

# Curriculum Vitae of Laura Dietz

## Personal Details

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## Summary

I am an Assistant Professor at the Computer Science department at University of New Hampshire with a research and teaching focus on text retrieval, extraction, machine learning, and analytics. Before that I was a research scientist at the Data and Web Science group at University of Mannheim, Germany and at the Center for Intelligent Information Retrieval at University of Massachusetts in Amherst. I have over a decade of research experience developing statistical machine learning methods for text, social networks, and knowledge graphs. I have published peer-reviewed articles in the fields information retrieval, natural language processing, machine learning, semantic web, groupware systems, and computational biology.

## Academic Background

08/2016–present Assistant Professor at University of New Hampshire, Durham.  
03/2015–08/2016 Research Scientist at University of Mannheim, Germany with Prof. Simone Ponzetto.  
09/2012–02/2015 Research Scientist at University of Massachusetts, Amherst with Prof. W. Bruce Croft.  
10/2010–09/2012 Post-doctoral fellow at University of Massachusetts, Amherst with Prof. Andrew McCallum.  
01/2007–01/2011 Ph.D. student at Max Planck Institute for Informatics, Saarbrücken, Germany with Prof. Tobias Scheffer and Prof. Gerhard Weikum.  
Thesis: “Exploiting Graph-Structured Data in Generative Probabilistic Models”  
10/2006–12/2006 Ph.D. student at Knowledge Management group (Prof. Tobias Scheffer) at Humboldt University, Berlin, Germany.  
12/2002–09/2006 Research Associate at Fraunhofer Institute for Publication and Information Systems (IPSI), Darmstadt, Germany.  
10/1995–10/2002 Diplom (Dipl.-Inf.) in Computer Science at Goethe University, Frankfurt a.M., Germany.  
Thesis: “Kooperative Verarbeitung strukturierter Textdokumente mit adaptiver Konfliktgranularität”. (“Shared Word Processor for Structured Text Documents with Adaptive Conflict Granularity”).

## Scholarships and Grants

01/2019–present “NSF CAREER: Utilizing Fine-grained Knowledge ANnotations in Text Understanding and Retrieval” (549,056 USD, five years)  
07/2018–present UNH CoRE Pilot Research Partnership award for “Watershed Informatics: Integrating Big Data to Understand Watersheds in a Changing World” (Co-PI, 30,000 USD, one year)  
03/2016–02/2019 Elite Post-doc program of BW-Stiftung grant for “Knowledge Consolidation and Organization for Query-specific Wikipedia Construction” (110,000 EUR, two years)  
05/2015–05/2016 Amazon AWS in education award for “Queripedia - A New Web Search Paradigm through Query-specific Knowledge Resource Construction” (11,000 USD, one year)  
03/2015–present Co-investigator on Google faculty grant “Query Modeling Using Intra-Entity Knowledge Base Structure” (31,130 USD, three years, PI: Prof. Miles Efron, UIUC)

- 01/2013–12/2014 Co-investigator on NIH subcontract “Figure Search” (155,000 USD, PI: Prof. Bruce Croft, UMass)
- 06/2008–09/2010 Ph.D. scholarship of Microsoft Research Cambridge.
- 01/2007–05/2008 International Max Planck graduate school scholarship.

## Awards and Prizes

- 06/2018 Best paper award at JCDL. Title: “Entity-aspect linking: providing fine-grained semantics of entities in context” (Together with Federico Nanni and Prof. Simone Paolo Ponzetto).
- 11/2013 Open Software Innovation Competition Award of the Institute for Computational Biology, Biostatistics, and Bioinformatics. Title: “Hardware and software for single-molecule fluorescence analysis” (Together with Ben Gamari and Prof. Lori Goldner).

## Publications

Annotation of conferences and CORE ratings<sup>1</sup> given in parentheses.

- A\*: The ACM SIGIR conference is the prime venue for research on Information Retrieval
- A\*: ACM JCDL is the prime venue for research on digital libraries and web archiving
- A\*: ACM International Conference on Web Search and Data Mining (WSDM)
- A\*: WWW is the prime venue for research on Information Systems on the World-wide Web.
- A\*: NIPS (NeurIPS) is one of two prime venues for machine learning.
- A\*: ICML is one of two prime venues for machine learning.
- A: ECIR is the most important conference for information retrieval research in Europe.
- A: NAACL is the most important conference for computational linguistics research in North America.
- A: CIKM is a large conference on information and knowledge management.
- C: LREC is the largest conference in computational linguistics. Because of its focus on dissemination of research resources, it has a low rating but a high reputation.
- C: MMM is an international conference on multimedia modelling.
- The ACM ICTIR is a high-rated specialized conference for theoretical research in Information Retrieval (unranked, too new)
- ACM Web Science Conference brings together computer science, sociology, economics, information science, anthropology, and psychology.
- Text Retrieval Conference (TREC) is an evaluation venue running shared tasks with the support of NIST.
- The Conference on Digital Humanities is the prime venue for research on Digital Humanities. (not in scope for CORE)

