Robin Burke

Department of Information Science
College of Media, Communication and Information
University of Colorado, Boulder
Technology Learning Center, Rm 219
1045 18th Street, UCB 315
Boulder, CO 80309-0315
robin.burke@colorado.edu

Experience

from 1/2019	Professor, Department of Information Science, College of Communication, Media, and Information, University of Colorado, Boulder
7/2011-12/2018	Professor, School of Computing, College of Computing and Digital Media, DePaul University.
7/2007-6/2011	Associate Professor with Tenure, School of Computing, College of Computing and Digital Media, DePaul University. Joint appointment in School of Cinema and Interactive Media.
8/2008-7/2009	Fulbright Scholar, School of Computer Science and Informatics, University College Dublin.
7/2005-6/2007	Associate Professor with Tenure, School of Computer Science, Telecommunications, and Information Systems, DePaul University
7/2002-6/2005	Associate Professor, School of Computer Science, Telecommunications, and Information Systems, DePaul University.
1/2001-6/2002	Associate Professor, Department of Information Systems and Decision Sciences, California State University, Fullerton.
6/2000-1/2001	Adjunct Assistant Professor, Department of Information and Computer Science, University of California, Irvine.
4/1999-5/2000	Specialist, Department of Information and Computer Science, University of California, Irvine.
8/1998-4/1999	Director of Software Development, Verb, Inc. (was Recommender, Inc.)
9/1996-7/1998	Research Scientist, Department of Computer Science, University of Chicago.
9/1993-9/1996	Visiting Assistant Professor, Department of Computer Science, University of Chicago.

Research Interests

Artificial intelligence, especially recommender systems and personalization, user modeling, data mining, and machine learning, including fairness-aware and multistakeholder approaches. Digital humanities, including bibliomining, social network analysis, and text mining.

Education

12/1993	PhD, Computer Science, Northwestern University
6/1990	MS, MPhil, Computer Science, Yale University
6/1986	BS with Distinction and Honors, Computer Science, Harvey Mudd College

SCHOLARSHIP

h-index (Google scholar): 49

Journal Articles

Vahedian, F., Burke, R. & Mobasher, B. Multi-relational Recommendation in Heterogeneous Networks. *ACM Transactions on the Web*. 11(3): 15 (34 pages), 2017.

Gemmell, J., Schimoler, T., Mobasher, B. & Burke, R. Resource recommendation in social annotation systems: A linear-weighted hybrid approach. *Journal of Computer and Systems Science*. (JCSS) 78(4):1160-1174 (2012).

Mobasher, B., Burke, R., Bhaumik, R. & Sandvig, JJ. Attacks and Remedies in Collaborative Recommendation. *IEEE Expert Systems*. 22(3) 56-63, 2007.

Williams, C., Mobasher, B, & Burke, R. Defending Recommender Systems: Detection of Profile Injection Attacks. *Service Oriented Computing and Applications*. 1(3), 157-170. 2007.

Mobasher, B., Burke, R., Bhaumik, R. & Williams, C. Towards Trustworthy Recommender Systems: An Analysis of Attack Models and Algorithms. *ACM Transactions on Internet Technology*. 7(2), Article 23 (38 pages.) 2007.

Burke, R. Hybrid Recommender Systems: Survey and Experiments. *User Modeling and User Adapted Interaction*. 12(4), 331-370. 2002.

Burke, R. Interactive Critiquing for Catalog Navigation in E-Commerce. *Artificial Intelligence Review,* 18(3-4), 245-267. 2002.

Burke, R. Conceptual Indexing and Active Retrieval of Video for Interactive Learning Environments. *Knowledge-Based Systems*, 9(8), 491-499, 1996.

Burke, R. & Kass, A. Supporting Learning through Active Retrieval of Video Stories. *Expert Systems with Applications, 9*(3), 361-378. 1995.

Kass, A., Burke, R., Blevis, E. & Williamson, M. Constructing learning environments for complex social skills. *Journal of the Learning Sciences 3*(4), 387-427. 1994.

Burke, R. Intelligent retrieval of video stories in a social simulation. *Journal of Educational Multimedia and Hypermedia*, 2(4), pages 381-392. 1993. Paper originally appeared in *Educational Multimedia and Hypermedia Annual 1993*, 91-98. AACE, 1993.

Blevis, E., Glasgow, J., Duncan, N. & Burke, R. The Life Analysis & Depreciation Integrated Exemplar System (LADIES). *International Journal of Expert Systems Research and Applications. 4*(2), 141-155, 1991.

Archival Conference Proceedings

2018

Burke, R., Sonboli, N. & Ordonez-Gauger, A. Balanced Neighborhoods for Multi-sided Fairness in Recommendation. In *Conference on Fairness, Accountability, and Transparency (FAT*)*. New York, 2018. Appeared as *Proceedings of Machine Learning Research* 81:1–13, 2018.

Mansoury, M., Burke, R., Ordonez-Gauger, A. & Sepulveda, X. Automating recommender systems experimentation with librec-auto. In *Proceedings of the 12th ACM Conference on Recommender Systems (RecSys '18)*. ACM, New York, NY, USA, 500-501. 2018.

Sánchez-Moreno, D., Moreno-García, M.N., Sonboli, N., Mobasher, B., Burke, R. Inferring User Expertise from Social Tagging in Music Recommender Systems for Streaming Services. In: de Cos Juez F. et al. (eds) *Hybrid Artificial Intelligent Systems. HAIS 2018*. Lecture Notes in Computer Science, vol 10870. Springer, Cham. 2018

Sürer, Ö., Burke, R. & Malthouse E. Multistakeholder Recommendation with Provider Constraints. In *Proceedings of the 12th ACM Conference on Recommender Systems (RecSys '18),* ACM, New York, NY, USA, 54-62. 2018.

2017

Abdollahpouri, H., Burke, R. & Mobasher, B. Controlling Popularity Bias in Learning-to-Rank Recommendation. In *Proceedings of the 11th ACM Conference on Recommender Systems (RecSys '17),* 5 pages. Como, Italy. August 2017.

Abdollahpouri, H., Burke, R. & Mobasher, B. Recommender Systems as Multistakeholder Environments. In *Proceedings of the 25th Conference on User Modeling and Personalization (UMAP '17)*. Bratislava, Slovakia. June 2017.

Burke, R., Lucic, A., & Shanahan, J. Circulation Modeling of Library Book Promotions. In *2017 ACM/IEEE Joint Conference on Digital Libraries (JCDL'17)*, pp. 1-2. IEEE.

Eskandanian, F., Mobasher, B. & Burke, R. A Clustering Approach for Personalizing Diversity in Collaborative Recommender Systems. In *Proceedings of the 25th Conference on User Modeling and Personalization (UMAP '17)*. Bratislava, Slovakia. June 2017.

Vahedian, F., Burke, R. & Mobasher, B. Weighted Random Walk Sampling for Multi-Relational Recommendation. In *Proceedings of the 25th Conference on User Modeling and Personalization (UMAP '17)*. Bratislava, Slovakia. June 2017.

2016

Eskandanian, F., Mobasher, B.,& Burke, R. User Segmentation for Controlling Recommendation Diversity. In *Poster Proceedings of the 10th ACM Conference on Recommender Systems*. 2016. http://ceur-ws.org/Vol-1688/paper-24.pdf, 2 pages.

Vahedian, F., Burke, Robin D., & Mobasher, B. Weighted Random Walks for Meta-Path Expansion in Heterogeneous Networks. In *Poster Proceedings of the 10th ACM Conference on Recommender Systems*. 2016. http://ceur-ws.org/Vol-1688/paper-11.pdf, 2 pages.

Vahedian, F., Burke, Robin D., & Mobasher, B. Meta-Path Selection for Extended Multi-Relational Matrix Factorization. In *Proceedings of the 29th International Florida AI Research Symposium (FLAIRS '16)*, pp. 566-571.

