publication and collaborated with more than ten co-authors.