

## Curriculum Vitae

### Personal Data

Birthdate: March 29, 1982  
Birthplace: Meissen, Saxony, Germany  
Nationality: German



### Scientific Career

since 2022 Principal Scientist at Amazon (AGI)  
since 2022 Honorary Professor at TU Dresden  
2015-2022 Full Professor (W3) at University of Bonn and Lead Scientist for Conversational AI and Knowledge Graphs Fraunhofer IAIS  
2013-2015 Head of AKSW Research Group, University of Leipzig ( $\approx$  40 researchers)  
2011-2012 Research visitor, University of Oxford  
2010-2016 Leader of "Machine Learning and Ontology Engineering" group, University of Leipzig ( $\approx$  10 reseachers)

### Scientific Education

2010 PhD awarded, topic: Learning OWL Class Expressions, grade "summa cum laude"  
2006-2010 PhD student at University of Leipzig  
2001-2006 Study of Computer Science at TU Dresden – Diploma with grade 1.1 (best: 1.0, worst: 5.0)  
2005-2006 Erasmus exchange student at University of Bristol (UK), 4 master courses (each with grade "A") in Machine Learning  
2000 Abitur, grade 1.2  
1998–2000 Werner-Heisenberg-Gymnasium Riesa with extended mathematical and scientific education  
1992–1998 St.-Afra-Gymnasium Meissen

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*For a short overview of research topics and "objective" performance measures, please see the table on the next page.*

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### *Short Overview*

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<b>Research Topics</b>	Artificial Intelligence/Machine Learning, Knowledge Graphs, Conversational AI, Large language models
Community projects	60+ open source projects 40 000+ software/dataset downloads per month

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<b>Publications</b>	≈ 300+ in international conferences and journals
Major pub. venues <sup>1</sup>	ACL, ISWC, EMNLP, WebConf, AAAI, JWS, SWJ, NeurIPS, MLJ, TPAMI, ECAI, JMLR
Citations (per year)	<b>25000+</b> (3000+ in 2022) according to Google Scholar
H-Index	<b>64</b> according to Google Scholar
Best Paper Awards	<b>15</b> (only international venues counted)

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<b>Funding</b> acquired	> <b>20 Mio Euro</b> as (Co-)PI, ≈ 3 Mio Euro/year (in academia) EU H2020/FP7, DFG, BmBF, BmWI, DAAD
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<b>Teaching</b> experience	> 15 years and ≈ 30 courses
Main teaching topics	Conversational AI, Semantic Web, Knowledge Graph Analysis
PhDs/PostDocs	50+ supervised

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<sup>1</sup>ISWC (International Semantic Web Conference), EMNLP (Empirical Methods in Natural Language Processing), ACL (Annual Meeting of the Association for Computational Linguistics), WebConf (World Wide Web Conference), AAAI (Association for the Advancement of Artificial Intelligence Conference), JWS (Journal of Web Semantics), SWJ (Semantic Web Journal), MLJ (Machine Learning Journal), TPAMI (IEEE Transactions on Pattern Analysis and Machine Intelligence), ECAI (European Conference on Artificial Intelligence), JMLR (Journal of Machine Learning Research)

# 1 Awards

## 1.1 International Awards

- ▷ Semantic Web Journal 10 Year Best Paper Award 2022 for "LinkedGeoData: A Core for a Web of Spatial Open Data" with C. Stadler, K. Höffner, S. Auer.  
See also: Amazon Science Blog Post for the award
- ▷ International Semantic Web Conference (ISWC) 2021, Best Research Paper Award for "Improving Inductive Link Prediction Using Hyper-Relational Facts", with M. Ali, M. Berrendorf, M. Galkin, V. Thost, T. Ma, V. Tresp
- ▷ AMiner Most Influential Scholar Award for Knowledge Engineering in 2021 and 2020 (ranked 3rd and 4th worldwide in those years)
- ▷ IEEE International Conference on Semantic Computing (ICSC) 2020, Best Resource Paper Award for "Let's build Bridges, not Walls: SPARQL Querying of TinkerPop Graph Databases with Sparql-Gremlin", with H. Thakkar, R. Angles, M. Rodriguez
- ▷ Elected as ELLIS (European Lab for Learning and Intelligent Systems) Fellow by the ELLIS Section Committee, 2020
- ▷ Award for the SPEAKER project at the AI innovation competition of the BMWi 2019
- ▷ Distinguished Reviewer Award at IJCAI (International Joint Conference on Artificial Intelligence) 2018
- ▷ Semantics 2017 Best Paper Award for "Trying Not to Die Benchmarking – Orchestrating RDF and Graph Data Management Solution Benchmarks Using LITMUS", with H. Thakkar, Y. Keswani, M. Dubey, S. Auer
- ▷ International Semantic Web Conference (2017), Best Demo Award for "The Tale of SANSA Spark", with I. Ermilov, G. Sejdiu, L. Bühmann, P. Westphal, C. Stadler, S. Bin, N. Chakraborty, H. Petzka, M. Saleem, A. Ngonga Ngomo, H. Jabeen
- ▷ Semantic Web Science Association (SWSA) 10 Ten-Year Award 2017 for "DBpedia: A Nucleus for a Web of Open Data", with S. Auer, C. Bizer, G. Kobilarov, R. Cyganiak, Z. Ives
- ▷ International Semantic Web Conference (2016), Best Resource Paper Award for "LODStats: The Data Web Census Dataset", with I. Ermilov, M. Martin, and S. Auer