Zheng, Y, Mobasher, B., & Burke, R. User-Oriented Context Suggestion. In *Proceedings of the 24th Conference on User Modeling and Personalization (UMAP '16)*, pp. 249-258

2015

Aghdam, M. H., Hariri, N., Mobasher, B., & Burke, R. Adapting Recommendations to Contextual Changes Using Hierarchical Hidden Markov Models. In *Proceedings of the 9th ACM Conference on Recommender Systems (RecSys '15)*, pp. 241-244.

Hariri, N., Mobasher, B., & Burke, R. Adapting to User Preference Changes in Interactive Recommendation. In *Proceedings of the 24th International Joint Conference on Artificial Intelligence (IJCAI '15)*, pp. 4268-4274

Vahedian, F., Burke, R. & Mobasher, B. Network-Based Extension of Multi-Relational Factorization Models. In *Poster Proceedings of the 9th ACM Conference on Recommender Systems*: ceur-ws.org/Vol-1441/.

Zheng, Y., Mobasher, B., & Burke, R. Integrating Context Similarity with Sparse Linear Recommendation Model. In *Proceedings of the 23th Conference on User Modeling and Personalization (UMAP '15)*, pp. 370-376.

Zheng, Y., Mobasher, B., & Burke, R. Similarity-Based Context-Aware Recommendation. *Web Information Systems Engineering (WISE '15)*, pp. 431-447

Zheng, Y., Mobasher, B., & Burke, R. Similarity-based Contextual SLIM Recommendation. In *Proceedings of the 23nd Conference on User Modeling, Adaptation and Personalization (UMAP 2015)*.

2014

Zheng, Y., Mobasher, B., & Burke, R. Deviation-Based Contextual SLIM Recommenders. In *Proceedings of the 23rd ACM International Conference on Information and Knowledge Management (CIKM '14)*, pp. 271-280.

Gemmell, J., Mobasher, B. & Burke, R. Resource Recommendation in Social Annotation Systems Based on User Partitioning. In Proceedings of the 15th International Conference on Electronic Commerce and Web Technologies, EC-Web 2014. pp. 101-112

Hariri, N., Mobasher, B. & Burke, R. Context adaptation in interactive recommender systems. In *Proceedings of the 8th ACM Conference on Recommender Systems (RecSys '14)*. pp. 41-48. (Best Paper Honorable Mention)

Zheng, Y., Mobasher, B. & Burke, R. CSLIM: contextual SLIM recommendation algorithms. In Proceedings of the 8th ACM Conference on Recommender Systems (RecSys '14). pp. 301-304

Zheng, Y., Burke, R. & Mobasher, B. Splitting approaches for context-aware recommendation: an empirical study. In *Proceedings of the Symposium on Applied Computing 2014.* pp. 274-279.

Burke, R., Vahedian, F. &, Mobasher, B. Hybrid Recommendation in Heterogeneous Networks. In *Proceedings of the 22nd Conference on User Modeling, Adaptation and Personalization (UMAP '14).* pp. 49-60.

Gemmell, J., Mobasher, B. & Burke, R. User Partitioning Hybrid for Tag Recommendation. In *Proceedings of the 22nd Conference on User Modeling, Adaptation and Personalization (UMAP '14)*. pp. 74-85.

2013

Hariri, N., Mobasher, B., & Burke, R. Query-Driven Context-Aware Recommendation. In Proceedings of the 7th ACM Conference on Recommender Systems (RecSys '13), ACM.

Putnam, C., Cheng, J., Rusch, D., Berthiaume, A., and Burke, R. Supporting Therapists In Motion-Based Gaming For Brain Injury Rehabilitation. In *Proceedings of the 2013 annual conference extended abstracts on Human factors in computing systems (CHI EA '13)*, Paris, France. [Acceptance rate: 45%]

Zheng, Y., Burke, R. and Mobasher, B. Recommendation with Differential Context Weighting. In Proceedings of the 21st Conference on User Modeling, Adaptation and Personalization (UMAP 2013). Rome, Italy.

2012

Hariri, N., Mobasher, B., & Burke, R. Context-aware music recommendation based on latent-topic sequential patterns. In *Proceedings of the sixth ACM conference on Recommender systems (RecSys '12)*. ACM, New York, NY, USA, 131-138.

Zheng, Y. Burke, R. & Mobasher, B. Differential Context Relaxation for Context-aware Travel Recommendation. *Proceedings of the 13th International Conference on Electronic Commerce and Web Technologies, EC-Web 2012,* Vienna, Austria, August 2012.

2011

Gemmell, J., Schimoler, T., Mobasher, B. & Burke, R. Recommendation by Example in Social Annotation Systems. EC-Web 2011: 209-220.

Guzzi, F., Ricci, F. & Burke, R. Interactive multi-party critiquing for group recommendation. In *Proceedings of the 5th ACM International Conference on Recommender Systems (RecSys '11):* 265-268.

Gemmell, J., Schimoler, T., Mobasher, B. & Burke, R. Tag-Based Resource Recommendation in Social Annotation Applications. In *Proceedings of User Modeling, Adaption and Personalization 2011*, pp. 111-122. Girona, Spain.

2010

Gemmell, J., Mobasher, B., Schimoler, T., & Burke, R. Hybrid Tag Recommendation for Social Annotation Systems. In *Proceedings of the 19th ACM International Conference on Information and Knowledge Management (CIKM '10), pp. 829-838* .Toronto, Canada. October 2010

Burke, R. Evaluating the Dynamic Properties of Recommendation Algorithms. In *Proceedings of the 4th ACM International Conference on Recommender Systems (Recsys '10)*, pp. 225-228. Barcelona, Spain. September 2010.

Prior to 2009

Ramezani, M.; Sandvig, J. J.; Schimoler, T.; Gemmell, J.; Mobasher, B. & Burke, R.. Evaluating the Impact of Attacks in Collaborative Tagging Environments. *Proceedings of the 1st International Conference on Social Computing*, pp. 136 –143. Vancouver, Canada. August 2009.

Felfernig, A. and Burke, R. 2008. Constraint-based recommender systems: technologies and research issues. In *Proceedings of the 10th International Conference on Electronic Commerce*, pp. 1-10. Innsbruck, Austria. August 2008.

Shepitsen, A.; Gemmell, J.; Mobasher, B. & Burke, R. Personalized Recommendation in Collaborative Tagging Systems Using Hierarchical Clustering. In *Proceedings of the 2nd ACM International Conference on Recommender Systems (RecSys'08)*, pp. 259-266. Lausanne, Switzerland. October 2008.

Bhaumik, R., Burke, R., Mobasher, B. Crawling Attacks Against Web-based Recommender Systems. *Proceedings of the 2007 International Conference on Data Mining, DMIN'07*, Las Vegas, June 2007.

Sandvig, J.J., Mobasher, B., & Burke, R. Impact of Relevance Measures on the Robustness and Accuracy of Collaborative Filtering. *Proceedings of the 8th International Conference on Electronic Commerce and Web Technologies, EC-Web 2007*, pp. 99-108. Regensburg, Germany, September 2007.

Sandvig, J.J., Mobasher, B, & Burke, R. Robustness of Collaborative Recommendation Based On Association Rule Mining. *Proceedings of the 2007 ACM Conference on Recommender Systems*, pp. 105-112. Minneapolis, October, 2007.

Settle, A., Burke, R., & Dettori, L. Game Design as a Writing Course in the Liberal Arts. In *Proceedings of the 2007 International Conference on Frontiers in Education::Computer Science & Computer Engineering (FECS '07)*, pp. 176-180. CSREA Press. 2007.

Sieg, A., Mobasher, B., & Burke, R.. Representing Context in Web Search with Ontological User Profiles. In *Proceedings of the Sixth International and Interdisciplinary Conference on Modeling and Using Context*, pp. 439-452. Roskilde University, Denmark, August 2007.

