

## Ryen W. White, Ph.D.

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### Biography

Ryen White is a Partner Research Manager at Microsoft Research. In recent roles, he led the applied science organization for Cortana, served as chief scientist for Microsoft Health, and was a principal researcher at Microsoft Research. Ryen's research has focused on understanding search interaction and on developing tools to help people search more effectively. He received his Ph.D. in Computer Science from University of Glasgow, United Kingdom, in 2004. Ryen has published more than 200 conference papers and journal articles in Web search, log analysis, and user studies of search systems. He was identified as the "Center of the SIGIR Universe" (most central author in the co-authorship graph) in the 40 years of the ACM SIGIR conference. Ryen has received many best-paper awards in conferences, journals, and elsewhere, including at SIGIR (2007, 2010, 2013), ACM CIKM (2014, 2015), ACM SIGCHI (2011), and in JASIST (2010). His doctoral research received the British Computer Society's (BCS) *Distinguished Dissertation Award* for the best Computer Science Ph.D. dissertation in the United Kingdom in 2004/2005. In 2014, Ryen received the *Microsoft BCS/BCS IRSG Karen Spärck Jones Award* for contributions to Information Retrieval. His new book, entitled *Interactions with Search Systems*, was published in 2016 by Cambridge University Press and received the Association for Information Science and Technology's (ASIS&T) *Best Information Science Book Award* in 2017. Ryen has led many initiatives on search interaction, especially exploratory search, including an NSF-sponsored invitational workshop and special issues of Communications of the ACM and IEEE Computer, and other journals. From 2008-2013, Ryen co-organized the HCIR Symposium, which has evolved into the ACM SIGIR's Conference on Human Information Interaction and Retrieval (CHIIR). He served as the founding steering committee chair for CHIIR. Ryen has served as area chair for many top conferences including SIGIR, WSDM, WWW, and SIGCHI. He is editor-in-chief of the *Information Retrieval Journal*, and he serves on the editorial board of ACM TOIS, ACM TWEB, and Foundations and Trends in Information Retrieval. Ryen is the technical program co-chair of The Web Conference 2019 (formerly WWW 2019) and was the technical program co-chair of SIGIR 2017. Technology derived from his research has shipped in many Microsoft products, including Bing, Xbox, Internet Explorer, Skype, and Cortana. Ryen is a BCS Fellow.

### Professional Experience

<b>Partner Research Manager</b> Microsoft Research, Redmond, USA	2018 – present
<b>Principal Applied Science Manager</b> Microsoft Cortana, Bellevue, USA	2017 – 2018
<b>CTO, Health Intelligence</b> Microsoft Health, Redmond, USA (joined high-potential senior leader program)	2015 – 2017
<b>Principal Researcher</b> Microsoft Research, Redmond, USA	2006 – 2017
<b>Research Scientist</b> Institute for Advanced Computer Studies, University of Maryland, College Park, USA	2004 – 2006
<b>Visiting Research Scientist (supported by the Royal Society of Edinburgh)</b> Information School, University of Washington, Seattle, USA	2003

## Education

<b>Ph.D.</b>	Computer Science, University of Glasgow, UK Advisors: Joemon M. Jose, Ian Ruthven, C.J. van Rijsbergen Dissertation: "Implicit Feedback for Interactive Information Retrieval"	2004
<b>B.Sc. (Hons)</b>	Computer Science and Management Studies, University of Glasgow, UK	2001