- ▷ WASABI (2014) Best Workshop Paper Award and Extended Semantic Web Conference "Best of Workshops" Award for "CROCUS: Cluster-based ontology data cleansing", with D. Cherix, R. Usbeck, A. Both
- ▷ Extended Semantic Web Conference (2014), Best Student Paper Award for "Hybrid Acquisition of Temporal Scopes for RDF Data", with A. Rula, M. Palmonari, A. Ngonga, D. Gerber and L. Bühmann
- ▷ Extended Semantic Web Conference (2014), 7-Years Most Influential Paper Award for "What have Innsbruck and Leipzig in common? Extracting Semantic from Wiki Content, with S. Auer
- ▷ Semantic Web Journal Outstanding (Best Paper of the Year) Award (2014) for "DBpedia - A Large-scale, Multilingual Knowledge Base Extracted from Wikipedia", with R. Isele, M. Jakob
- ▷ KESW Best System Description Paper at the Knowledge Engineering and Semantic Web Conference (2013) for "Linked Open Data Statistics: Collection and Exploitation", with I. Ermilov, M. Martin, S. Auer
- ▷ Outstanding Paper Award Winner at the Literati Network Awards for Excellence (2013) for "DBpedia and the Live Extraction of Structured Data from Wikipedia", with M. Morsey, S. Auer, C. Stadler, S. Hellmann
- ▷ International Semantic Web Conference Best Research Paper Award (2011) for "DBpedia SPARQL Benchmark", with M. Morsey, S. Auer and A.-C. Ngonga Ngomo
- ▷ Best Student Paper Award at the International Conference on Inductive Logic Programming (ILP) 2007 for "A Refinement Operator Based Learning Algorithm for the ALC Description Logic" and "Foundations of Refinement Operators for Description Logics" (USD 1500 price), with P. Hitzler
- ▷ Journal of Web Semantics Most Cited Paper (2006-2010) Award for "DBpedia - A Crystallization Point for the Web of Data", with C. Bizer, G. Kobilarov, S. Auer, C. Becker, R. Cyganiak and S. Hellmann

## **1.2 Other Awards and Nominations**

- ▷ Best Student Paper Candidate at KEOD 2021 for "A Scalable Approach for Distributed Reasoning over Large-scale OWL Datasets", with H. Mohamed, S. Fathalla, H. Jabeen