Sieg, A., Mobasher, B., & Burke, R. Web Search Personalization with Ontological User Profiles. *Proceedings of the 16th ACM Conference on Information and Knowledge Management (CIKM 2007)*, pp. 525-534. Lisboa, Portugal, November 2007.

Burke, R., Mobasher, B., Williams, C. & Bhaumik R. Classification Features for Attack Detection in Collaborative Recommender Systems. In *Proceedings of the ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD'06)*, pp. 542-547. Philadelphia, August 2006.

Burke, R. Mobasher, B., Williams, C. & Bhaumik, R. Detecting Profile Injection Attacks in Collaborative Recommender Systems. In *Proceedings of the 8th IEEE Conference on E-Commerce Technology (CEC' 06)*, pp. 23-31. San Francisco, California, June 2006.

Mobasher, B., Burke, R., Sandvig, JJ. Model-Based Collaborative Filtering as a Defense Against Profile Injection Attacks. *In Proceedings of the 21st National Conference on Artificial Intelligence (AAAI'06)*, pp. 1388-1393. Boston, Massachusetts, August 2006.

Burke, R., Mobasher, B., Bhaumik, R. & Williams, C. Segment-Based Injection Attacks against Collaborative Filtering Recommender Systems. In *Proceedings of the 2005 International Conference on Data Mining (ICDM'05)*, pp. 577-580. Houston, Texas, November 2005.

Sieg, A., Mobasher, B., Burke, R., Prabu, G. & Lytinen, S. "Representing User Information Context with Ontologies". In *Proceedings of HCI International 2005 Conference*, Las Vegas, Nevada, July 2005.

Burke, R. Hybrid Recommender Systems with Case-Based Components. In *European Conference on Case-Based Reasoning 2004*. pages 91-105. New York: Springer Verlag, 2004.

Sieg, A., Mobasher, B., & Burke, R. Inferring User's Information Context: Integrating User Profiles and Concept Hierarchies. In *Proceedings of the 2004 Meeting of the International Federation of Classification Societies*, Chicago, IL, July 2004.

Sieg, A.; Mobasher, B.; Lytinen, S. & Burke, R. Using Concept Hierarchies to Enhance User Queries in Web-based Information Retrieval. In *Proceedings of the IASTED International Conference on Artificial Intelligence and Applications (AIA 2004)*. page 153-159. Innsbruck, Austria, 2004.

Sieg, A.; Mobasher, B.; Lytinen, S. & Burke, R. Concept based query enhancement in the ARCH search agent. In *Proceedings of the International Conference on Internet Computing*. Las Vegas, NV. August 2003.

Burke, R. Ranking Algorithms for Costly Similarity Metrics. In D. Aha, I. Watson and Q. Yang (eds.), *Case-Based Reasoning Research and Development (4th International Conference on Case-Based Reasoning)*, pages 105-117. New York: Springer Verlag, 2001.

Burke, R. Salticus: Guided Crawling for Personal Digital Libraries. In *Proceedings of the First Joint Conference on Digital Libraries*, pages 88-89. Roanoke, VA: June, 2001.

Burke, R. A Case-Based Reasoning Approach to Collaborative Filtering. In E. Blanzieri and L. Portinale (eds.), *Advances in Case-Based Reasoning (5th European Workshop on Case-Based Reasoning)*, pages 370-379. New York: Springer Verlag, 2000.

Burke, R. The Wasabi Personal Shopper: A Case-Based Recommender System. In *Proceedings of the 11th National Conference on Innovative Applications of Artificial Intelligence*, pages 844-849, AAAI, 1999.

Kulyukin, V., Hammond, K, & Burke, R. Answering Questions for an Organization Online. In *Proceedings of the 15th National Conference on Artificial Intelligence*, pages 532-537, AAAI, 1998.

Burke, R., Hammond, K. & Cooper, E. Knowledge-based navigation of complex information spaces. In *Proceedings of the 13th National Conference on Artificial Intelligence,* pages 462-468, AAAI, 1996.

Hammond, K., Burke, R., Martin, C. & Lytinen, S. FAQ Finder: A Case-Based Approach to Knowledge Navigation. In *Proceedings of the 11th Conference on Artificial Intelligence for Applications*. Los Angeles, CA: IEEE Computer Society Press, 1995.

Burke R. & Kass, A. Tailoring Retrieval to Support Case-Based Teaching. *Proceedings of the 12th Annual Conference on Artificial Intelligence*, pages 493-498. AAAI, 1994.

Burke, R. & Kass, A. Integrating case presentation and simulation-based learning-by-doing. In *Proceedings of the 14th Conference of the Cognitive Science Society*, pages 629-634. Hillsdale, NJ: Lawrence Erlbaum Associates, 1992.

Other Refereed Conference and Workshop Proceedings
2018

Burke, R., Kontny, J. & Sonboli, N. Synthetic Attribute Data for Evaluating Consumer-Side Fairness. In *Proceedings of the 2nd FATRec Workshop on Responsible Recommendation*, held at RecSys 2018. Available as arXiv preprint arXiv:1809.04199.

Liu, W. & Burke, R. Personalizing Fairness-aware Re-ranking. In *Proceedings of the 2nd FATRec Workshop on Responsible Recommendation*, held at RecSys 2018. Available as arXiv preprint arXiv:1809.02921

2017

Burke, R. Multi-sided Fairness for Recommendation. In *Proceedings of the Workshop on Fairness, Accountability and Transparency in Machine Learning* (FATML), held at KDD 2017. arXiv:1707.00093.

Burke, R. & Abdollahpouri, H. Patterns of Multistakeholder Recommendation. In *Proceedings of the 1st International Workshop on Value-Aware and Multistakeholder Recommendation* (VAMS), held at RecSys 2017. arXiv:1707.09258.

Burke, R., Sonboli, N., Mansoury, M. & Ordonez-Gauger, A. Balanced Neighborhoods for Fairness-Aware Collaborative Recommendation. In *Proceedings of the FATRec Workshop on Responsible Recommendation*, held at RecSys 2017.

2016

Burke, R. & Eskandanian, F. Collaborative Recommendation of Informal Learning Experiences. In *Proceedings of the 3rd International Workshop on Educational Recommender Systems*, held at WI 2016.

Burke, R. & Abdollahpouri, H. Educational Recommendation with Multiple Stakeholders. In *Proceedings of the 3rd International Workshop on Educational Recommender Systems*, held at WI 2016.

Burke, R., Abdollahpouri, H., Mobasher, B., Gupta, T. Towards Multi-Stakeholder Utility Evaluation of Recommender Systems. In *UMAP Workshop on Surprise, Opposition and Obstruction in Personalized Systems*, 2016

2015

Zheng, Y., Mobasher, B., Burke, R. CARSKit: A Java-Based Context-Aware Recommendation Engine. *ICDM Workshops*, pp. 1668-1671

Zheng, Y., Mobasher, B., Burke, R. Incorporating Context Correlation into Context-aware Matrix Factorization. *IJCAI Workshop on Intelligent Techniques in Web Personalization*, 2015

2014

Vahedian, F. & Burke, R. Predicting Component Utilities for Linear-Weighted Hybrid Recommendation. In *Proceedings of the 6th Workshop on Recommender Systems and the Social Web* (RSWeb '14).

2013

Burke, R. & Vahedian, F. Social Web Recommendation using Metapaths. In *Proceedings of the Workshop on Recommender Systems in the Social Web* (RSWeb '13). Hong Kong, China. October 2013.

Zheng, Y., Mobasher, B. &, Burke, R.: The Role of Emotions in Context-aware Recommendation. In *Proceedings of the Workshop on Human Decision-Making in Recommender Systems* (Decisions '13), pages 21-28. Hong Kong, China. October 2013.

2012

Zheng, Y., Burke, R., & Mobasher, B. Optimal Feature Selection for Context-Aware Recommendation using Differential Relaxation. In *Proceedings of the International Workshop on Context-Aware Recommender Systems (CARS '12)*. Dublin, Ireland, September 2012.

