

Svitlana Vakulenko

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RESEARCH INTERESTS

Information Retrieval, Conversational Search, Knowledge Representation, Dialogue Analysis

EDUCATION

Vienna University of Technology PhD in Computer Science (advisors: Prof. Axel Polleres, Prof. Maarten de Rijke)	October 2015 – November 2019
Saarland University Graduate school of Computer Science	April 2012 – June 2013
University of Tartu MSc in Software Engineering (advisor: Prof. Marlon Dumas)	September 2009 – June 2011
Kyiv National Economic University BSc in Business Informatics	September 2005 – June 2009

RESEARCH POSITIONS

University of Amsterdam Post-doctoral researcher in the Informatics Institute	October 2019 – October 2021
Apple Inc. Internship in the Siri Understanding team	June 2019 – September 2019
Vienna University of Economics and Business Project staff in the Institute for Information Business	January 2017 – November 2019
MODUL University Vienna Researcher in the Department of New Media Technology	September 2014 – December 2016
University of Liechtenstein Research Assistant in the Institute of Information Systems	September 2013 – August 2014
Karlsruhe Institute of Technology Research Associate in the Institute of Applied Informatics and Formal Description Methods	November 2011 – March 2012

RESEARCH PROJECTS

AT FFG CommuniData communidata.at Open data for local communities	January 2017 – April 2019
EU Horizon 2020 InVID invid-project.eu Video verification on social media	May 2016 – December 2016
EU FP7 PHEME pHEME.eu Rumour verification on social media	August 2014 – December 2016
EU FP7 LiquidPublication liquidpub.org Predicting conference ranking from bibliometric indicators	September 2010 – May 2011

RESEARCH VISITS

Stanford University Prof. Axel Polleres (Mark Musen's Lab)	June 2018
Federal University of the State of Rio de Janeiro Prof. Kate Revoredo (Department of Applied Informatics)	April 2018 – May 2018
University of Amsterdam Prof. Evangelos Kanoulas (ILPS)	July 2017 – September 2017

SUBMITTED PUBLICATIONS

1. **Svitlana Vakulenko**, Evangelos Kanoulas, Maarten de Rijke. Discovering Measurable Dimensions of Information-Seeking Dialogues for Conversational Search. *ACM Transactions on Information Systems*. 2020.
2. **Svitlana Vakulenko**, Shayne Longpre, Zhucheng Tu, Raviteja Anantha. Question Rewriting for Conversational Question Answering. *International Conference on Information and Knowledge Management (CIKM)*. 2020. Preprint: <https://arxiv.org/abs/2004.14652>
3. Raviteja Anantha, **Svitlana Vakulenko**, Zhucheng Tu, Shayne Longpre, Stephen Pulman, Srinivas Chappidi. Open-Domain Question Answering Goes Conversational via Question Rewriting. *Conference on Empirical Methods in Natural Language Processing (EMNLP)*. 2020.

REFEREED PUBLICATIONS

I have published 18 peer-reviewed articles, with 152 citations, and an h-index of 8.

1. **Svitlana Vakulenko**, Evangelos Kanoulas and Maarten de Rijke. An Analysis of Mixed Initiative and Collaboration in Information-Seeking Dialogues. *Proceedings of Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)*. 2020.
2. **Svitlana Vakulenko**, Javier D. Fernandez, Axel Polleres, Maarten de Rijke and Michael Cochez. Message Passing for Complex Question Answering over Knowledge Graphs. *Proceedings of the International Conference on Information and Knowledge Management (CIKM)*. 2019.
3. Kathrin Figl, Samuel Kießling, Christiane Rank, **Svitlana Vakulenko**. The Effect of Fake News Flags on the Believability of Social Media Posts. *Proceedings of the International Conference on Information Systems (ICIS)*. 2019.
4. Sophia Keyner, Vadim Savenkov and **Svitlana Vakulenko**. Open Data Chatbot. *Proceedings of the Extended Semantic Web Conference (ESWC)*. 2019.