- ▷ First runner-up for best paper award at the WISE conference 2020 for "Encoding Knowledge Graph Entity Aliases in Attentive Neural Network for Wikidata Entity Linking-2020", with Isaiah Onando Mulang', Kuldeep Singh, Akhilesh Vyas, Saeedeh Shekarpour, Maria-Esther Vidal, Jens Lehmann, Soren Auer
- ▷ Best Student Paper Candidate at ISWC 2020 for "Temporal Knowledge Graph Embedding Model based on Additive Time Series Decomposition", with Chengjin Xu, Nayyeri Mojtaba, Fouad Alkhoury, Hamed Shariat Yazdi
- ▷ ICEGOV Award Nomination 2019 with Fathoni Musyaffa, Hajira Jabeen (see <https://sda.tech/paper-accepted-at-icegov/>)
- ▷ Runner Up for Best Paper Award at ISCS (International Conference on Semantic Computing) 2017 for "Torpedo: Improving the State-of-the-Art RDF Dataset Slicing", with E. Marx, S. Shekarpour, T. Soru, A. Brasoveanu, M. Saleem, C. Baron, A. Weichselbraun, A. Ngonga Ngomo, S. Auer
- ▷ Fraunhofer IAIS Paper of the Month Award for "AskNow: A Framework for Natural Language Query Formalization in SPARQL" March 2017, with M. Dubey, S. Dasgupta, A. Sharma, K. Höffner
- ▷ Best Paper at CSCUBS 2017 student conference for "Dialogue Response Generation using Neural Networks with Attention and Background Knowledge", with S. Kosovan and A. Fischer
- ▷ Fraunhofer IAIS Paper of the Month Award 2017 for "LC-QuAD: A Corpus for Complex Question Answering over Knowledge Graphs", November 2017, with P. Trivedi, G. Maheshwari, M. Dubey
- ▷ International Semantic Web Conference (2017) Best Student Resource Paper Award Nomination for "LC-QuAD: A Corpus for Complex Question Answering over Knowledge Graphs, November 2017, with P. Trivedi, G. Maheshwari, M. Dubey
- ▷ The META Seal of Recognition 2015 for DBpedia (see <http://www.meta-net.eu/meta-seal>)
- ▷ DBpedia selected by ReadWriteWeb 2009 as top 10 Semantic Web product
- ▷ Runner up in the ISWC 2009 Semantic Web challenge for LinkedGeoData with S. Auer and C. Stadler
- ▷ Nomination for the 2008 Award of the Andrew W. Mellon foundation for DBpedia
- ▷ Many prizes in national math olympics on regional, state and country level 1992-2000

## 2 Top 10 Publications

This list is a subjective assessment of the best publications in terms of impact and quality. See <https://scholar.google.de/citations?hl=de&user=sEaQ5rgAAAAJ> for a list ordered only by citations and other CV sections for a full publication list and the list of all awards

- ▷ 5\* Knowledge Graph Embeddings with Projective Transformations, *Mojtaba Nayyeri, Sahar Vahdati, Can Aykul and Jens Lehmann*, AAAI Press 2021, 9064–9072
- ▷ Neural Network-based Question Answering over Knowledge Graphs on Word and Character Level, *Denis Lukovnikov, Asja Fischer, Jens Lehmann and Sören Auer*, ACM 2017, 1211–1220, **276 citations**
- ▷ DBpedia - A large-scale, multilingual knowledge base extracted from Wikipedia, *Jens Lehmann, Robert Isele, Max Jakob, Anja Jentzsch, Dimitris Kontokostas, Pablo N. Mendes, Sebastian Hellmann, Mohamed Morsey, Patrick van Kleef, Sören Auer and Christian Bizer*, 2015, 167–195, **SWJ Outstanding Paper Award 2014, 3001 citations**
- ▷ Template-based question answering over RDF data, *Christina Unger, Lorenz Bühmann, Jens Lehmann, Axel-Cyrille Ngonga Ngomo, Daniel Gerber and Philipp Cimiano*, ACM 2012, 639–648, **593 citations**
- ▷ DBpedia SPARQL Benchmark - Performance Assessment with Real Queries on Real Data, *Mohamed Morsey, Jens Lehmann, Sören Auer and Axel-Cyrille Ngonga Ngomo*, Springer 2011, 454–469, **ISWC Best Paper Award, 375 citations**
- ▷ Concept learning in description logics using refinement operators, *Jens Lehmann and Pascal Hitzler*, 2010, 203–250, **Based on two ILP Best Paper Awards, 243 citations**
- ▷ DBpedia - A crystallization point for the Web of Data, *Christian Bizer, Jens Lehmann, Georgi Kobilarov, Sören Auer, Christian Becker, Richard Cyganiak and Sebastian Hellmann*, 2009, 154–165, **Journal of Web Semantics 2006-2010 Award, 2840 citations**
- ▷ DL-Learner: Learning Concepts in Description Logics, *Jens Lehmann*, 2009, 2639–2642, **238 citations**
- ▷ DBpedia: A Nucleus for a Web of Open Data, *Sören Auer, Christian Bizer, Georgi Kobilarov, Jens Lehmann, Richard Cyganiak and Zachary G. Ives*, Springer 2007, 722–735, **ISWC 10 Year Best Paper Award, 5733 citations**

- ▷ What Have Innsbruck and Leipzig in Common? Extracting Semantics from Wiki Content, *Sören Auer and Jens Lehmann*, Springer 2007, 503–517, **ESWC 7-Year Most Influential Paper Award, 337 citations**

### 3 Acquired Funding

The table below lists project acronym, topic area, role in the project acquisition (PI = overall principal investigator, Co-PI = leading the contributions for the own organisation), funding program and acquired funding (limited only to own organisation and actual funding, i.e. 90% funding rate and a budget of 1 Mio Euro will be shown as 900k Euro).