## Honors and Awards

- **ASIS&T Best Information Science Book Award 2017**  
For "Interactions with Search Systems" [Sole Author]  
Awarded to the outstanding book in information science published during the preceding calendar year.
- **Best Student Paper Award**  
For "Analyzing and Predicting Task Reminders"  
ACM UMAP Conference on User Modeling Adaptation and Personalization (UMAP 2016)
- **Editors' Choice Award**  
For "Early Identification of Adverse Drug Reactions from Search Log Data" [First Author]  
Journal of Biomedical Informatics (JBI)
- **Best Student Paper Award**  
For "Struggling and Success in Web Search"  
ACM CIKM Conference on Information and Knowledge Management (CIKM 2015)
- **Microsoft BCS/BCS IRSG Karen Spärck Jones Award 2014**  
For contributions to information retrieval, specifically "*to a better understanding of search interaction, e.g., through novel and creative analyses of vital and as of yet unexplored aspects of searcher behavior, closely coupled with the development of models and applications for improving the search experience*".
- **Best Paper Award**  
For "Cross-Device Search"  
ACM CIKM Conference on Information and Knowledge Management (CIKM 2014)
- **Best Paper Award**  
For "Beliefs and Biases in Web Search" [Sole Author]  
ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2013)
- **Best Paper Award**  
For "Effects of Community Size and Contact Rate in Synchronous Social Q&A" [First Author]  
ACM SIGCHI Conference on Human Factors in Computing Systems (SIGCHI 2011)
- **Best Paper Award**  
For "Assessing the Scenic Route: Measuring the Value of Search Trails in Web Logs" [First Author]  
ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2010)
- **Best Paper Award**  
For "Evaluating Advanced Search Interfaces Using Established Information-Seeking Models"  
Journal of the American Society for Information Science and Technology (JASIST 2010)
- **Best Paper Award**  
For "Studying the Use of Popular Destinations to Enhance Web Search Interaction" [First Author]  
ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2007)
- **BCS/CPHC Distinguished Dissertation Award 2005**  
For "Implicit Feedback for Interactive Information Retrieval"  
Awarded to the best Computer Science Ph.D. dissertation in the United Kingdom for 2004/2005.

- **Best Student Paper Award**  
For “A Simulated Study of Implicit Feedback Models” [First Author]  
European Conference on Information Retrieval (ECIR 2004)
- **Best Paper Award**  
For “A Granular Approach to Web Search Result Presentation” [First Author]  
IFIP TC13 International Conference on Human-Computer Interaction (INTERACT 2003)
- **UNISYS Executive of Interest Project Prize**  
Best Undergraduate Computing Science Thesis, University of Glasgow (2000/2001)

## Honorable Mentions and Best Paper Finalists

- **Honorable Mention Award**  
For “Exploring Time-Dependent Concerns about Pregnancy and Childbirth from Search Logs”  
ACM SIGCHI Conference on Human Factors in Computing Systems (SIGCHI 2015)
- **Honorable Mention Award**  
For “No Clicks, No Problem: Using Cursor Movements to Understand and Improve Search”  
ACM SIGCHI Conference on Human Factors in Computing Systems (SIGCHI 2011)
- **Best Paper Finalist**  
For “Evaluating Search Systems Using Result Page Context”  
Symposium on Information Interaction in Context (IiX 2010)
- **Best Paper Finalist**  
For “Modeling Long-Term Search Engine Usage” [First Author]  
International Conference on User Modeling, Adaptation and Personalization (UMAP 2010)

## Other Awards

- **Center of the SIGIR Universe**  
Awarded to the author most central in the ACM SIGIR co-authorship graph over 40 years of publications at the SIGIR conference (SIGIR 2017).
- **John Moyes Lessells Scholarship**  
Royal Society of Edinburgh (2003)

## Editor-in-Chief

- Information Retrieval Journal

## Editorial Board Memberships

### PRESENT

- Information Retrieval Journal (2009 – present) [Editor-in-Chief from 2018]
- ACM Transactions on Information Systems (TOIS) (2010 – present) [Senior Associate Editor]
- ACM Transactions on the Web (TWEB) (2011 – present) [Senior Associate Editor]
- Foundations and Trends in Information Retrieval (FnTIR) (2014 – present)

### PAST

- Information Processing and Management (IP&M) (2014 – 2016)

## Track/Area Chairing and Senior Program Committee Memberships

- AAAI: 2017, 2018
- ACM CHIIR: 2016, 2017
- ACM CIKM: 2010-2012, 2014, 2015-2018
- ACM SIGIR: 2010-2014, 2016, 2018, 2019 [Short Papers Chair 2015, Program Chair 2017]
- ACM WSDM: 2012, 2016-2019
- ASIS&T: 2014
- TheWebConf (formerly known as WWW): 2010, 2011, 2015 [Program Chair 2019]