5. **Svitlana Vakulenko**, Kate Revoreda, Claudio Di Ciccio and Maarten de Rijke. QRFA: A Data-Driven Model of Information Seeking Dialogues. Proceedings of the European Conference on Information Retrieval (ECIR). 2019. *Best paper (User track)*.
6. **Svitlana Vakulenko**, Maarten de Rijke, Michael Cochez, Vadim Savenkov and Axel Polleres. Measuring Semantic Coherence of a Conversation. Proceedings of the International Semantic Web Conference (ISWC). 2018. *Spotlight paper*.
7. **Svitlana Vakulenko**, Ilya Markov and Maarten de Rijke. Conversational Exploratory Search via Interactive Storytelling. Proceedings of the Workshop on Search-Oriented Conversational AI (SCAI @ ICTIR). 2017.
8. **Svitlana Vakulenko** and Vadim Savenkov. TableQA: Question Answering on Tabular Data. Proceedings of SEMANTiCS Conference. 2017. *Best poster and demo nomination*.
9. Sebastian Neumaier, Vadim Savenkov and **Svitlana Vakulenko**. Talking Open Data. Proceedings of the Extended Semantic Web Conference (ESWC). 2017.
10. **Svitlana Vakulenko**, Lyndon Nixon, and Mihai Lupu. Character-based Neural Embeddings for Tweet Clustering. Proceedings of the Workshop on Natural Language Processing for Social Media (SocialNLP @ EACL). 2017.
11. Albert Weichselbraun, Stefan Gindl, Fabian Fischer, **Svitlana Vakulenko**, and Arno Scharl. Aspect-based extraction and analysis of affective knowledge from social media streams. In IEEE Intelligent Systems. 2017.
12. **Svitlana Vakulenko**, Albert Weichselbraun, and Arno Scharl. Detection of valid sentiment-target pairs in online product reviews and news media articles. Proceedings of the IEEE/WIC/ACM International Conference on Web Intelligence (WI). 2016.
13. **Svitlana Vakulenko**, Max Göbel, Arno Scharl and Lyndon Nixon. Know which Way the Wind Blows: Visualising the Propagation of News on the Web. Proceedings of the Workshop on Recent Trends in News Information Retrieval (NewsIR @ ECIR). 2016.
14. Gregory Katsios, **Svitlana Vakulenko**, Anastasia Krithara and Georgios Paliouras. Towards Open Domain Event Extraction from Twitter: REVEALing Entity Relations. Proceedings of the Workshop on Detection, Representation, and Exploitation of Events in the Semantic Web (DERIVE @ ESWC). 2015.
15. **Svitlana Vakulenko**, Oliver Müller, Jan vom Brocke. Enriching iTunes App Store Categories via Topic Modeling. Proceedings of the 35th International Conference on Information Systems (ICIS). 2014.
16. Nadine Reuter, **Svitlana Vakulenko**, Jan vom Brocke, Stefan Debortoli, Oliver Müller. Identifying the Role of Information Systems in Achieving Energy-Related Environmental Sustainability using Text Mining. Proceedings of the European Conference on Information Systems (ECIS). 2014.
17. Andrea Herbst, Alexander Simons, Jan vom Brocke, Oliver Müller, Stefan Debortoli, **Svitlana Vakulenko**. Identifying and characterizing topics in enterprise content management: a latent semantic analysis of vendor case studies. Proceedings of the European Conference on Information Systems (ECIS). 2014.
18. Peep Küngas, Siim Karus, **Svitlana Vakulenko**, Marlon Dumas, Cristhian Parra, Fabio Casati. Reverse-engineering conference rankings: what does it take to make a reputable conference? Scientometrics. 2013.

REPORTS

1. Krisztian Balog, Lucie Flekova, Matthias Hagen, Rosie Jones, Martin Potthast, Filip Radlinski, Mark Sanderson, **Svitlana Vakulenko**, Hamed Zamani. Common Conversational Community Prototype: Scholarly Conversational Assistant. Dagstuhl Seminar 19461 on Conversational Search. 2020.
2. **Svitlana Vakulenko**, Sebastian Neumaier, Vadim Savenkov. AT FFG CommuniData Project Deliverable 3.1: Dataset Discovery Plugin. Vienna University of Economics and Business. 2017.
3. Lyndon Nixon, **Svitlana Vakulenko**. EU Horizon 2020 InVID Project Deliverable 2.1: Social Media Filtering and Extraction. MODUL Technology. 2016.

4. **Svitlana Vakulenko**, Arno Scharl. EU FP7 PHEME Project Deliverable 3.2: Algorithms for Implicit Information Diffusion Networks Across Media. MODUL University Vienna. 2016.
5. **Svitlana Vakulenko**, Sudhir Agarwal. CoAggregator: User-Driven Approach to Web Aggregation. Karlsruhe Institute of Technology. 2012.

THESES

- Knowledge-based Conversational Search. **PhD thesis**. Technical University of Vienna. 2019. (Supervised by Prof. Axel Polleres and Prof. Maarten de Rijke)
- Extraction of Process Models from Business Process Descriptions. **MSc thesis**. University of Tartu. 2011. (Supervised by Prof. Marlon Dumas)

TEACHING

- Lecturer of the “Principles of Software Programming” BSc course, WU Wien, WS 2017.
- Lecturer of the “Introduction to Programming” MSc course, University of Liechtenstein, SS 2014.

STUDENT SUPERVISION

2020

- Alex Ketelaars BSc, Integrating Language Style Matching Objective into Generative Dialogue Models.
- Bart van Vulpen BSc, Integrating Language Style Matching Objective into Generative Dialogue Models.
- Arvid Lindström MSc, Inductive Dialogue Act Classification using Graph Neural Networks.

