

Hugh E. Williams, PhD

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Profile

- Web and search engine R&D veteran
 - Experienced executive and engineering vice president
 - Former tenured professor with 101 publications
 - Expert in search engines, information retrieval, and computational biology
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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

- Twelve years experience in software engineering and engineering leadership
- Vice President of Search and Experience Technology at eBay
- Development Manager at Microsoft's Bing / Live Search / MSN Search
- 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 of experience as a researcher, professor, and manager
 - Author of three books, including the best-selling "Web Database Applications with PHP and MySQL", which has sold over 100,000 copies
 - Co-built a large research lab – the Search Engine Group – at RMIT University
 - Advised 12 PhDs to completion between 2000 and 2006
 - Published 101 works, including 3 books, 5 patents, and 20 journal papers
 - Almost \$3 million in competitive grant funding
 - Experienced reviewer and program committee member for all major Information Retrieval venues
 - Taught over 100 courses from 1993 to 2004
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Career

Vice President, Search and Experience Technology, eBay Inc, San Jose, CA *2009-present*

I manage a team around 400 engineers that are responsible for eBay's search engine, home page, merchandizing, advertising, catalogs, selling flows, and classification systems

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

I managed a team of over 150 engineers at Bing, and am best-known for starting the team that built image and video search.

I managed the development of all user-facing web search relevance features. Additionally, I managed the Powerset team, 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 news, images, video, 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 Publications

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

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**, 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)

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

Julia H. Farago, **Hugh E. Williams**, James E. Walsh, Nick Whyte, Kavi Goel, Philip Fung, Ariel Lazier, Kenneth A. Moss, Ethan N. Ray: Object Search UI and Dragging Object Results, United States Patent 7664739 and European Patent Application EP1984854 and WIPO Patent Application WO/2007/094902, 2010.

Andrew Turpin, Yohannes Tsegay, David Hawking, **Hugh E. Williams**: Fast generation of result snippets in web search. SIGIR 2007: 127-134

Hugh E. Williams, Xian-Sheng Hua, Hong-Qiao Li, Xiaodong Fan, Richard Qian: Forming a Representation of a Video Item and Use Thereof, United States Patent Application 20090007202, 2007.

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, and cricket enthusiast

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

Finalist in the 2010 **RMIT Alumni of the Year**