## Other Organizational Roles

- Technical program co-chair for TheWebConf 2019.<sup>1</sup>
- Technical program co-chair for ACM SIGIR 2017.
- Founding chair, Steering Committee for ACM SIGIR Conference on Human Information Interaction and Retrieval (2014-2016).
- Short papers co-chair for ACM SIGIR 2015.
- Guest co-editor of *ACM Transactions on Information Systems* special issue: "Contextual Search and Recommendation" (2013).
- Co-chair of Human Computer Interaction and Information Retrieval Symposium (2008 - 2013).
- Co-chair of ACM SIGIR workshop: "Health Search and Discovery" (2013).
- Guest co-editor of *Information Processing and Management* special issue: "Human-Computer Information Retrieval" (2013).
- Guest co-editor of *IEEE Computer* special issue: "Information Seeking Support Systems" (2009).
- Treasurer of ACM Conference on Information and Knowledge Management (2008).
- Posters chair of European Conference on Information Retrieval (2008).
- Co-chair of National Science Foundation Invitational workshop: "Information Seeking Support Systems" (2008).
- Co-chair of ACM SIGIR workshop: "Web Information Seeking and Interaction" (2007).
- Co-chair of ACM SIGCHI workshop: "Exploratory Search and HCI" (2007).
- Guest co-editor of *Information Processing and Management* special issue: "Evaluating Exploratory Search Systems" (2008).
- Co-chair of ACM SIGIR workshop: "Evaluating Exploratory Search Systems" (2006).
- Guest co-editor *Communications of the ACM* special issue: "Supporting Exploratory Search" (2006).

## Professional Memberships

- Fellow of the British Computer Society: 2016 – Present
- Member of the ACM and ACM SIGIR: 2005 – Present

## Publications

### BOOKS

1. **Ryen W. White.** (2016). *Interactions with Search Systems*. Cambridge University Press: New York, NY. [ASIS&T BEST INFORMATION SCIENCE BOOK AWARD]

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<sup>1</sup> The Web Conference 2019: The Twenty-Eighth International WWW Conference.

2. **Ryen W. White** and Resa A. Roth. (2009). Exploratory Search: Beyond the Query-Response Paradigm. *Synthesis Lectures on Information Concepts, Retrieval, and Services*, 1(1): pp. 1-98. Morgan and Claypool.

### BOOK CHAPTERS

1. **Ryen W. White** (2011). Interactive techniques. In Ian Ruthven and Diane Kelly (Eds.), *Interactive Information Seeking, Behaviour and Retrieval*. Facet Publishing: London, UK.

### INVITED EDITORIALS

1. Eric Horvitz and **Ryen W. White** (2017). Making connections: Advancing healthcare research via consumer mobile devices. *Circulation: Cardiovascular Quality and Outcomes*, 10(3).

### EDITOR (\* JOURNAL SPECIAL ISSUES)

1. Noriko Kando, Tetsuya Sakai, Hideo Joho, Hang Li, Arjen P. de Vries, and **Ryen W. White**. (2017). *Proceedings of the 40th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2017)*. ACM Press.
2. \*Paul N. Bennett, Kevyn Collins-Thompson, Diane Kelly, **Ryen W. White**, and Yi Zhang. (2015). Overview of the Special Issue on contextual search and recommendation. *ACM Transactions on Information Systems*, 33(1), 1e.
3. \***Ryen W. White**, Rob Capra, Gene Golovchinsky, Bill Kules, Daniel Tunkelang, and Catherine Smith. (2013). Human-Computer Information Retrieval. *Information Processing and Management*, 49(5).
4. Rob Capra, Bill Kules, Daniel Tunkelang, and **Ryen W. White**. (2010). *Proceedings of the Fourth Workshop on Human-Computer Information Retrieval (HCIR 2010)*.
5. Bill Kules, Daniel Tunkelang, and **Ryen W. White**. (2009). *Proceedings of the Third Workshop on Human-Computer Information Retrieval (HCIR 2009)*.
6. \*Gary Marchionini and **Ryen W. White**. (2009). Information-seeking support systems. *IEEE Computer*, 42(3).
7. **Ryen W. White**, Daniel Tunkelang, and Bill Kules. (2008). *Proceedings of the Second Workshop on Human-Computer Information Retrieval (HCIR 2008)*.
8. Craig Macdonald, Iadh Ounis, Vassilis Plachouras, Ian Ruthven, and **Ryen W. White**. (2008). Advances in Information Retrieval: *Proceedings of the 30th European Conference on IR Research*.
9. \***Ryen W. White**, Gheorghe Muresan, and Gary Marchionini. (2008). Evaluating exploratory search systems. *Information Processing and Management*, 44(2).
10. Kerry Rodden, Ian Ruthven, and **Ryen W. White**. (2007). *Web Information Seeking and Interaction: Proceedings of SIGIR 2007 workshop*.
11. **Ryen W. White**, Steven M. Drucker, Gary Marchionini, Marti Hearst, and m.c. schraefel. (2007). *Exploratory Search and HCI: Proceedings of SIGCHI 2007 Workshop*.
12. **Ryen W. White**, Gheorghe Muresan, and Gary Marchionini. (2006). *Evaluating Exploratory Search Systems: Proceedings of SIGIR 2006 Workshop*.
13. \***Ryen W. White**, Bill Kules, Steven Drucker, and m.c. schraefel. Supporting exploratory search. *Communications of the ACM*, 49(4).