<b>Total Funding as (Co-)PI</b>			<b>20.1 Mio Euro</b>
<b>OpenGPT-X</b> (Large-Scale Language Models, NetMedia Department Share)			
Co-PI	BMWi	2022–2024	<b>4,500,000 Euro</b>
<b>IntelliLung</b> (Intelligent lung support system for acute respiratory failure)			
Co-PI	EU	2022–2027	<b>1,000,000 Euro</b>
<b>SPEAKER</b> (B2B Conversational AI Platform, EIS Department Share)			
Co-PI	BMWi	2020–2023	<b>1,900,000 Euro</b>
<b>PLATOON</b> ((Digital PLATform and analytical TOOlS for eNergy))			
Co-PI	H2020	2020–2022	<b>507,500 Euro</b>
<b>OpertusMundi</b> (A Single Digital Market for Industrial Geospatial Data Assets)			
Co-PI	H2020	2020–2022	<b>622,500 Euro</b>
<b>Cleopatra</b> (Cross-lingual Event-centric Open Analytics Research Academy)			
Co-PI	H2020	2019–2022	<b>505,576 Euro</b>
<b>MLwin</b> (Maschinelles Lernen mit Wissensgraphen (pending))			
Co-PI	BmBF	2018–2021	<b>506,699 Euro</b>
<b>Simple-ML</b> (Big Data Machine Learning Work ows leicht gemacht (pending))			
Co-PI	BmBF	2018–2021	<b>618,000 Euro</b>
<b>LAMBDA</b> (Learning, Applying, Multiplying Big Data Analytics)			
Co-PI	H2020	2018–2021	<b>388,500 Euro</b>
<b>Bio2Vec</b> (Smart Analytics Infrastructure for the Life Sciences)			
Co-PI	CRG	2018–2021	<b>80,000 Euro</b>
<b>SOLIDE</b> (Sprachgesteuerte, kontextuelle Lagebildinformation)			

Co-PI	BmBF	2017–2020	<b>160,000 Euro</b>
<b>QROWD</b> (Crowdsourcing Big Data)			
Co-PI	EU H2020	2016–2019	<b>753,250 Euro</b>
<b>SLIPO</b> (Geospatial Analytics)			
Co-PI	EU H2020	2016–2019	<b>833,500 Euro</b>
<b>Domain Specific Languages</b>			
PI	University of Bonn	2016–2018	<b>70,000 Euro</b>
<b>Cognitive Robotics</b>			
PI	University of Bonn	2016–2018	<b>70,000 Euro</b>
<b>Machine Learning for Certain Theoretical CS Problems</b>			
PI	University of Bonn	2016–2018	<b>140,000 Euro</b>
<b>Smoothed Analysis of ML Algorithms for Knowledge Graphs</b>			
PI	University of Bonn	2016–2018	<b>70,000 Euro</b>
<b>Tensor Factorisation and Visualization for Knowledge Graphs</b>			
PI	University of Bonn	2016–2018	<b>140,000 Euro</b>
<b>GEISER</b> (Geospatial Analytics)			
Co-PI	BmWi	2016–2019	<b>592,920 Euro</b>
<b>HOBBIT</b> (Big Data Benchmarking)			
Co-PI	EU H2020	2015–2018	<b>592,920 Euro</b>
<b>Big Data Europe</b> (Big Data for European Societal Challenges)			
Co-PI	EU H2020	2015–2018	<b>612,500 Euro</b>
<b>DGF</b> (Event Support Grant for Semantics 2014)			
PI	DFG	2015–2018	<b>20,000 Euro</b>
<b>PhD Grant Diego Esteves</b>			
PI	Science without Borders	2014–2017	<b>54,000 Euro</b>
<b>Diachron</b> (Managing the Evolution and Preservation of the Data Web)			
Co-PI	EU FP7	2013–2016	<b>531,300 Euro</b>
<b>GeoKnow</b> (Project Enlargement of GeoKnow)			
PI	EU H2020	2012–2018	<b>70,000 Euro</b>
<b>GeoKnow</b> (Making the Web an Exploratory Place for Geospatial Data)			
PI	EU FP7	2012–2015	<b>871,600 Euro</b>