2019

- Sophia Keyner BSc, Open Data Chatbot.
- Yoan Bachev MSc, Social Media News Chatbot.
- Matthew Minson MSc, Deep Learning Models for Question Answering.

2018

- Paul Rudolf Zahrl BSc, Real-time Job Recommendations from Twitter.
- Christiane Rank BSc, Rumor Detection Systems and Trustworthiness of Social Media Posts.
- Eric Bruch MSc, Open Data Gamification: Quizz Generator.

2017

- Alexander Meisl BSc, Open Data for Social Science: Red Cross Use Case.
- Donatella Novakovic BSc, Semantic Literature Review on Rumour Detection.
- Amar Tauqeer MSc, Visualizing Geo-located Open Data.

COMMUNITY SERVICE

2020

- Program Committee member: Dialogue and Interactive Systems Track of the Annual Meeting of the Association for Computational Linguistics (ACL 2020), Dialog and Interactive Systems track of the Conference on Empirical Methods in Natural Language Processing (EMNLP 2020), Dialogue - Interactive Systems Track of the International Conference on Computational Linguistics (COLING 2020), In-Use Track of the International Semantic Web Conference (ISWC 2020).
- Member of the Student Grant selection committee for the Conference and Labs of the Evaluation Forum (CLEF 2020).
- Reviewer for Automated Knowledge Base Construction (AKBC 2020), ACM Transactions on Information Systems (TOIS).

2019

- Program Committee member: Resources and Evaluation Track of the Conference of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL-HLT 2019), Reproducibility Track of the International Semantic Web Conference (ISWC 2019).
- Active participant of the Dagstuhl Seminar 19461 on Conversational Search.
- Reviewer for Automated Knowledge Base Construction (AKBC 2019), International Conference on Information Systems (ICIS 2019), Transactions on Information Systems (TOIS), Knowledge and Information Systems (KAIS), et cetera.

INVITED TALKS

Message Passing for Complex Question Answering over Knowledge Graphs Search Engines Amsterdam meetup, Netherlands	31 January 2020
Measuring Semantic Coherence of a Conversation Stanford Center for Biomedical Informatics Research (BMIR), USA	6 June 2018
Conversation Mining: Process Mining for Conversational Data Federal University of the State of Rio de Janeiro (UNIRIO), Brazil	24 April 2018
Semantic Coherence for Conversational Browsing of a Knowledge Graph University of Bonn, Germany	31 January 2018
CommuniData: project report GovCamp Vienna, Austria	1 December 2017
Conversational Exploratory Search via Interactive Storytelling University of Amsterdam, Netherlands	5 September 2017
Memory Networks for Question Answering on Tabular Data Grammarly meetup Kyiv, Ukraine	7 June 2017

SUMMER SCHOOLS

IRSS , Athens, Greece International Research-Centered Summer School in Cognitive Systems and Interactive Robotics, Data and Content Analysis	July 2014
BaSoTI , Kaunas, Lithuania International school focused on advances in telecommunication and information technologies	August 2010

HONORS AND AWARDS

- SIGIR Student Travel Grant for attending the International Conference on Information and Knowledge Management (CIKM). 2019
- Student grant for attending the European Conference on Information Retrieval (ECIR). 2019
- Travel grant from the Austrian Research Association funding the research visit at Stanford. 2018
- Travel grant for attending the Workshop on Search-Oriented Conversational AI (SCAI). 2017

- Stipend for attending the IS Womens Network Workshop: “Advancing Women In IS”. 2014
- Scholarship for attending the Research-Centered Summer School at NCSR Demokritos. 2014
- Scholarship for attending the Graduate School of Computer Science at Saarland University. 2012
- Scholarship from the Estonian Ministry of Foreign Affairs supporting my Master’s studies. 2010-2011
- Scholarship for attending Baltic Summer School at Kaunas University of Technology. 2010
- EU Eastern Partnership scholarship from the Open Estonia Foundation. 2010
- Scholarship from the Estonian Ministry of Foreign Affairs supporting my Master’s studies. 2009-2010

OPEN-SOURCE SOFTWARE

Most of my research projects, as well as studying and teaching materials are open-source. I authored 71 public software repositories on Github (<https://github.com/svakulenk0>) and made 223 contributions in the last year (as of April 2020).

TECHNICAL SKILLS

Programming languages: Python, JavaScript, Java.

Machine learning: PyTorch, Tensorflow, Keras.

Databases: SQL, NoSQL, SPARQL.

Other: Git, LaTeX.

LANGUAGES

Russian and Ukrainian (Native), English (Fluent), German (Advanced), Spanish and Greek (Basic).