

Hugh E. Williams, PhD

hugh@hughwilliams.com

Profile

- Fifteen year search engine research and development veteran
 - Vice President, Search Engineering at eBay
 - Former Partner Development Manager at Microsoft's Bing
 - Former tenured professor with almost 80 academic publications
 - Highly-motivated, get-it-done, accountable leader, developer, and researcher
 - Expert in search engines, information retrieval, and computational biology
 - Author of two books, including the best-selling "Web Database Applications with PHP and MySQL", which has sold over 90,000 copies
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Education

PhD in Computer Science, RMIT University, Australia (1997)
BAppSc in Computer Science (with first-class honors), RMIT University, Australia (1990)

Experience & Accomplishments

Development Management

- Ten years experience in software engineering and development management
- Currently Vice President, Search Engineering at eBay
- Former Development Manager of around 150 developers at Microsoft's Bing
- Director of a computing company for five years in the early 1990s
- Experienced C programmer, with excellent knowledge of web technologies, search relevance and algorithms, data compression, computational biology, data structures, and algorithms

Research, Research Leadership, and Teaching

- Ten years experience as a communicator, researcher, professor, and manager
 - Co-built a large research lab – the Search Engine Group – at RMIT University
 - Advised 12 PhDs to completion between 2000 and 2006
 - Published 72 works, including 2 books, 2 book chapters, 15+ journal papers, 40+ refereed conference papers, 15+ patents, and 10+ other works
 - Around 30 patents pending
 - Almost \$3 million in competitive grant funding since 2002
 - University teaching award in 2001
 - Experienced editor and reviewer
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Career

Vice President, Search Engineering, eBay Inc, Campbell, CA *2009-present*

I manage the engineering team that's responsible for eBay's search engine.

Partner Development Manager, Live Search, Microsoft Corporation, Redmond, WA *2005-2009*

I'm proud to say that many of the features of the first Bing release were created by my team.

I managed the development of all user-facing web search relevance features, including the left-rail explore pane (with its "table of contents"), navigational query treatments, query-biased summaries, "deeplinks", related searches, and whole page results relevance. Additionally, I managed the Powerset team in San Francisco. I also managed the end-to-end development of Internet Explorer 8's suggested sites feature, image search, video search, news search, xrank, and almost all instant answers (such as the encarta, news, images, and so on).

Associate Professor in Information Retrieval, School of Computer Science and IT, RMIT University, Australia *1994-2004*

Director / Software Engineer, Williams & Williams, Australia *1990-1994*

**Top Ten
Refereed
Works**

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)

**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

Running, cycling, gym, Australian rules football, baseball, NFL, and cricket enthusiast

Former **coach of Women's Rowing** at Janet Clarke Hall (a residential college at the The University of Melbourne)

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