<b>LinkingLOD</b> (Interlinking Knowledge Bases)			
Contributor	DFG	2012–2014	<b>89,400 Euro</b>
<b>PhD Grant Mohamed Sherif</b>			
PI	DAAD	2012–2015	<b>61,000 Euro</b>
<b>PhD Grant Mofeed Hassan</b>			
PI	DAAD	2012–2015	<b>61,000 Euro</b>
<b>PhD Grant Amrapali Zaveri</b>			
PI	DAAD	2011–2014	<b>48,000 Euro</b>
<b>PhD Grant Mohamed Morsey</b>			
PI	DAAD	2011–2013	<b>61,000 Euro</b>
<b>LOD2</b> (Creating Knowledge out of Interlinked Data)			
Major contributor		2010–2014	<b>1,333,900 Euro</b>
<b>LATC</b> (Helping You to Publish and Consume Linked Data)			
PI	Major contributor	2010–2012	<b>198,500 Euro</b>
<b>Funding from Confidential Projects</b>			
PI	-	—	<b>2,000,000 Euro</b>

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## 4 List of Publications

Criterion	Value
#citation count	> 25000
#max. citations per year	> 2900
#h-index	59
#i10-index	140
#publications	320
#books	2
#journal publications	53
#conference and workshop publications	243
#book chapters	6
#proceedings	14

The table shows publication statistics with citations according to Google Scholar <sup>1</sup>.

### 4.1 Books

- [1] Jens Lehmann. *Learning OWL Class Expressions*, volume 6 of *Studies on the Semantic Web*. IOS Press, 2010.
- [2] Jens Lehmann and Johanna Völker. *Perspectives on Ontology Learning*, volume 18 of *Studies on the Semantic Web*. IOS Press, 2014.

### 4.2 Journal Articles

- [3] Christian Bizer, Jens Lehmann, Georgi Kobilarov, Sören Auer, Christian Becker, Richard Cyganiak, and Sebastian Hellmann. Dbpedia - a crystallization point for the web of data. *J. Web Semant.*, 7(3):154–165, 2009. Journal of Web Semantics 2006-2010 Award.
- [4] Sebastian Hellmann, Jens Lehmann, and Sören Auer. Learning of owl class descriptions on very large knowledge bases. *Int. J. Semantic Web Inf. Syst.*, 5(2):25–48, 2009.
- [5] Jens Lehmann. Dl-learner: Learning concepts in description logics. *J. Mach. Learn. Res.*, 10:2639–2642, 2009.

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<sup>1</sup><https://scholar.google.com/citations?user=sEaQ5rgAAAAJ>

- [6] Sören Auer and Jens Lehmann. Creating knowledge out of interlinked data. *Semantic Web*, 1(1-2):97–104, 2010.
- [7] Jens Lehmann, Sebastian Bader, and Pascal Hitzler. Extracting reduced logic programs from artificial neural networks. *Appl. Intell.*, 32(3):249–266, 2010.
- [8] Jens Lehmann and Pascal Hitzler. Concept learning in description logics using refinement operators. *Mach. Learn.*, 78(1-2):203–250, 2010. Based on two ILP Best Paper Awards.
- [9] Jens Lehmann, Sören Auer, Lorenz Bühmann, and Sebastian Tramp. Class expression learning for ontology engineering. *J. Web Semant.*, 9(1):71–81, 2011.
- [10] Mohamed Morsey, Jens Lehmann, Sören Auer, Claus Stadler, and Sebastian Hellmann. Dbpedia and the live extraction of structured data from wikipedia. *Program*, 46(2):157–181, 2012.
- [11] Claus Stadler, Jens Lehmann, Konrad Höffner, and Sören Auer. Linkedgeodata: A core for a web of spatial open data. *Semantic Web*, 3(4):333–354, 2012.
- [12] Sören Auer, Jens Lehmann, Axel-Cyrille Ngonga Ngomo, Claus Stadler, and Jörg Unbehauen. Extraktion, mapping und verlinkung von daten im web - phasen im lebenszyklus von linked data. *Datenbank-Spektrum*, 13(2):77–87, 2013.
- [13] Amrapali Zaveri, Jens Lehmann, Sören Auer, Mofeed M. Hassan, Mohamed Ahmed Sherif, and Michael Martin. Publishing and interlinking the global health observatory dataset - towards increasing transparency in global health. *Semantic Web*, 4(3):315–322, 2013.
- [14] Spiros Athanasiou, Daniel Hladky, Giorgos Giannopoulos, Alejandra García-Rojas, and Jens Lehmann. Geoknow: Making the web an exploratory place for geospatial knowledge. *ERCIM News*, 2014(96), 2014.
- [15] Christian Dirschl, Katja Eck, and Jens Lehmann. Supporting the data lifecycle at a global publisher using the linked data stack. *ERCIM News*, 2014(96), 2014.
- [16] Michael Martin, Claus Stadler, Philipp Frischmuth, and Jens Lehmann. Increasing the financial transparency of european commission project funding. *Semantic Web*, 5(2):157–164, 2014.
- [17] Daniel Gerber, Diego Esteves, Jens Lehmann, Lorenz Bühmann, Ricardo Usbeck, Axel-Cyrille Ngonga Ngomo, and René Speck. Defacto - temporal and multilingual deep fact validation. *J. Web Semant.*, 35:85–101, 2015.