## Peer-Reviewed Journal and Conference Publications

- Jeff Dalton, Shahrzad Naseri, Laura Dietz, and James Allan. Local and global query expansion for hierarchical complex topics. In *ECIR 2019 European Conference on Information Retrieval*. Springer, 2019, in print. (A)†
- Lydia Weiland, Ioana Hulpus, Simone Paolo Ponzetto, Wolfgang Effelsberg, and Laura Dietz. Knowledge-rich image gist understanding beyond literal meaning. *Data & Knowledge Engineering*, 117:114–132, 2018.
- Federico Nanni, Simone Paolo Ponzetto, and Laura Dietz. Toward comprehensive event collections. *International Journal on Digital Libraries*, pages 1–15, 2018c.
- Federico Nanni, Simone Paolo Ponzetto, and Laura Dietz. Entity-aspect linking: providing fine-grained semantics of entities in context. pages 49–58, 2018b. (A\*), **best paper award**.
- Federico Nanni, Mahmoud Osman, Yi-Ru Cheng, Simone Paolo Ponzetto, and Laura Dietz. UKParl: a data set for topic detection with semantically annotated text. LREC, 2018a. (C)

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<sup>1</sup><http://www.core.edu.au/conference-portal>

- Federico Nanni, Laura Dietz, and Simone Paolo Ponzetto. Toward a computational history of universities: Evaluating text mining methods for interdisciplinarity detection from phd dissertation abstracts. *Digital Scholarship in the Humanities*, 33(3):612–620, 2017a.
- Federico Nanni, Bhaskar Mitra, Matt Magnusson, and Laura Dietz. Benchmark for complex answer retrieval. In *ICTIR '17 Proceedings of the ACM SIGIR International Conference on Theory of Information Retrieval*, pages 293–296, 2017c.
- Federico Nanni, Nikolay Marinov, Simone Paolo Ponzetto, and Laura Dietz. Building entity-centric event collections for supporting research in political and social history. In *Digital Humanities*, 2017b.
- Amina Kadry and Laura Dietz. Open relation extraction for support passage retrieval: Merit and open issues. In *Proceedings of the 40th International ACM SIGIR Conference on Research and Development in Information Retrieval*, pages 1149–1152. ACM, 2017. (A\*)
- Federico Nanni, Simone Paolo Ponzetto, and Laura Dietz. Building entity-centric event collections. In *Proceedings of the 17th ACM/IEEE Joint Conference on Digital Libraries*, pages 199–208. IEEE Press, 2017d. (A\*)
- Lydia Weiland, Ioana Hulpus, Simone Paolo Ponzetto, and Laura Dietz. Using object detection, NLP, and knowledge bases to understand the message of images. In *International Conference on Multimedia Modeling*, pages 405–418. Springer, Cham, 2017. (C)
- Lydia Weiland, Ioana Hulpus, Simone Paolo Ponzetto, and Laura Dietz. Understanding the message of images with knowledge base traversals. In *Proceedings of the 2016 ACM International Conference on the Theory of Information Retrieval*, pages 199–208. ACM, 2016.
- Federico Nanni, Laura Dietz, Stefano Faralli, Goran Glavaš, and Simone Paolo Ponzetto. Capturing interdisciplinarity in academic abstracts. *D-lib magazine*, 22(9/10):9, 2016.
- Christoph Carl Kling, Lisa Posch, Arnim Bleier, and Laura Dietz. Topic model tutorial: A basic introduction on latent dirichlet allocation and extensions for web scientists. In *Proceedings of the 8th ACM Conference on Web Science*, pages 10–10. ACM, 2016.
- Michael Schuhmacher, Benjamin Roth, Simone Paolo Ponzetto, and Laura Dietz. Finding relevant relations in relevant documents. In *Advances in Information Retrieval. 38th European Conference on IR Research, ECIR 2016, Padua, Italy, March 20–23, 2016.*, volume 9626, pages 654–660. Springer International Publishing, 2016. (A)
- Michael Schuhmacher, Laura Dietz, and Simone Paolo Ponzetto. Ranking entities for web queries through text and knowledge. In *ACM International Conference on Information and Knowledge Management (CIKM)*, 2015. (A)
- Jeffrey Dalton, Laura Dietz, and James Allan. Entity query feature expansion using knowledge base links. In *Proceedings of the 37th international ACM SIGIR conference on Research & development in information retrieval*, pages 365–374. ACM, 2014 (A\*).
- Laura Dietz, Ziqi Wang, Samuel Huston, and W Bruce Croft. Retrieving opinions from discussion forums. In *Proceedings of the 22nd ACM international conference on Information & Knowledge Management*, pages 1225–1228. ACM, 2013. (A)
- Jeffrey Dalton and Laura Dietz. A neighborhood relevance model for entity linking. In *Proceedings of the 10th Conference on Open Research Areas in Information Retrieval*, pages 149–156. LE CENTRE DE HAUTES ETUDES INTERNATIONALES D'INFORMATIQUE DOCUMENTAIRE, 2013.
- Laura Dietz, Ben Gamari, John Guiver, Edward Snelson, and Ralf Herbrich. De-layering social networks by shared tastes of friendships. In *International Conference on Weblogs and Social Media (ICWSM)*, 2012.
- Laura Dietz, Valentin Dallmeier, Andreas Zeller, and Tobias Scheffer. Localizing bugs in program executions with graphical models. In *Advances in Neural Information Processing Systems*, pages 468–476, 2009. (A\*)
- Laura Dietz, Steffen Bickel, and Tobias Scheffer. Proceedings of the 24th international conference on machine learning. 2007. (A\*)
- Peter Tandler and Laura Dietz. Cooperation in ubiquitous computing: an extended view on sharing. In *From Integrated Publication and Information Systems to Information and Knowledge Environments*, pages 241–250. Springer, Berlin, Heidelberg, 2005.