### REFEREED JOURNAL ARTICLES

1. **Ryen W. White**, Adam Fourney, Allen Herring, Paul Bennett, Niru Chandrasekaran, Robert Sim, Elnaz Nouri, Mark Encarnación, and Nalin Singal. (2019). Multi-device digital assistance. *Communications of the ACM*, in press.

2. Mehrdad Farajtabar, Emre Kiciman, Girish Nathan, and **Ryen W. White**. (2018). Modeling behaviors and lifestyle with online and social data for prediction and analysis of sleep and exercise quality. *International Journal of Data Science and Analytics*, in press.
3. **Ryen W. White**. (2018). Opportunities and challenges in search interaction. *Communications of the ACM*, 61(12): 36-38.
4. **Ryen W. White**. (2018). Skill discovery in virtual assistants. *Communications of the ACM*, 61(11): 106-113.
5. **Ryen W. White**, P. Murali Doraiswamy, and Eric Horvitz. (2018). Detecting neurodegenerative disorders from web search signals. *Nature Digital Medicine*, 1(1): 8.
6. Rave Harpaz, William DuMouchel, Martijn Schuemie, Olivier Bodenreider, Carol Friedman, Eric Horvitz, Anna Ripple, Alfred Sorbello, **Ryen W. White**, Rainer Winnenburger, and Nigam Shah. (2017). Toward multimodal signal detection of adverse drug reactions. *Journal of Biomedical Informatics*, 76: 41-49.
7. Tim Althoff, Eric Horvitz, and **Ryen W. White**. (2017). Psychomotor function measured via online activity predicts motor vehicle fatality risk. *Nature Digital Medicine*, 1(3).
8. Tim Althoff, **Ryen W. White**, and Eric Horvitz. (2016). Influence of Pokémon Go on physical activity: Study and implications. *Journal of Medical Internet Research*, 18(12).
9. **Ryen W. White**, Fernando Diaz, and Qi Guo. (2016). Search result prefetching on desktop and mobile. *ACM Transactions on Information Systems*, 35(3), 23.
10. **Ryen W. White** and Eric Horvitz (2016). Evaluation of the feasibility of screening patients for early signs of lung carcinoma in web search logs. *JAMA Oncology*, 3(3), 398-401.
11. John Paparrizos, **Ryen W. White**, and Eric Horvitz (2016). Screening for pancreatic adenocarcinoma using signals from web search logs: Feasibility study and results. *Journal of Oncology Practice*, 12(8): 737-744.
12. Michael J. Paul, **Ryen W. White**, and Eric Horvitz. (2016). Search and breast cancer: On episodic shifts of attention over life histories of an illness. *ACM Transactions on the Web*, 10(2): 13.
13. **Ryen W. White**, Sheng Wang, Apurv Pant, Rave Harpaz, Pushpraj Shukla, Walter Sun, William DuMouchel, and Eric Horvitz. (2016). Early identification of adverse drug reactions from search log data. *Journal of Biomedical Informatics*, 59: 42-48. [EDITORS' CHOICE AWARD]
14. **Ryen W. White** and Eric Horvitz. (2015). Belief dynamics and biases in web search. *ACM Transactions on Information Systems*, 33(4): 18.
15. Roberto González-Ibáñez, Chirag Shah, and **Ryen W. White**. (2015). Capturing collaboration opportunities: A method to evaluate collaboration opportunities in information search using pseudo-collaboration. *Journal of the American Society for Information Science and Technology*, 66(9): 1897-1912.
16. Rave Harpaz, David Odgers, Greg Gaskin, William DuMouchel, Rainer Winnenburger, Olivier Bodenreider, Anna Ripple, Ana Szarfman, Alfred Sorbello, Eric Horvitz, **Ryen W. White**, and Nigam Shah. (2014). A time-indexed reference standard of adverse drug reactions. *Nature Scientific Data*, 1.
17. **Ryen W. White** and Ahmed Hassan. (2014). Content bias in online health search. *ACM Transactions on the Web*, 8(4): 25.
18. **Ryen W. White\***, Rave Harpaz\*, Nigam Shah, William DuMouchel, and Eric Horvitz. (2014). Toward enhanced pharmacovigilance using patient-generated data on the Internet. *Nature Clinical Pharmacology and Therapeutics* (Nature CPT) (\* = shared first authorship), 96(2): 239-246.
19. Elad Yom-Tov, **Ryen W. White**, and Eric Horvitz. (2014). Seeking insights about cycling mood disorders via anonymized search logs. *Journal of Medical Internet Research*, 16(2).
20. **Ryen W. White**. (2014). Belief dynamics in Web search. *Journal of the American Society for Information Science and Technology*, 65(11): 2165-2178.
21. Jaime Teevan, Kevyn Collins-Thompson, **Ryen W. White**, and Susan Dumais. (2014). Slow search. *Communications of the ACM*, 57(8), 36-38.
22. **Ryen W. White** and Eric Horvitz. (2014). From health search to health care: explorations of intention and utilization via query logs and user surveys. *Journal of the American Medical Informatics Association*, 21(1): 49-55.