- [18] Jens Lehmann, Robert Isele, Max Jakob, Anja Jentzsch, Dimitris Kontokostas, Pablo N. Mendes, Sebastian Hellmann, Mohamed Morsey, Patrick van Kleef, Sören Auer, and Christian Bizer. Dbpedia - a large-scale, multilingual knowledge base extracted from wikipedia. *Semantic Web*, 6(2):167–195, 2015. SWJ Outstanding Paper Award 2014.
- [19] Jens Lehmann and Óscar Corcho. 2nd special issue on linked dataset descriptions. *Semantic Web*, 6(2):103–104, 2015.
- [20] Lorenz Bühmann, Jens Lehmann, and Patrick Westphal. Dl-learner - a framework for inductive learning on the semantic web. *J. Web Semant.*, 39:15–24, 2016.
- [21] Konrad Höffner, Michael Martin, and Jens Lehmann. Linkedspending: Openspending becomes linked open data. *Semantic Web*, 7(1):95–104, 2016.
- [22] Amrapali Zaveri, Anisa Rula, Andrea Maurino, Ricardo Pietrobon, Jens Lehmann, and Sören Auer. Quality assessment for linked data: A survey. *Semantic Web*, 7(1):63–93, 2016.
- [23] Konrad Höffner, Sebastian Walter, Edgard Marx, Ricardo Usbeck, Jens Lehmann, and Axel-Cyrille Ngonga Ngomo. Survey on challenges of question answering in the semantic web. *Semantic Web*, 8(6):895–920, 2017.
- [24] Maribel Acosta, Amrapali Zaveri, Elena Simperl, Dimitris Kontokostas, Fabian Flöck, and Jens Lehmann. Detecting linked data quality issues via crowdsourcing: A dbpedia study. *Semantic Web*, 9(3):303–335, 2018.
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- [26] Ali Ismayilov, Dimitris Kontokostas, Sören Auer, Jens Lehmann, and Sebastian Hellmann. Wikidata through the eyes of dbpedia. *Semantic Web*, 9(4):493–503, 2018.
- [27] Mehdi Ali, Charles Tapley Hoyt, Daniel Domingo-Fernández, Jens Lehmann, and Hajira Jabeen. Biokeen: a library for learning and evaluating biological knowledge graph embeddings. *Bioinform.*, 35(18):3538–3540, 2019.
- [28] Luís Paulo F. Garcia, Jens Lehmann, André C. P. L. F. de Carvalho, and Ana Carolina Lorena. New label noise injection methods for the evaluation of noise filters. *Knowl. Based Syst.*, 163:693–704, 2019.
- [29] Ana Carolina Lorena, Luís Paulo F. Garcia, Jens Lehmann, Marçílio Carlos Pereira de Souto, and Tin Kam Ho. How complex is your classification problem?: A survey