- Peter Dawabi, Laura Dietz, Alejandro Fernández, and Martin Wessner. Concertstudeo: Using pdas to support face-to-face learning. In *International Conference on Computer Support for Collaborative Learning*, pages 235–237, 2003.
- Laura Dietz, Peter Dawabi, and Martin Wessner. Improving face-to-face learning with concertstudeo. *Learning Technology*, 5:383–401, 2003.

### Peer-Reviewed Workshop Publications

- Matthew Magnusson and Laura Dietz. An analysis of deep contextual word embeddings and neural architectures for toponym mention detection in scientific publications. In *NAACL Workshop on Workshop on extracting structured knowledge from scientific publications (ESSP)*, 2019a, accepted.
- Matthew Magnusson and Laura Dietz. UNH at SemEval-2019 task 12: Toponym resolution in scientific papers. In *The 2019 International Workshop on Semantic Evaluation colocated with NAACL (SemEval)*, 2019b, accepted.
- Sumanta Kashyapi, Shubham Chatterjee, Jordan Ramsdell, and Laura Dietz. Trema-unh at trec 2018: Complex answer retrieval and news track. In *Text Retrieval Conference (TREC)*, 2018, in print.
- Chumki Basu, Laura Dietz, and Christiane Fellbaum. WordNetContext: information retrieval-friendly access to wordnet senses. In *ProfS/KG4IR/Data: Search@ SIGIR*, pages 63–64, 2018.
- Laura Dietz and John Foley. On the equivalence of generative and discriminative formulations of the sequential dependence model. In *ATIR: SIGIR Workshop on Axiomatic Thinking for Information Retrieval and Related Tasks*, 2017.
- Matthew Magnusson, Ben Gamari, and Laura Dietz. Trema-unh at trec 2017: Complex answer retrieval. In *Text Retrieval Conference (TREC)*, 2017.

Only recent workshop publications are listed.

