

ALEXANDER KOTOV

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Research interests:

Large-scale textual data analytics, with particular focus on intelligent information retrieval, health informatics and textual data mining

Education:

University of Illinois at Urbana-Champaign PhD, Computer Science. Advisor: Professor ChengXiang Zhai	2006 – 2011
University of Illinois at Urbana-Champaign MS, Computer Science.	2004 – 2006
Tver State Technical University BS, Computer Science.	1999 – 2003

Professional Experience:

Assistant Professor , Wayne State University	August 2013 – present
Post-Doctoral Fellow , Emory University	September 2011 – July 2013
Research Intern , Microsoft Research	June 2010 – August 2010
Research Intern , Yahoo! Labs	June 2008 – September 2008

Research:

Book chapters:

- B.1. **Kotov A.** “Social Media Analytics for Healthcare”, In “*Healthcare Data Analytics*” by Chandan K. Reddy and Charu C. Aggarwal (editors), CRC Press, 2015

Journal publications:

- J.1. Hasan M., **Kotov A.**, Idalski Carcone A., Dong M., Naar S., Brogan Hartlieb K. “A Study of the Effectiveness of Machine Learning Methods for Classification of Clinical Interview Fragments into a Large Number of Categories”, *Journal of Biomedical Informatics* 62: pages 21-31, 2016

Representative conference publications:

- C.1. Nikolaev F., **Kotov A.**, Zhiltsov N. “Parameterized Fielded Term Dependence Models for Ad-hoc Entity Retrieval from Knowledge Graph”, full paper, In *Proceedings of the 39th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR’16)*, pages 435-444, 2016 (acceptance rate 18%)
- C.2. Zhiltsov N., **Kotov A.**, Nikolaev F. “Fielded Sequential Dependence Model for Ad-hoc Entity Retrieval in the Web of data”, full paper, In *Proceedings of the 38th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR’15)*, pages 253-262, 2015 (acceptance rate 20%)
- C.3. Yang Z., **Kotov A.**, Mohan A., Lu S. “Parametric and Non-parametric User-aware Sentiment Topic Models”, full paper, In *Proceedings of the 38th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR’15)*, pages 413-422, 2015 (acceptance rate 20%)
- C.4. Wang L., Dong M., **Kotov A.** “Multi-level Approximate Spectral Clustering”, full paper, In *Proceedings of the IEEE International Conference on Data Mining (ICDM’15)*, pages 439-448, 2015 (acceptance rate 8%)
- C.5. **Kotov A.**, Zhai C. “Tapping into Knowledge Base for Concept Feedback: Leveraging ConceptNet to Improve Search Results for Difficult Queries”, full paper, In *Proceedings of the 5th ACM International Conference on Web Search and Data Mining (WSDM’12)*, pages 403-412, 2012 (acceptance rate 21%)

- C.6. **Kotov A.**, Bennett P., White R., Dumais S., Teevan J. “Modeling and Analysis of Cross-Session Search Tasks”, full paper, *In Proceedings of the 34th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR’11)*, pages 5–14, 2011 (acceptance rate 20%)
- C.7. **Kotov A.**, Zhai C., Sproat R. “Mining Named Entities with Temporally Correlated Bursts from Multilingual Web News Streams”, full paper, *In Proceedings of the 4th ACM International Conference on Web Search and Data Mining (WSDM’11)*, pages 237–246, 2011 (acceptance rate 8%)
- C.8. **Kotov A.**, Zhai C. “Towards Natural Question-Guided Search”, full paper, *In Proceedings of the 19th International World Wide Web Conference (WWW’10)*, pages 541–550, 2010 (acceptance rate 14%)

Teaching:

Wayne State University

- CSC 7710 Database Management Systems II (NoSQL Databases) (graduate)
- CSC 5710 Design of Intelligent Information Retrieval Systems (graduate/undergraduate)
- CSC 2200 Computer Science II (Data structures in C++) (undergraduate)

Emory University

- CS 572 Information Retrieval (graduate-level)

Funding:

National Institutes of Health “Automated Coding of eCoaching Exchanges to Promote Healthier Eating” (R21), Role: co-PI, Total: \$272,914, Share: \$102,600, 2016-2018

Office of Vice President for Research at Wayne State University “Electronic Health Records Information Extraction for Improving the Study of Cancer Risk and Outcomes”, Role: co-PI, Total: \$70,000, Share: \$30,000, 2014-2016

Ford Motor Company “Extraction of actionable insights from on-line automotive consumer reviews”, Role: PI, Total: \$12,700, Share: \$12,700, 2014-2015

Professional activities:

National Science Foundation panelist: 2014, 2015

Conference program committee member:

- ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR**): 2011-2016
- ACM International Conference on Web Search and Data Mining (**WSDM**): 2014, 2015, 2017
- International World Wide Web Conference (**WWW**): 2012, 2013, 2015, 2017
- ACM International Conference on Information and Knowledge Management (**CIKM**): 2012, 2013, 2016
- ACM SIGIR International Conference on the Theory of Information Retrieval (**ICTIR**): 2015
- European Conference on Information Retrieval (**ECIR**): 2014-2016
- Conference on Empirical Methods in Natural Language Processing (**EMNLP**): 2012
- Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (**NAACL-HLT**): 2013, 2015
- International Joint Conference on Artificial Intelligence (**IJCAI**): 2016
- AAAI Conference on Artificial Intelligence (**AAAI**): 2012
- IEEE International Conference on Big Data (**Big Data**): 2013
- International Joint Conference on Natural Language Processing (**IJCNLP**): 2013

Journal reviewer:

ACM Transactions on Information Systems, Journal of Biomedical Informatics, Information Processing & Management, Information Retrieval, IEEE Transactions on Knowledge and Data Engineering, Knowledge Engineering Review, IEEE/ACM Transactions on Computational Biology and Bioinformatics

Awards:

- Best Short Paper at the 11th Asia Information Retrieval Societies (AIRS) Conference 2015
- First place in Task A of the 2015 TREC Clinical Decision Support (CDS) track 2015
- EMNLP-CoNLL Best Reviewer 2012
- UIUC Incomplete List of Teachers Ranked as Excellent Spring 2005