23. **Ryen W. White** and Eric Horvitz. (2013). Captions and biases in diagnostic search. *ACM Transactions on the Web*, 7(4): 23.
24. **Ryen W. White**, Nicholas P. Tatonetti, Nigam H. Shah, Russ B. Altman, and Eric Horvitz. (2013). Web-scale pharmacovigilance: listening to signals from the crowd. *Journal of the American Medical Informatics Association*, 20(3): 404-408.
25. **Ryen W. White** and Eric Horvitz. (2013). From web search to healthcare utilization: privacy-sensitive studies from mobile data. *Journal of the American Medical Informatics Association*, 20(1): 61-68.
26. Peter Bailey, **Ryen W. White**, Han Liu, and Giridhar Kumaran. (2010). Mining past query trails to label long and rare search engine queries. *ACM Transactions on the Web*, 4(4): 15.
27. Max Wilson, m.c. schraefel, and **Ryen W. White**. (2010). Evaluating advanced search interfaces using established information-seeking models. *Journal of the American Society for Information Science and Technology*, 60(7): 1407-1422. [BEST PAPER AWARD]
28. **Ryen W. White** and Eric Horvitz. (2009). Cyberchondria: studies of the escalation of medical concerns in web search. *ACM Transactions on Information Systems*, 27(4): 23.
29. **Ryen W. White**, Mikhail Bilenko, and Silviu Cucerzan. (2008). Leveraging popular destinations to enhance web search interaction. *ACM Transactions on the Web*, 2(3): 16.
30. Andy Edmonds, **Ryen W. White**, Dan Morris, and Steven M. Drucker. (2007). Instrumenting the dynamic web. *Journal of Web Engineering*, 6(3): 243-260
31. Gary Marchionini and **Ryen W. White**. (2007). Find what you need, understand what you find. *International Journal of Human-Computer Interaction*, 23(3): 205-237.
32. **Ryen W. White** and Gary Marchionini. (2007). Examining the effectiveness of real-time query expansion. *Information Processing and Management*, 43(3): 685-704.
33. **Ryen W. White**. (2006). Using searcher simulations to redesign a polyrepresentative implicit feedback interface. *Information Processing and Management*, 42(5): 1185-1202.
34. **Ryen W. White** and Ian Ruthven. (2006). A study of interface support mechanisms for interactive information retrieval. *Journal of the American Society for Information Science and Technology*, 57(7): 933-948.
35. **Ryen W. White**, Ian Ruthven, Joemon M. Jose, and C. J. van Rijsbergen. (2005). Evaluating implicit feedback models using searcher simulations. *ACM Transactions on Information Systems*, 23(3): 325-361.
36. **Ryen W. White**, Joemon M. Jose, and Ian Ruthven. (2005). Using top-ranking sentences to facilitate effective information access. *Journal of the American Society for Information Science and Technology*, 56(10): 1113-1125.
37. **Ryen W. White**, Joemon M. Jose, and Ian Ruthven. (2004). An implicit feedback approach for interactive information retrieval. *Information Processing and Management*, 42(1): 166-190.
38. **Ryen W. White**, Joemon M. Jose, and Ian Ruthven. (2003). A task-oriented study on the influencing effects of query-biased summarisation in web searching. *Information Processing and Management*, 39(5): 707-733.