### Organized Workshops, Tutorials, Special Issues, Shared Tasks

- Vivi Nastase, Ben Roth, Laura Dietz, and Andrew McCallum. Workshop on extracting structured knowledge from scientific publications (ESSP). In *NAACL 2019 Annual Conference of the North American Chapter of the Association of Computational Linguistics*. ACL, 2019, upcoming. (A)
- Chen Huajun, Laura Dietz, Ying Ding, Wendy Hall, James Hendler, Deborah McGuinness, Edgar Meij, Sam Molyneux, Varish Mulwad, Raghava Mutharaju, Jeff Pan, Xiang Ren, Jie Tang, Alex Wade, Mengting Wan, Chenyan Xiong, and Min Zhang. Workshop on knowledge graph technology and applications (KGTA). In *WWW 2019: International World Wide Web Conference*, (a merger of three workshops), 2019, upcoming. (A\*)
- Laura Dietz, Chenyan Xiong, Jeff Dalton, and Edgar Meij, editors. *Special issue on knowledge graphs and semantics in text analysis and retrieval [Special Issue]*, Information Retrieval Journal, 2019. Springer Netherlands.
- Laura Dietz, Ben Gamari, Jeff Dalton, and Nick Craswell. TREC complex answer retrieval overview. In *Proceedings of TREC*, 2018a.
- Laura Dietz, Chenyan Xiong, Jeff Dalton, and Edgar Meij. The second workshop on knowledge graphs and semantics for text retrieval, analysis, and understanding (KG4IR). In *The 41st International ACM SIGIR Conference on Research & Development in Information Retrieval*, pages 1423–1426. ACM, 2018b. (A\*)
- Laura Dietz, Chenyan Xiong, and Edgar Meij. Overview of the first workshop on knowledge graphs and semantics for text retrieval and analysis (KG4IR). In *ACM SIGIR Forum*, volume 51, pages 139–144. ACM, 2018c. (A\*)
- Laura Dietz, Manisha Verma, Filip Radlinski, and Nick Craswell. Trec complex answer retrieval overview. In *Proceedings of TREC*, 2017c.

- Laura Dietz, Chenyan Xiong, and Edgar Meij. The first workshop on knowledge graphs and semantics for text retrieval and analysis (KG4IR). In *Proceedings of the 40th International ACM SIGIR Conference on Research and Development in Information Retrieval*, pages 1427–1428. ACM, 2017d. (A\*)
- Laura Dietz, Alexander Kotov, and Edgar Meij. Tutorial on utilizing knowledge graphs in text-centric information retrieval. In *Proceedings of the Tenth ACM International Conference on Web Search and Data Mining*, pages 815–816. ACM, 2017b. (A\*)
- Laura Dietz, Alexander Kotov, and Edgar Meij. Tutorial on utilizing knowledge bases in text-centric information retrieval. In *Proceedings of the 2016 ACM International Conference on the Theory of Information Retrieval*, pages 5–5. ACM, 2016.

### Trade Publications

- Mohammad Aliannejadi, Maram Hasanain, Jiaxin Mao, Jaspreet Singh, Johanne R Trippas, Hamed Zamani, and Laura Dietz. ACM SIGIR student liaison program. In *ACM SIGIR Forum*, volume 51, pages 42–45. ACM, 2018.
- Laura Dietz, Elinor Brondwine, Shiri Dori-Hacohen, and Ellen Voorhees. Women in ir. In *ACM SIGIR Forum*, volume 50, pages 15–17. ACM, 2017a.

### Invited Talks and “by invitation only” Workshops

03/2019	L.Dietz. Text, Entities, and Relevant Context for Complex Answer Retrieval. Dr. Fernando Diaz, Microsoft Research, Monreal, Canada.
01/2019	L.Dietz. Text, Entities, and Relevant Context for Complex Answer Retrieval. Shay Artzi, Amazon Search, Boston, MA.
08/2018	L.Dietz. Text, Entities, and Relevant Context for Complex Answer Retrieval. Dr. Amanda Stent, Bloomberg, New York City, NY.
04/2018	L.Dietz. Text, Entities, and Relevant Context for Complex Answer Retrieval. Prof. Charles Clark, Facebook, Menlo Park, CA.
3/2018	L.Dietz. Text, Entities, and Relevant Context for Complex Answer Retrieval. Prof. Doug Oard. University of Maryland.
2/2018	The third Strategic Workshop in Information Retrieval in Lorne (SWIRL III), Lorne, Australia.
11/2017	L.Dietz. Retrieving Complex Answers through Knowledge Graphs and Text. Prof. Nazli Goharian. Georgetown University.
10/2017	3rd Workshop on an Open Knowledge Network: Enabling the Community to Build the Network. Inter-agency Workshop organized by NIRTD. Bethesda, MD.
10/2017	L.Dietz. Retrieving Complex Answers through Knowledge Graphs and Text. Prof. Ben van Durme. CLSP Fall Seminar Series. Johns Hopkins University. 2017.
10/2016	Retrieving Knowledge from the Web. Prof. Carsten Binnig, Brown University, U.S.A.
11/2015	Query-specific Wikipedia construction. Prof. Maarten de Rijke, University of Amsterdam, The Netherlands.
09/2015	Query-specific Wikipedia construction and network topic models. Arnim Bleier, GESIS, Cologne, Germany.
05/2015	Network topic models. Prof Stefan Riezler, University of Heidelberg, Germany.
09/2014	Entity Linking with Document Retrieval and Vice Versa. Prof. Miles Efron, University of Illinois, Urbana-Champaign, IL, U.S.A
05/2014	Entity Linking with Document Retrieval and Vice Versa. Prof. Simone Ponzetto, University of Mannheim, and Prof. Gerhard Weikum, Max-Planck Institute for Informatics, Germany.
03/2014	Tutorial on Entity Linking. Dr. Wafic Sabra, American University of Beirut, Lebanon.
04/2013	Entity Linking with the Neighborhood-Relevance Model ... and Applications to FigureSearch, Prof. Hong Yu, UMass Medical School, Worcester, MA, USA.