Hariri, N., Mobasher, B. & Burke, R. Using Social Tags to Infer Context in Hybrid Music Recommendation. In *Proceedings of the Workshop on Web Information and Data Management (WIDM 12)*, pages 41-48. 2012.

Christiansen, L., Schimoler, T., Burke, R. & Mobasher, B. Modeling Topic Trends on the Social Web Using Temporal Signatures. In *Proceedings of the Workshop on Web Information and Data Management (WIDM 12)*, pages 3-10. 2012.

2011

Burke, R., Zheng, Y. & Riley, S. Experience Discovery: hybrid recommendation of student activities using social network data. In *Proceedings of the 2nd International Workshop on Information Heterogeneity and Fusion in Recommender Systems (HetRec '11)*. ACM, New York, NY, USA, pages 49-52. 2011.

Gemmell, J., Schimoler, T., Mobasher, B. & Burke, R. Personalized Recommendation by Example. In *Proceedings of the 3rd Workshop on Recommender Systems and the Social Web (RSWeb '11)*. pages 57-64. 2011.

2010

Gemmel, J., Schimoler, T., Mobasher, B., & Burke, R. Resource Recommendation for Social Tagging: A Multi-Channel Hybrid Approach. In *Proceedings of the 2nd Workshop on Recommender Systems and the Social Web*, pp. 60-70. Held at RecSys '10, Bacelona, Spain. September 2010.

Sieg, A., Mobasher, B., & Burke, R. Improving the Effectiveness of Collaborative Recommendation with Ontology-Based User Profiles. In *Proceedings of the International Workshop on Information Heterogeneity and Fusion in Recommender Systems*. Held at RecSys '10. September 2010.

Sieg, A., Mobasher, B., & Burke, R. Ontology-Based Collaborative Recommendation. In *Proceedings of the 8th Workshop on Intelligent Techniques for Web Personalization and Recommender Systems*. Held at UMAP 2010, Hawaii, June 2010.

Prior to 2010

Burke, R. & Mobasher, B. Reasoning from Experience in the Presence of Adversaries. In *Proceedings of the Workshop on Grand Challenges in Reasoning from Experience*. Held at IJCAI 2009, Pasadena, California, USA, July 2009.

Gemmell, J.; Shepitsen, A.; Mobasher, B.; & Burke, R. Personalization in Folksonomies Based on Tag Clustering. In *Proceedings of the 6th Workshop on Intelligent Techniques for Web Personalization and Recommender Systems,* pp. 37-48. Held at AAAI 2008, Chicago, USA, July 2008.

Gemmell, J., Shepitsen, A., Mobasher, B. & Burke, R. Personalizing Navigation in Folksonomies Using Hierarchical Tag Clustering. *Proceedings of the 10th International Conference on Data Warehousing and Knowledge Discovery (DaWaK'08)*, Lecture Notes in Computer Science 5182, pp. 196-205. New York: Springer, 2008.

Ramezani, M.; Bergman, L.; Thompson, R.; Burke, R. & Mobasher, B. Selecting and Applying Recommendation Technology. In *Proceedings of International Workshop on Recommendation and Collaboration*. Held at 2008 International ACM Conference on Intelligent User Interfaces (IUI 2008), Canaria, Canary Islands, Spain, January 2008.

Ramezani, M.; Sandvig, J.J.; Bhaumik, R.; Schimoler, T.; Burke, R.; & Mobasher, B. Exploring the Impact of Profile Injection Attacks in Social Tagging Systems. In *Proceedings of the 2008 WebKDD Workshop*. Held at ACM KDD'2008 Conference on Knowledge Discovery and Data Mining, Las Vegas, Nevada, August, 2008.

Sandvig, JJ; Bhaumik, R.; Ramezani, M.; Burke, R. &, Mobasher, B.. A Framework for the Analysis of Attacks Against Social Tagging Systems. In *Proceedings of the 6th Workshop on Intelligent Techniques for Web Personalization and Recommender Systems*, pp. 56-65. Held at AAAI 2008, Chicago, USA, July 2008.

Bhaumik, R.; Burke, R. & Mobasher, B.. Effectiveness of Crawling Attacks Against Web-based Recommender Systems. In *Proceedings of AAAI Workshop on Intelligent Techniques for Web Personalization*. B. Mobasher, S. Anand, A. Kobsa, and D. Jannach (Eds.), AAAI Press Technical Report WS-07-08, pages 17-26, July 2007.

Sieg, A.; Mobasher, B. & Burke, R. Ontological User Profiles for Personalized Web Search. In *Proceedings of AAAI Workshop on Intelligent Techniques for Web Personalization*. B. Mobasher, S. Anand, A. Kobsa, and D. Jannach (Eds.), AAAI Press Technical Report WS-07-08, pages 84-91, July 2007.

Sieg, A.; Mobasher, B. & Burke, R. Ontological User Profiles for Representing Context in Web Search. *Proceedings of the Workshop on Web Personalization and Recommender Systems*. Held at the ACM International Conference on Web Intelligence, Silicon Valley, CA, November 2007.

Bhaumik, R.; Williams, C.; Mobasher, B. & Burke, R. Securing Collaborative Filtering Against Malicious Attacks Through Anomaly Detection. In *Proceedings of the 4th Workshop on Intelligent Techniques for Web Personalization (ITWP'06)*. AAAI 2006, Boston, July 2006.

Williams, C.; Mobasher, B.; Burke, R.; Bhaumik, R. & Sandvig, JJ. Detection of Obfuscated Attacks in Collaborative Recommender System. In *Proceedings of the ECAI'06 Workshop on Recommender Systems*, pp. 19-23. Held at the 17th European Conference on Artificial Intelligence (ECAI'06), Riva del Garda, Italy, August, 2006.

Williams, C.; Bhaumik, R.; Burke, R. & Mobasher, B. The Impact of Attack Profile Classification on the Robustness of Collaborative Recommendation. In *Proceedings of the 2006 WebKDD Workshop*. Held at KDD'2006, Philadelphia, August 2006.

Burke, R.; Mobasher, B.; Bhaumik, R. & Williams, C. Collaborative Recommendation Vulnerability To Focused Bias Injection Attacks. In *Workshop on Privacy and Security in Data Mining*. Held at ICDM 2005, Houston, Texas, November 2005.

Mobasher, B.; Burke, R.; Bhaumik, R. & Williams, C. Effective Attack Models for Shilling Item-Based Collaborative Filtering Systems. In *Proceedings of the 2005 WebKDD Workshop*, pp. 13-23. Held at KDD 2005, Chicago, Illinois, USA, August 2005. Expanded version reprinted in O. Nasraoui, O. Zaiane, M. Spiliopoulou, B. Mobasher, B. Masand, P. Yu (eds.) *Advances in Web Mining and Web Usage Analysis*, pp. 96-118. Springer, 2005.

Mobasher, B.; Burke, R. & Bhaumik, R. Limited Knowledge Shilling Attacks in Collaborative Filtering Systems. In *Proceedings of Workshop on Intelligent Techniques for Web Personalization (ITWP'05)*, Held IJCAI'05, Edinburgh, Scotland, August 2005.

Burke, R.; Mobasher, B.; Zabicki, R. & Bhaumik, R. Identifying Attack Models for Secure Recommendation. In *Beyond Personalization: A Workshop on the Next Generation of Recommender Systems Research*, pp. 19-25. IUI, 2005.

Burke, R. Hybrid Systems for Personalized Recommendations. In B. Mobasher & S. Anand (eds.) *Intelligent Techniques for Web Personalization*, pp. 133-152. Workshop held at IJCAI 2003.

Burke, R. Semantic Ratings and Heuristic Similarity for Collaborative Filtering. In *AAAI Workshop on Knowledge-Based Electronic Markets*, pp. 14-20. AAAI, 2000.

Burke, R. Agent-Based Information Access in DONNA. In *AAAI Workshop on Intelligent Information Systems*, pp. 13-15. AAAI, 1999.