## REFEREED CONFERENCE PAPERS

1. Johanne R. Trippas, Damiano Spina, Falk Scholer, Ahmed Hassan Awadallah, Peter Bailey, Paul N. Bennett, **Ryen W. White**, Jonathan Liono, Yongli Ren, Flora D. Salim, and Mark Sanderson. (2019). Learning about work tasks to inform intelligent assistant design *Proc. ACM SIGIR Conference on Human Information Interaction and Retrieval*, in press.
2. **Ryen W. White** and Ahmed Hassan Awadallah. (2019). Task duration estimation. *Proc. 12th Annual International ACM WSDM Conference on Web Search and Data Mining*, in press.

3. Hosein Azarbondy, Robert Sim, and **Ryen W. White**. (2019). Domain adaptation for commitment detection in email. *Proc. 12th Annual International ACM WSDM Conference on Web Search and Data Mining*, in press.
4. Yu Su, Ahmed Hassan Awadallah, Miaosen Wang, and **Ryen W. White**. (2018). Natural language interfaces with fine-grained user interaction: A case study on web APIs. *Proc. 41st Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 855-864.
5. Hua He, Kris Ganjam, Navendu Jain, Jessica Lundin, **Ryen W. White**, and Jimmy Lin. (2017). An insight extraction system on biomedical literature with deep neural networks. *Proc. Conference on Empirical Methods in Natural Language Processing*, 2691-2701.
6. Tim Althoff, Eric Horvitz, **Ryen W. White**, and Jamie Zeitzer. (2017). Population-scale study of sleep and performance. *Proc. 26th International World Wide Web Conference*, 113-122.
7. Adam Fourney, Meredith Ringel Morris, and **Ryen W. White**. (2017). Web search as a linguistic tool. *Proc. 26th International World Wide Web Conference*, 549-557.
8. John Paparrizos, **Ryen W. White**, and Eric Horvitz. (2016). Detecting devastating diseases in search logs. *Proc. 22nd ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, 559-568.
9. David Graus, Paul N. Bennett, **Ryen W. White**, and Eric Horvitz. (2016). Analyzing and predicting task reminders. *Proc. 24th Annual ACM UMAP Conference on User Modeling, Adaptation and Personalization*, 7-15. [BEST STUDENT PAPER AWARD]
10. Fernando Diaz, Qi Guo, and **Ryen W. White**. (2016). Search result prefetching using cursor movement. *Proc. 39th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 609-618.
11. Sandro Bauer, Filip Radlinski, and **Ryen W. White**. (2016). Where can I buy a boulder? Searching for offline retail locations. *Proc. 25th International World Wide Web Conference*, 1225-1235.
12. Daan Odijk, **Ryen W. White**, Ahmed Hassan Awadallah, and Susan Dumais. (2015). Struggle and success in web search. *Proc. 24th ACM International Conference on Information and Knowledge Management*, 1551-1560. [BEST STUDENT PAPER AWARD]
13. **Ryen W. White** and Ahmed Hassan Awadallah. (2015). Personalizing search on shared devices. *Proc. 38th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 523-532.
14. Adish Singla, Eric Horvitz, Pushmeet Kohli, **Ryen W. White**, and Andreas Krause. (2015). Information gathering in networks via active exploration. *Proc. International Joint Conferences on Artificial Intelligence*, in press.
15. Michael Paul, **Ryen W. White**, and Eric Horvitz. (2015). Diagnoses, decisions, and outcomes: Web search as medical decision support for cancer. *Proc. 24th International World Wide Web Conference*, 831-841.
16. Adam Fourney, **Ryen W. White**, and Eric Horvitz. (2015). Exploring time-dependent concerns about pregnancy and childbirth from search logs. *Proc. ACM SIGCHI Conference on Human Factors in Computing Systems*, 737-746. [BEST PAPER HONORABLE MENTION]
17. Jiepu Jiang, Ahmed Hassan, Xiaolin Shi, and **Ryen W. White**. (2015). Understanding and predicting graded search satisfaction. *Proc. 8th Annual International ACM WSDM Conference on Web Search and Data Mining*, 57-66.
18. George Montanez, **Ryen W. White**, and Xiao Huang. (2014). Cross-device search. *Proc. 23rd ACM CIKM Conference on Information and Knowledge Management*, 1669-1678. [BEST PAPER AWARD]
19. Ahmed Hassan, **Ryen W. White**, Patrick Pantel, Susan Dumais, and Yi-Min Wang. (2014). Supporting complex search tasks. *Proc. 23rd ACM CIKM Conference on Information and Knowledge Management*, 829-838.