- 02/2013 A Neighborhood-Relevance Model for Entity Linking. Machine Learning and Friends Lunch Talk, University of Massachusetts, MA, USA and Prof. Lisa Ballesteros, Holyoke College, South Hadley, MA, USA.
- 01/2011 Exploiting Graph-Structured Data in Generative Probabilistic Models. ANC/DTC Seminar, University of Edinburgh, UK.
- 01/2010 Localizing Bugs in Program Executions with Graphical Models. Seminar Maschinelles Lernen für das Software Engineering (Class on Machine Learning for Software Engineering), University of Potsdam, Germany.
- 01/2009 Probabilistic Graph Models for Debugging Software, in talk series "Machine Learning @ CUED", Prof. Zoubin Ghahramani, University of Cambridge, UK.

## Academic Activities

### Research Community Service

- WSDM Doctoral Consortium Chair 2019.
- ECIR Mentoring Chair 2019.
- Co-founder of Women in Information Retrieval.
- SIGIR Student Affairs Chair.
- WSDM Cup 2017 Chair.
- Coordinator of the TREC Complex Answer Retrieval track starting in 2017.

### PC Membership and Peer Review

- Information Retrieval: SIGIR 2015, 2016, 2017, 2018, 2019. ECIR 2017, 2018, 2019. ICTIR 2015. WWW 2016. WSDM 2017, 2016, 2017, 2018.
- Natural Language Processing: CONLL 2013. NAACL HTL 2012, 2013, 2014, 2015. EMNLP 2011, 2012, 2013.
- Knowledge Management: KDD 2011, 2012. CIKM 2012, 2013, 2014.
- Machine Learning: NIPS 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018. UAI 2012, ACL 2012, KDD 2008 and 2009, ECML 2006 and 2007. IJCAI 2011. ICML 2010. ECML 2008 and 2009. NIPS Workshop on Applications for Topic Models: 2009, 2010.

### Journal Review

- ACM Transactions on Information Systems.
- Information Retrieval Journal.
- Information Processing & Management.
- Scientometrics.
- Transactions on the Web.
- Journal for Machine Learning Research.
- Journal Web Semantics.
- Data Mining and Knowledge Discovery.
- Data & Knowledge Engineering.

## Outreach and Community Activities

- 04/2018 L.Dietz. Career Day at Ellis school. Fremont, NH.
- 04/2018 L.Dietz. CRA-W Grad Cohort Speaker and ACM SIGIR Representative.
- 08/2017 (\*) L.Dietz. SIGIR Business meeting: Report from ACM SIGIR Student Affairs Chair on the Student Liaison Program.
- 08/2017 (\*) L.Dietz, M. Hasanain. Women in IR meeting at SIGIR 2017.
- 04/2017 L.Dietz. CRA-W Grad Cohort ACM SIGIR Representative.
- 08/2016 L.Dietz, S. Dori-Hacohen. Women in IR meeting at SIGIR 2016.
- 04/2016 L.Dietz, M. Maistro. Women in IR meeting at ECIR 2016.
- 08/2015 L.Dietz, S. Dori-Hacohen, J.Teevan. Inaugural Women in IR meeting at SIGIR 2015.

Activities marked with (\*) covered in the Communications of the ACM blog print edition below.

M. Kobayashi. Opportunities for Women, Minorities in Information Retrieval<sup>2</sup> Communications of the ACM, Vol. 60 No. 11, Pages 10-11 10.1145/3137627

M. Kobayashi. Student Liaison Program Debuts at SIGIR 2017<sup>3</sup> Blog@CACM. October 3, 2017.

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<sup>2</sup><https://cacm.acm.org/magazines/2017/11/222164-opportunities-for-women-minorities-in-information-retrieval/fulltext>

<sup>3</sup><https://cacm.acm.org/blogs/blog-cacm/221569-student-liaison-program-debuts-at-sigir-2017/fulltext>