Burke, R. Integrating Knowledge-Based and Collaborative-Filtering Recommender Systems. In *AAAI Workshop on AI in Electronic Commerce*, pp. 69-72. AAAI, 1999.

Burke, R. Defining the Opportunities for Textual CBR. In *AAAI Workshop on Textual Case-Based Reasoning*, pp. 13-19. AAAI, 1998.

Burke, R.; Hammond, K.; Kulyukin, V.; Lytinen, S.; Tomuro, N.; Schoenberg, S. Natural Language Processing in the FAQ Finder System: Results and Prospects. In *AAAI Spring Symposium on Natural Language Processing for the World Wide Web*. AAAI, 1997.

Burke, R.; Hammond, K. & Cooper, E. Knowledge-based Information Retrieval from Semi-structured Text. In *AAAI Workshop on Internet-based Information Systems*, pp. 9-15. AAAI, 1996.

Hammond, K.; Burke, R. & Cooper, E. Knowledge-based Information Retrieval for Semi-Structured Text. At *Artificial Intelligence-Based Tools to Help WWW Users, Workshop of the Fifth International World Wide Web Conference*. Paris, France: May, 1996.

Kulyukin, V.; Hammond, K. & Burke, R. Automated analysis of structured on-line documents. In *AAAI Workshop on Internet-based Information Systems*, pp. 78-86. AAAI, 1996.

Burke, R. & Hammond, K. Combining knowledge-bases and databases for assisted browsing. In *Working Notes of the AAAI Spring Symposium on Information Gathering in Heterogeneous Environments*, pp. 25-29. AAAI, 1995.

Burke, R.; Hammond, K. & Kozlovsky, J. Knowledge-based information retrieval for semi-structured text. In *Working Notes of the AAAI Fall Symposium on AI Applications in Knowledge Navigation and Retrieval*, pages 15-19. AAAI, 1995.

Hammond, K.; Burke, R.; Martin, C. & Lytinen, S. FAQ Finder: A Case-Based Approach to Knowledge Navigation. In *Working Notes of the AAAI Spring Symposium on Information Gathering in Heterogeneous Environments*, pp. 69-73. AAAI, 1995.

Burke, R. & Kass, A. Refining the Universal Indexing Frame to Support Retrieval of Tutorial Stories. In *AAAI Workshop on Indexing and Reuse in Multimedia Systems*, pp. 1-11. AAAI, 1994.

Burke, R.; Kedar, S. & Kass, A. Acquiring Retrieval Knowledge for Multimedia Stories. In *AAAI Workshop on Indexing and Reuse in Multimedia Systems*, pp. 199-212. AAAI, 1994.

Hammond, K.; Burke, R. & Schmitt, K. A Case-Based Approach to Knowledge Navigation. In *AAAI Workshop on Indexing and Reuse in Multimedia Systems*, pp. 46-57. AAAI, 1994. Also in *AAAI Workshop on Knowledge Discovery in Databases*, pages 383-393. AAAI, 1994.

Burke, R. Retrieval strategies for tutorial stories. In D. Leake (ed.) *Case-based Reasoning: Papers from the 1993 Workshop*, Technical Report WS-93-01, pp. 118-124. AAAI, 1993.

Burke, R. Strategic retrieval of tutorial stories. In P. Anick and E. Simoudis (eds.) *Case-Based Reasoning and Information Retrieval: Exploring the Opportunities for Technology Sharing, Papers from the 1993 Spring Symposium*, Technical Report SS-93-07, pp. 18-27. AAAI, 1993.

Burke, R. Knowledge acquisition and education: a case for stories. In *Working Notes of the AAAI Symposium on Cognitive Aspects of Knowledge Acquisition*, pp. 39-46. AAAI, 1992.

Burke, R. & Ohmaye, E. Case-based environments for teaching. In *Working Notes of the AAAI Symposium on Knowledge-Based Environments for Learning and Teaching*, pages 63-67. AAAI, 1990.

Schank, R.; Osgood, R.; Brand, M.; Burke, R.; Domeshek, E.; Edelson, D.; Ferguson, W.; Freed, M.; Jona, K.; Krulwich, B.; Ohmaye, E. & Pryor, L. Towards a general content theory of indexing. In *Working Notes of the AAAI Symposium on Case-Based Reasoning*. AAAI, 1990.

Burke, R. Understanding and responding in conversation: Case retrieval with natural language. In *Proceedings of the Case-Based Reasoning Workshop I*, pp. 230-234. Morgan-Kaufmann, 1989.

Burke, R. Knowledge-based analysis of medical descriptions. In *Proceedings of the AAAI Symposium on Artificial Intelligence in Medicine*, pp. 11-12. AAAI, 1988.

Books, Invited Articles

Vahedian, F. & Burke, R. Recommender Systems based on Social Networks. *Encyclopedia of Social Network Analysis and Mining*, (R. Alhajj & J. Rokne, eds.). Springer, 2017.

Zheng, Y., Mobasher, B., & Burke, R. Emotions in Context-aware Recommender Systems. Chapter 15 in *Emotions and Personality in Personalized Services*, pages 311-326. Springer, 2016.

Burke, R., Felfernig, A. & Göker, M. Recommender Systems: An Overview. *AI Magazine* 32(3) 13-18. 2011

Burke, R., Gemmell, J., Hotho, A. & Jäschke, R. Recommendation in the Social Web. *AI Magazine* 32(3) 46-56. 2011.

Burke, R. Review of "Recommender Systems: An Introduction". *International Journal of Human-Computer Interaction*, 28(1) 72-73. 2011

Burke, R. & Ramezani, M. Matching Recommendation Technologies and Domains. In Kantor, P., Ricci, F., Rokach, L. & Shapira, B. eds. *Handbook of Recommender Systems*. Springer, 2010.

Burke, R.; Hurley, N. & O'Mahoney, M. Robust Collaborative Recommendation. In Kantor, P., Ricci, F., Rokach, L. & Shapira, B. eds. *Handbook of Recommender Systems*. Springer, 2010. Revised version published in 2nd edition, 2015.

Burke, R., Felfernig, A. & Schmidt-Thieme, L. (eds.) *Proceedings of the 3rd ACM International Conference on Recommender Systems*. ACM, 2009.

Burke, R. Hybrid Web Recommender Systems. In Brusilovsky, P., Kobsa, A., Nejdl, W. (eds.). *The Adaptive Web: Methods and Strategies of Web Personalization*., Lecture Notes in Computer Science, Vol. 4321, pp. 377-408, Springer, Berlin-Heidelberg, 2007.

Kulyukin, V. & Burke, R. Mining Free Text for Structure. In J. Wang (ed.), *Data Mining: Opportunities and Challenges,* pp. 278-300. Harrisburg, PA: Idea Group Publishers, 2003.

Burke, R. Recommenders: Where CBR Meets E-Commerce. *IEEE Intelligent Systems*, 17(3): 6-8. 2002.

Burke, R. Knowledge-based Recommender Systems. In A. Kent (ed.), *Encyclopedia of Library and Information Systems*. Vol. 69, Supplement 32. New York: Marcel Dekker, 2000.

Burke, R. Representation, Storage and Retrieval of Tutorial Stories in a Social Simulation. Chapter 4 in R. Schank, (ed.) *Multi-Media Case Based Instruction*, pp. 175-283.Mahwah, NJ: Lawrence Erlbaum Associates, 1998.

Burke, R.; Hammond, K.; Kulyukin, V.; Lytinen, S.; Tomuro, N. & Schoenberg, S. Question Answering from Frequently-Asked Question Files: Experiences with the FAQ Finder System. *AI Magazine*, 18(2): 57-66, 1997.

Burke, R.; Hammond, K. & Young, B. The FindMe Approach to Assisted Browsing. *IEEE Expert*, 12(4), pp. 32-40, 1997.

Burke, R. & Kass, A. Retrieving Stories for Case-Based Teaching. In D. Leake, (ed.) *Case-Based Reasoning: Experiences, Lessons, & Future Directions*, pp. 93-106. Menlo Park, CA: AAAI Press, 1996.