20. Georg Schoenherr and **Ryen W. White**. (2014). Interactions between health searchers and search engines. *Proc. 37th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 143-152.
21. Jinyun Yan, Wei Chu, and **Ryen W. White**. (2014). Cohort modeling for enhanced personalized search. *Proc. 37th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 505-514.
22. Nina Mishra, **Ryen W. White**, Samuel leong, and Eric Horvitz. (2014). Time-critical search. *Proc. 37th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 747-756.
23. Hongning Wang, Yang Song, Ming-Wei Chang, Xiaodong He, Ahmed Hassan, and **Ryen W. White**. (2014). Modeling action-level satisfaction for search task satisfaction prediction. *Proc. 37th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 123-132.
24. Yang Song, Xiaolin Shi, **Ryen W. White**, and Ahmed Hassan. (2014). Context-aware web search abandonment prediction. *Proc. 37th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 93-102.
25. Adish Singla, Ece Kamar, **Ryen W. White**, and Eric Horvitz. (2014). Stochastic privacy. *Proc. 28th AAAI Conference on Artificial Intelligence*, in press.
26. **Ryen W. White**, Ahmed Hassan, Adish Singla, and Eric Horvitz. (2014). From devices to people: Attribution of search activity in multi-user settings. *Proc. 23rd International World Wide Web Conference*, 431-442.
27. Munmun De Choudhury, Meredith Ringel Morris, and **Ryen W. White**. (2014). Seeking and sharing health information online: Comparing search engines and social media. *Proc. ACM SIGCHI Conference on Human Factors in Computing Systems*, 1365-1376.
28. Carsten Eickhoff, Jaime Teevan, **Ryen W. White**, and Susan Dumais. (2014). Lessons from the journey: A query log analysis of within-session learning. *Proc. 7th Annual International ACM WSDM Conference on Web Search and Data Mining*, 223-232.
29. Ahmed Hassan, **Ryen W. White**, Susan Dumais, and Yi-Min Wang. (2014). Struggling or exploring? Disambiguating long search sessions. *Proc. 7th Annual International ACM WSDM Conference on Web Search and Data Mining*, 53-62.
30. Youngho Kim, Ahmed Hassan, **Ryen W. White**, and Imed Zitouni. (2014). Modeling dwell time to predict click-level satisfaction. *Proc. 7th Annual International ACM WSDM Conference on Web Search and Data Mining*, 193-202.
31. Jaime Teevan, Kevyn Collins-Thompson, **Ryen W. White**, Susan Dumais, and Yubin Kim. (2013). Slow search: information retrieval without time constraints. *Proc. 7th Symposium on Human-Computer Interaction and Information Retrieval*, article 1.
32. Ahmed Hassan and **Ryen W. White**. (2013). Personalized models of search satisfaction. *Proc. 22nd ACM International Conference on Information and Knowledge Management*, 2009-2018.
33. Fernando Diaz, **Ryen W. White**, Dan Liebling, and Georg Buscher. (2013). Robust models of mouse movement on dynamic web search results pages. *Proc. 22nd ACM International Conference on Information and Knowledge Management*, 1451-1460.
34. **Ryen W. White**. (2013). Beliefs and biases in web search. *Proc. 36th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 3-12. [BEST PAPER AWARD]
35. Milad Shokouhi, **Ryen W. White**, Paul Bennett, and Filip Radlinski. (2013). Fighting search engine amnesia: reranking repeated results. *Proc. 36th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 273-282.

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37. Ahmed Hassan, **Ryen W. White**, and Yi-Min Wang. (2013). Toward self-correcting search engines: using underperforming queries to improve search. *Proc. 36th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, 263-272.
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