

Hugh E. Williams

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Profile

- Partner at Microsoft, and Development Manager in the web search team at Live Search
- Manager of half of the core web ranking research and development
- Manager of the teams that shipped <http://images.live.com>, <http://video.live.com>, and <http://news.live.com>
- Manager of book search, academic search, xRank, and searchsense
- Nearly 18 years of professional computing experience
- Highly-motivated, focused, accountable leader, developer, and researcher
- Formerly a tenured professor with 72 academic publications
- Author of two books, including the best-selling (over 70,000 copies) “Web Database Applications with PHP and MySQL”
- “Best academic to industry conversion of all time! He came in and built up the Multimedia Search team nearly from scratch, and so far it seems to be one of the more talented and capable teams in the entire company.” – officeballot.com

Education

PhD in Computer Science, RMIT University, Melbourne, Australia (1997)
BAppSc in Computer Science (First-class honors), RMIT University, Melbourne, Australia (1990)
Intermittently studying towards an **MBA**, completed 5 courses

Relevant Experience & Accomplishments

Development and Development Management

- Led the teams that shipped Live Search Images, Live Search Video, xRank, Live Search News, Related Searches, and much of the recent relevance gains in web search
- Manager of Book search, Academic search, and searchsense teams
- Partner in the Microsoft Corporation
- Currently managing more than fifty developers in eight teams
- Outstanding Microsoft performance reviews in 2006 and 2007
- Director of a computing company for five years in the early 1990s
- Experienced C programmer, with excellent knowledge of web technologies, search, compression, computational biology, data structures, and algorithms

Research, Research Leadership, and Teaching

- Professional communicator, researcher, and manager for 11 years
 - Co-built a large research lab - the Search Engine Group - at RMIT University
 - Advised 12 PhDs to completion between 2000 and 2006
 - Published 2 books, 2 book chapters, 15 journal papers, 45 conference papers, over 20 patents, and several other works
 - Almost \$3 million in competitive grant funding since 2002
 - University teaching award in 2001
 - Experienced editor, reviewer, and program committee member
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Employment

Partner Development Manager, Microsoft Corporation, Redmond, WA

2005-present

- Manager of the Domain Relevance team, including multimedia search, news search, book search, academic search, xRank, searchsense, answers, half of web ranking and relevance, and query suggestions development teams

Association Professor in Information Retrieval, RMIT University, Australia

1994-2004

- Tenured faculty
- People manager and research leader
- Award-winning teacher of over 45 courses in 11 years
- Chair, program committee member, associate editor, guest editor, and reviewer for all major Information Retrieval conferences and journals

Director, Williams & Williams, Australia

1990-1994

- Ran a computing consulting company with clients in the oil, telecommunications, and property industries. Architected, designed, and coded many systems, including major telecommunications billing software and oil drilling simulators

Top Ten Publications

Hugh E. Williams, Justin Zobel: Indexing and Retrieval for Genomic Databases. *IEEE Trans. Knowl. Data Eng.* 14(1): 63-78 (2002)

Hugh E. Williams, Justin Zobel: Compressing Integers for Fast File Access. *Comput. J.* 42(3): 193-201 (1999)

Hugh E. Williams, Justin Zobel, Dirk Bahle: Fast phrase querying with combined indexes. *ACM Trans. Inf. Syst.* 22(4): 573-594 (2004)

Michael Cameron, Hugh E. Williams, Adam Cannane: Improved Gapped Alignment in BLAST. *IEEE/ACM Trans. Comput. Biology Bioinform.* 1(3): 116-129 (2004)

Falk Scholer, Hugh E. Williams, John Yiannis, Justin Zobel: Compression of inverted indexes for fast query evaluation. *SIGIR 2002:* 222-229

Falk Scholer, Hugh E. Williams, Andrew Turpin: Query association surrogates for Web search. *JASIST* 55(7): 637-650 (2004)

Steffen Heinz, Justin Zobel, Hugh E. Williams: Burst tries: a fast, efficient data structure for string keys. *ACM Trans. Inf. Syst.* 20(2): 192-223 (2002)

Adam Cannane, Hugh E. Williams: A general-purpose compression scheme for large collections. *ACM Trans. Inf. Syst.* 20(3): 329-355 (2002)

Michael Cameron, Hugh E. Williams: Comparing Compressed Sequences for Fast Nucleotide BLAST Searches. *IEEE/ACM Trans. Comput. Biology Bioinform.* To appear.

Nicholas Lester, Justin Zobel, Hugh E. Williams: Efficient online index maintenance for contiguous inverted lists. *Inf. Process. Manage.* 42(4): 916-933 (2006)

A full list of publications is available at
<http://hughwilliams.com/publications.html>

**Interests,
Achievements,
and
Memberships**

Duke Of Edinburgh's Gold Award for community service, presented by HRH Prince Philip

Excellent skills in the **Indonesian Language**

Formerly a very minor **rock star** with two CD releases and supports with bands such as The Smashing Pumpkins

Enjoy **sprinting, jogging, cycling**, Australian rules football, baseball, touch/flag football, and **cricket**

Former **coach of Women's Rowing** at The University of Melbourne

Long-time member of the **Association for Computing Machinery**

Nominated to the **Microsoft Corporate Bench Program** (a program for senior, high-performing employees) in 2007