Hammond, K., Burke, R., & Schmitt, K. A Case-Based Approach to Knowledge Navigation. In D. Leake, (ed.) *Case-Based Reasoning: Experiences, Lessons, & Future Directions*, pp. 125-136. Menlo Park, CA: AAAI Press, 1996.

Kass, A., Burke, R. & Fitzgerald W. How to Support Learning from Interaction with Simulated Characters. Chapter 10 in B. Gorskaya & J. Mey, (eds.) *Cognitive Technology: In Search of a Humane Interface*,. New York: Elsevier/North-Holland, 1996. Also issued as Technical Report #64, Institute for the Learning Sciences, 1995.

Refereed Conference Presentations

Burke, R. & Yang, H. "Circulation Modeling of Library Book Promotions." Presented at Chicago Colloquium on Digital Humanities and Computer Science, 2018.

Bernal, M. Burke, R. & Shanahan, J. "Visualizing and Modeling Chicago's 'One Book' Program." Presented at Library Information Technology Association Forum, Ft. Worth, November 19, 2016.

Bernal, M. Burke, R. & Shanahan, J. "Reading Chicago Reading: Capture and Analysis of City-Scale Literary Events." Presented at 2016 Chicago Colloquium on Digital Humanities and Computer Science, November 12, 2016.

Bernal, M., Bishop-Royse, J., Burke, R., Ceraso, A., & Shanahan, J. "Data Sources for Modeling Library Texts and Readership." Paper presented at the 2016 International Conference on Computational Social Science, June 25, 2016.

Christiansen, L., Burke, R., & Mobasher, B. "Automated timeline extraction from legal records." Paper presented at the 2014 Chicago Colloquium on Digital Humanities and Computer Science. October 24, 2014.

Burke, R. "Games Across the Curriculum." Poster presented at the Game Developers' Conference Education Summit, February 18, 2008.

Burke, R. "Introduction to Game Design." Presentation at Game Developers' Conference Education Summit, March 5, 2007.

Munoz-Franco, L., Rebull, L. M., Burke, R. D., Fenstermacher, K. D., Lenz, D. D., Marks, M. D., Richardson, D. A. & York, D. G. The Chicago Public Schools-University of Chicago Internet Project. *Bulletin of the American Astronomical Society*, 189(4.11), 1996.

Burke, R. Conceptual Indexing and Active Retrieval of Video for Interactive Learning Environments. Presentation at *Second International Symposium on Knowledge Acquisition, Representation and Processing*, Auburn, Alabama, September 1995.

Kass, A. & Burke, R. Augmenting social simulation with storytelling. In *Abstracts of the East-West Conference on Emerging Computer Technologies in Education*. International Centre for Scientific and Technical Information, Moscow, 1992.

Burke, R. Similarity and Utility in Case Retrieval. Poster presented at the DARPA Case-Based Reasoning Workshop II, Washington, D.C., May 1991.

Invited Presentations and Colloquia

Invited Presentation: "Adventures in Multistakeholder Recommendation", Department of Information Science, University of Colorado, Boulder. April 2018.

Workshop: "Social Network Analysis with Gephi". Studio CHI workshop series, DePaul University, April 2018.

Tutorial: (with Ana Lucic and John Shanahan) "Mining Diverse Texts for Location and Sentiment". Workshop held at the Chicago Colloquium on Digital Humanities and Computer Science. Illinois Institute of Technology, November 2017.

Invited Presentation: "Reading Chicago Reading: Update", Social Science Research Center Research Show and Tell. DePaul University, June 1, 2017.

Workshop with John Shanahan and Ana Lučič, "Text Analysis Tools for Early Modern Literature: The Case of Margaret Cavendish", Research Methods Workshop for Early-Career Graduate Students, Center for Renaissance Studies, Newberry Library, March 2017.

Colloquium: "Reading Chicago Reading: Modeling Texts and Readers in a Public Library System", Social Science Research Center Colloquium, October 2016.

Colloquium: "Recommendation for Multiple Stakeholders", School of Computing Research Colloquium, DePaul University, September 2016.

Invited Lecturer, "Computational Advertising". Technical University of Graz, December 2015.

Keynote Speaker. "Recommendation in Heterogenenous Networks". IJCAI Workshop on Heterogeneous Information Network Analysis (HINA '15). July 2015.

Invited Lecturer. "Hybrid Recommender Systems." 11th Estonian Summer School on Computer and Systems Science, August 2012.

Invited Presentation: "Data Mining and Machine Learning in Open Adversarial Environments." First Annual Chicago Data Mining Symposium, October 2010.

Colloquium: "Data Mining and Machine Learning in Adversarial Environments." School of Computing Research Colloquium, DePaul University, October 2010.

Invited Lecturer: "Directions in Social Computing" Free University of Bolzano/Bozen, June 2010.

Invited Lecturer: "Recommender Systems" Technical University of Graz, May 2009 and June 2010.

Invited Seminar, "Robust Recommender Systems." Presented at Technical University of Graz, Telefonica Research and Development, University of Warwick, University of Southampton, University College Cork, University College Dublin, Robert Gordon University, Free University of Bolzano/Bozen. Spring 2009.

Tutorial, "Robust Recommendation." Presented at the 2nd ACM International Conference on Recommender Systems (RecSys'08), Lausanne, Switzerland, October 2008.

Colloquium: "Learning in Public: The Challenge of Autonomy for Machine Learning". University College Dublin. November 2008.

Keynote Speaker, "Teaching Computer Game Development: The DePaul Experience." Symposium on Emerging Technologies 2007. Metropolitan State University, St. Paul, Minnesota, October 2007.

Keynote Speaker, "Future Directions in Recommender Systems Research." Workshop on Recommender Systems. Held at the 17th European Conference on Artificial Intelligence. Riva del Garda, Italy, August 2006.

Keynote Speaker, "Recommender Systems and User Modeling," Workshop on Advances in Recommender Systems. Held at the 8th Biennial Israeli Symposium on the Foundations of AI. Haifa, Israel, June 2005.

Invited Panelist. "Commercial Applications of Adaptive Hypermedia." Third International Conference on Adaptive Hypermedia. August 2004.

Invited speaker. "Mixed-Initiative Case-Based Reasoning." Workshop held at the 6th European Conference on Case-Based Reasoning. Aberdeen, Scotland. September 2002.

Invited Panelist. "Case-Based Reasoning in E-Commerce." Workshop held at the 4th International Conference on Case-Based Reasoning. Vancouver, Canada. July/August 2001.

Technical Reports

Burke, R. *Hybrid Recommender Systems: A Comparative Study*. CTI Technical Report 06-012. 2006.

Burke, R. D.; Hammond, K. J.; Kulyukin, V. A.; Lytinen, S. L.; Tomuro, N. & Schoenberg, S. *Question Answering from Frequently-Asked Question Files: Experiences with the FAQ Finder System*. University of Chicago Department of Computer Science. Technical. Report TR-97-05. Chicago, IL, 1997.

Burke, R & Kass, A. *Interest-Focused Tutoring: A Tractable Approach to Modeling in Intelligent Tutoring Systems*. University of Chicago Department of Computer Science. Technical Report TR-96-08. Chicago, IL, 1996.

Burke, R. (editor) *AI Applications in Knowledge Navigation and Retrieval*. AAAI Technical Report FS-95-03. Menlo Park, CA: AAAI, 1995.

Burke, R. *Representation, Storage and Retrieval of Tutorial Stories in a Social Simulation*. PhD Thesis, Northwestern University, 1993. Issued as Technical Report #50, Institute for the Learning Sciences, 1993.

Schank, R.; Fano, A.; Jona, M.; Bell, B.; Allender, L.; Birnbaum, L.; Burke, R.; Cleave, J.; Ferguson, R.; Foster, D.; Goldstein, E.; Guralnick, D.; Kass, A. and Leone, M. *The Design of Goal-Based Scenarios*. Technical Report #39. Evanston, IL: Institute for the Learning Sciences, 1993.

