

Hugh E. Williams, PhD

hugh@hughwilliams.com

Profile

- Large-scale web services and search engine engineering veteran
 - Currently Vice President, Buyer Experience Engineering at eBay
 - Former Partner Development Manager at Microsoft's Bing
 - Former tenured professor with 99 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
-

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

- Eleven years experience in software engineering and development management
- Currently Vice President, Buyer Experience 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 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 99 works, including 2 books, 2 book chapters, 15+ journal papers, 2 granted US patents, 40+ refereed conference papers, 25+ patent applications, and 10+ other works
 - Almost \$3 million in competitive grant funding since 2002
 - Experienced reviewer and program committee member for all major Information Retrieval venues
 - Taught over 100 classes from 1993 to 2004
-

Career

Vice President, Buyer Experience Development, eBay Inc, Campbell, CA *2009-present*

I manage a team of over 200 engineers that are responsible for eBay's search engine, home page, catalogs and classification, and merchandizing

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 of over 150 developers at Microsoft.

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 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, NFL, and cricket enthusiast
- Long-time member of the **Association for Computing Machinery**