Kass, A.; Burke, R.; Blevis, E. & Williamson, M. *The GuSS Project: Integrating Instruction and Practice through Guided Social Simulation*. Technical Report #34. Evanston, IL: Institute for the Learning Sciences, 1992.

Schank, R.; Osgood, R.; Brand, M.; Burke, R.; Domeshek, E.; Edelson, D.; Ferguson, W.; Freed, M.; Jona, K.; Krulwich, B.; Ohmaye, E. & Pryor, L. *A Content Theory of Memory Indexing*. Technical Report #2. Evanston, IL: Institute for the Learning Sciences, 1990.

Grants and other Recognition

External

8/2018	Principal Investigator with John Shanahan and Ana Lucic. Lyrasis Foundation. "Data-Intensive Tools for Modeling and Visualizing Mass Reading" 8/2018-7/2019. $24,352.
8/2017	Principal Investigator with John Shanahan and Ana Lucic. HathiTrust Research Center, Advanced Collaborative Support Grant. "Computational Support for Reading Chicago Reading". August 2017 – December 2017. In-kind.
6/2016	Co-principal Investigator with John Shanahan, Megan Bernal, and Antonio Ceraso. National Endowment for the Humanities, Digital Humanities Start-up Grant. "Reading Chicago Reading". June 2016–December 2017. $75,000.
9/2014	Principal Investigator with Bamshad Mobasher, National Science Foundation, Information Integration and Informatics Program "Multi-Dimensional Recommendation in Complex Heterogeneous Networks." #1423368, September 2014-September 2017. $499,884.
8/2008	Fulbright Scholar, Ireland. "Autonomic Open Adaptive Systems." US-Irish Fulbright Commission and University College Dublin. August 2008-July 2009.
6/2006	Best paper award for Burke, et al. Detecting Profile Injection Attacks in Collaborative Recommender Systems. IEEE Conference on E-Commerce Technology (CEC'06). San Francisco, California.
9/2004	Principal Investigator with Bamshad Mobasher, National Science Foundation CyberTrust Program "Secure Personalization: Building Trustworthy Recommender Systems". #0430303. September 2004-September 2007. $300,000. No-cost extension approved through 8/30/2008.
2/2000	Principal Investigator, University of California Digital Media Innovation Program with FileNet Corporation, "Task-based Analogical Retrieval in DONNA" #D99-14. February 2000 – February 2001. Co-principal investigator Michael Pazzani. $122,542
10/1997	National Science Foundation, Major Research Instrumentation grant, "Acquisition of Computational Resources for the Development of an Intelligent Information Laboratory" #CDA-9724286. Co-principal investigator with Kristian J. Hammond, Michael Swain, and Theresa Gaasterland, October 1997— September 2000. $549,452
3/1997	Principal Investigator for Wasabi, Inc. National Science Foundation "SBIR Phase II" #DMI-9531395. March 1997 – September 1999. $297,800

Internal (DePaul University)

3/2017	Provost's Academic Initiative Grant, "Graduate assistant for Reading Chicago Reading". University Research Council, DePaul University.
6/2016	Competitive Instructional Grant, "Hardware Support for Collaborative Instruction". Quality of Instruction Council, DePaul University.
6/2015	Competitive Collaborative Research Grant, "Reading Chicago Reading". Quality of Research Council, DePaul University.
11/2013	Competitive Instructional Grant, "Software Support for Advanced Game Programming Courses." Quality of Instruction Council, DePaul University.
6/2011	Spirit of Inquiry Award. DePaul University.
7/2008	Paid Leave Award. "Contextual Recommender Systems." University Research Council, DePaul University. July 2008-July 2009.
5/2007	Competitive Instructional Grant, "Materials for 'History of Games." Quality of Instruction Council, DePaul University.

Consulting

11/2014 – 11/2015 Consultant, "Machine Learning of Diagnostic Features for Hardware Fault Attribution". Uptake, Inc.

7/2013 - 8/2014 Expert Witness, "Optimize Technology Solutions, LLC v. Staples, Inc. et al." Case No. 2:11-CV-419-JRG (E.D. Texas). Kasowitz, Benson, Torres & Friedman, LLP for Recreational Equipment Inc.

10/2012 - 12/2014 Expert Witness, "In the Matter of Certain Products Containing Interactive Program Guide and Parental Control Technology, Investigation No. 337-TA-845, United States International Trade Commission, Keker & Van Nest LLP for Netflix, Inc.

10/2012 - 8/2013 Consultant, "Collaborative Opportunity Recommendation". CareerBuilder.com.

1/2011-6/2011   Consultant, "Experience Discovery". Chicago Learning Network.

TEACHING & ADVISING

Curriculum development

B.A. Applied Computing, College of Liberal Arts and Social Sciences, under review

B.S./B.A. Data Science, School of Computing, active as of 9/2018

M.S. Predictive Analytics (now Data Science), School of Computing, active as of 9/2012

M.S. Computer Game Development, School of Computing, active as of 9/2009

B.S. Computer Game Development, School of Computing, active as of 9/2004

Course development

CSC 270 "From Fireflies to Facebook: The Science of Networks"

CSC 299 "Sophomore Lab in Applied Computing"

CSC 495 "Social Network Analysis"

CSC 594 "Topics in AI: Recommender Systems" now CSC 577

CSC 599 "Topics in Artificial Intelligence: Computational Advertising" now CSC 576

ECT 360 "Introduction to XML"

ECT 594 "Topics in Artificial Intelligence: AI in Knowledge Management"

GAM 206 "History of Games"

GAM 224 "Introduction to Game Design"

GAM 376/476 "AI for Computer Games"

GAM 378 "Strategy Games Programming"

GAM 399 "Topics in Game Design and Development: Prototyping"

ISP 101 "Virtual Reality: Myth or Matrix" (Focal Point Seminar)

LSP 112 "I, Robot: Imagining / Engineering Robot Autonomy"
        (Interdisciplinary Focal Point Seminar with Prof. John Shanahan)

Other courses taught

COMP 20050 "Software Engineering Project II" (University College Dublin)

COMP 30030 "Introduction to Artificial Intelligence" (University College Dublin)

CSC 358/458 "Symbolic Programming"

CSC 373 "Computer Systems I"

ECT 270 "Client-Side Web Application Development"

ECT 582 "Secure Electronic Commerce"

GAM 226 "Game Design for Majors"
GAM 374/474 "Fundamentals of Game Programming I"
IS 313 "Business Application Development in Java"
IT 130 "The Internet and the Web"

Student supervision

PhD advisor

Masoud Mansoury, Nasim Sonboli: 2nd year
Himan Abdollahpouri: 3rd year
Fatemeh Vahedian (9/2012 – 12/2017), title: "Multi-relational recommendation in heterogeneous
        networks."

PhD committee member

Negar Hariri (9/2012 - 10/2015), title: "Context Adaptation in Recommender Systems"
Yong Zheng (5/2012 - 5/2016), title: "Context Awareness in Recommender Systems"
Carlos Castro-Herrera (10/2010-6/2016), title: "Toward a Unified Process for Automated Traceability"
Jonathan Gemmell (9/2010 - 6/2014), title: "Recommendation in Social Annotation Systems"
Runa Bhaumik (4/2008 - 5/2011), title: "Attacks Against Collaborative Recommender Systems: An
        Analysis of Algorithms, Robustness and Detection Methods"
Ahu Sieg (3/2005 – 9/2010), title: "Collaborative Recommendation with Ontology-Based Profiles"

External examiner

Jascek Wasilewski, University College, Dublin, 2018.
Brendan O'Huiginn, University College Dublin, 2011.
Gil Chamiel, School of Computer Science and Engineering, University of New South Wales, 2010.
Antonis Loizou, University of Southampton, 2009.
Peter Briggs, University College Dublin, 2009.

Masters projects

Jackson Kontny, Synthetic demographic attributes for fairness-aware recommendation in job markets,
        2018.
Danno Aasland, Times Series Modeling of the Interaction between Library Circulation and Promotional
        Events, 2017.
Yoon Jung Lee, Data Sources for Multistakeholder Recommendation, 2017.
Scott Riley, Ensemble Models for Voter Behavior Prediction, 2016
John Lalor, Text Similarity in City of Learning Badges and Programs, 2015
Eric Bontz, Hashtag Recommendation in Twitter, 2014
Aaron Householder, Financial Blog Sentiment as a Market Predictor, 2011
Carlos Melvin, (thesis committee), Relational Trust Model for the Web, 2009
John Dolce, PDF Javadoc Tool, 2005
J.J. Sandvig, AACORN: A CBR Recommender for Academic Advising, 2005

Undergraduate research projects and independent studies

Xavier Sepulveda, Tools for Automating Recommender Systems Experiments, 6/2018-12/2018
Aldo Ordoñez-Gauger, Building User and Team Lending Profiles in Kiva.org, 1/2017-6/2018

Charley Grossman, Recommendation for Chicago City of Learning, 1/2016 – 11/2016
Jorge Staudt, Analysis of Library Circulation Data, 6/2015 – 11/2105
Chris Klimkiewicz, Hybrid Recommendation of Connected Learning Activities, 9/2014-6/2015
Alejandro Huerta, AZUL Game AI Engine, 1/2014-6/2014
Zachary Luttmer, AZUL Open Source Game Engine – API, 1/2013 – 2/2013

SERVICE

DePaul University

Committee on Research Policy, Faculty Council Standing Committee, Member from 9/2016.
Studio χ (Computing/Humanities Interface) Advisory Board, Founding Member, from 4/2016
Cross-College Collaboration Task Force, Member from 10/2014
Task Force on General Education, Member 9/2016-6/2017
Academic Innovation Task Force, Member 2/2013 – 5/2013
CTI / CDM Grade Challenge Committee, Member 9/2004-6/2013
DePaul / Rosalind Franklin Grant Review Panel, Member 3/2013--5/2013, 3/2017
Liberal Studies Domain Committee (Arts and Literature), Member 9/2005-6/2008
Academic Program Review Committee, Member 9/2003-9/2007

DePaul University School of Computing

Faculty Council, School of Computing, Member 6/2012 – 6/2016, chair from 6/2012 – 6/2014
Task Force on Flexible Workload, Member from 1/2017
Personnel Committee, School of Computing, Member from 6/2012
Program Committee, Computer Game Development Degree, Member 6/2003 – 6/2016; Chair 6/2006-
        6/2008; Co-Chair from 9/2010-9/2013
SoC Curriculum Committee, formerly CTI Undergraduate Committee, Member from 3/2003
Program Committee, Computer Science, Member from 2/2003
PhD Committee, Member from 9/2009
Research Environment Committee, Member from 9/2009
CIM Academic Program Review Committee, Chair, 9/2009 – 6/2010
Personnel Committee, School of Cinema and Interactive Media, Member, 8/2008-9/2010
CTI Recruitment Committee, Member 6/2005-6/2008; Chair 9/2006-6/2008
Undergraduate Common Core Committee (formerly Introductory Sequence Committee), Member
        5/2004-6/2008; Chair 5/2004-9/2005
Undergraduate Curriculum Revision Task Force, Member 2/2004-5/2004
Program Committee, Instructional Technology Systems Degree, Member 9/2003-6/2008
Program Committee, Electronic Commerce Technology Degree, Member 2/2003-6/2006
Computing Services Committee, Member 9/2002-9/2005
Colloquium Committee, Member 9/2002-9/2004

National and International

Program Co-Chair, 28th Conference on User Modeling, Adaptation and Personalization. To be held in
        Genoa, Italy. Summer 2020.

Co-Chair, 1st International Workshop in Fairness in User Modeling, Adaptation and Personalization. Held in conjunction with the ACM Conference on User Modeling, Adaptation and Personalization, 2018.

Chair, 1st International Workshop on Value-Aware and Multi-Stakeholder Recommendation. In conjunction with ACM Conference on Recommender Systems, 2017.

Steering Committee, Chicago Colloquium on Digital Humanities and Computer Science. Founding member from 10/2017.

Co-organizer: Recommender Systems Summer School, Bozen-Bolzano, 2017.

Co-chair: Doctoral Consortium, ACM Conference on Recommender Systems, 2017.

Steering Committee, ACM Conference on Recommender Systems. Founding member from 9/2008, Vice chair 9/2015 – 8/2017. Chair from 8/2017.

General Co-Chair of 5th ACM Conference on Recommender Systems, Chicago, 2010 – 2011.

Program Co-Chair of the 3rd ACM Conference on Recommender Systems, New York University, 2009

Conference Chair of the 10th International Conference on Case-Based Reasoning, DePaul University, 2005.

Grant review: National Science Foundation, Austrian Science Foundation, Research Council of Hong Kong

Editorial board: *Electronic Commerce Research with Applications*, from 6/2018.

Program committees: Regular service on numerous conference program committees including ACM Conference on Recommender Systems, ACM Conference on User Modeling and Personalization, FLAIRS Conference, International Joint Conference on Artificial Intelligence, International Conference on Electronic Commerce and Web Technologies (EC-WEB). Numerous workshops in recommender systems including Recommender Systems for the Social Web, Intelligence Techniques in Web Personalization.

Reviewer: Regular journal article reviews for numerous publications including ACM Transactions on Internet Technology, Social Network Analysis and Mining, IEEE Transactions on Knowledge and Data Engineering, ACM Transactions on the Web, IEEE Transactions on Systems, Man and Cybernetics-Part B, ACM Transactions on Intelligent Systems and Technology.

Guest editor: *Electronic Commerce Research with Applications* "Recommender Systems with Side Information" with Hui Fang, Guibing Guo, and Jie Zhang, 2018.
User Modeling and User Adapted Interaction "User Interfaces for Recommender Systems." with Alexander Felfernig and Pearl Pu, 2011.
AI Magazine "The Future of Recommender Systems: Research and Applications." with Alexander Felfernig and Mehmet Göker, 2011.
Artificial Intelligence Review, "AI Approaches to User Requirements Elicitation for E-Commerce. " with Pádraig Cunningham, 2002.

2009	Invited Textbook Reviewer for *Recommender Systems*, Cambridge University Press.
2009	Chapter Reviewer for *Recommender Systems Handbook*.
2008	Reviewer and editor for International Game Developers' Association Curriculum Framework.
1998-2001	Founder and Chair: Working Group on Computers in Education, Computer Professionals for Social Responsibility.

External

1/2013-6/2014	Advisor to PandaPrepared.org, a community service project supporting personal emergency preparedness through mobile applications.
2012-2014	Volunteer coach for First Lego League robotics competition, Girl Scout Troop #24, Evanston, IL.
2009-2014	Volunteer mathematics tutor at Haven Middle School, Evanston, IL.

9/2004	TechWatch volunteer for the Verified Voting Foundation. Helping to ensure responsible use of voting technology in the November 2004 election.
10/2003	Developed and installed community-support database for Great Oaks School, Evanston, Illinois.
2001	Invited presentation: "Hot PANs, Fat Pipes, Cool Chips, Smart Paint and Other Curiosities from the 21st Century Web." At the 3rd Annual Web Institute for Teachers, University of Chicago, July 6, 2001.
1999	Invited presentation: "The Future of the Internet in Education." At the 1st Annual Web Institute for Teachers, University of Chicago. July 8, 1999.
1997-1998	Co-director (with Craig Cunningham) of "The WWW for Teachers", educational outreach courses for inner-city schoolteachers. University of Chicago, Graham School of General Studies.
1996-1998	Chicago Public Schools / University of Chicago Internet Project. Outreach project assisting inner-city schools near the University of Chicago to access and use the Internet.