- on measuring classification complexity. *ACM Comput. Surv.*, 52(5):107:1–107:34, 2019.
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- [32] Fathoni A. Musyaffa, Maria-Esther Vidal, Fabrizio Orlandi, Jens Lehmann, and Hajira Jabeen. Iota: Interlinking of heterogeneous multilingual open fiscal data. *Expert Systems with Applications*, 147:113135, 2020.
- [33] Mojtaba Nayyeri, Mirza Mohtashim Alam, Jens Lehmann, and Sahar Vahdati. 3d learning and reasoning in link prediction over knowledge graphs. *IEEE Access*, 8:196459–196471, 2020.
- [34] Kuldeep Singh, Ioanna Lytra, Arun Sethupat Radhakrishna, Saeedeh Shekarpour, Maria-Esther Vidal, and Jens Lehmann. No one is perfect: Analysing the performance of question answering components over the dbpedia knowledge graph. *Journal of Web Semantics*, 65:100594, 2020.
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- [36] Hamid Zafar, Mohnish Dubey, Jens Lehmann, and Elena Demidova. Iqa: Interactive query construction in semantic question answering systems. *Journal of Web Semantics*, 64:100586, 2020.
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- [38] Vinay Srinivas Bharadhwaj, Mehdi Ali, Colin Birkenbihl, Sarah Mubeen, Jens Lehmann, Martin Hofmann-Apitius, Charles Tapley Hoyt, and Daniel Domingo-Fernández. Clep: a hybrid data- and knowledge-driven framework for generating patient representations. *Bioinform.*, 37(19):3311–3318, 2021.
- [39] Nilesh Chakraborty, Denis Lukovnikov, Gaurav Maheshwari, Priyansh Trivedi, Jens Lehmann, and Asja Fischer. Introduction to neural network-based question answering

- over knowledge graphs. *Wiley Interdiscip. Rev. Data Min. Knowl. Discov.*, 11(3), 2021.
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#### 4.5 Proceedings

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#### **4.6 PhD Theses**

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## **5 Research Community Services**

### **5.1 Advisory Boards**

- ▷ Advisory Board Member of the LAMBDA Network (2018 - 2021)
- ▷ Advisory Board Member of the WDAqua Network of Excellence (2016 - 2017)
- ▷ Bitkom Working Group Artificial Intelligence (since 2017)

### **5.2 Datasets**

- ▷ LC-QuAD - Largescale Complex Question Answering Dataset
- ▷ LinkedGeoData - Adding a spatial dimension to the Web of Data (since 2009, co-founder, co-leader)
- ▷ DBpedia - Extraction of machine understandable content from Wikipedia (since 2007, co-founder, co-leader)

### **5.3 Event Organisation**

- ▷ Leipziger Semantic Web Tag (LSWT), 2011
- ▷ Indian-Summer School on Linked Data (ISSLOD), 2011

### **5.4 General Chair**

- ▷ Computer Science Conference for University of Bonn Students (CSCUBS), 2016
- ▷ European Data Forum (EDF), 2015

### **5.5 Journal Editorial Boards**

- ▷ Semantic Web Journal, since 2010
- ▷ Journal of Information Technology Research, since 2008

### **5.6 Networks**

- ▷ European Lab for Learning and Intelligent Systems (ELLIS)
- ▷ Center for Scalable Data Analytics and Artificial Intelligence (ScaDS.AI)

### **5.7 Panel Member**

- ▷ World Wide Web Conference (WWW), 2018
- ▷ Extended Semantic Web Conference (ESWC), 2011

## **5.8 Program Chair**

- ▷ SEMANTiCs - Transfer, Engineering, Community (SEMANTiCs), 2014
- ▷ European Data Forum (EDF), 2014

## **5.9 Programme Committees**

- ▷ Conference on Empirical Methods in Natural Language Processing (EMNLP), 2021
- ▷ Extended Semantic Web Conference (ESWC), 2019
- ▷ International Joint Conference on Artificial Intelligence (IJCAI), 2018
- ▷ Hybrid Question Answering with Structured and Unstructured Knowledge (HQA), 2018
- ▷ Extended Semantic Web Conference (ESWC), 2018
- ▷ Question Answering over Linked Data (QALD), 2017
- ▷ International Conference on Knowledge Capture (K-Cap), 2017
- ▷ Generalizing knowledge: from Machine Learning and Knowledge Representation to the Semantic Web (GenSW), 2017
- ▷ Top-K Shortest Path in Large Typed RDF Graphs Challenge (Top-K), 2016
- ▷ Question Answering over Linked Data (QALD), 2016
- ▷ Association for the Advancement of Artificial Intelligence Conference (AAAI), 2015
- ▷ Natural Language Interfaces for Web of Data (NLIWoD), 2014
- ▷ International Workshop on NoSQL Databases and Linked Data Applications (NoSQL-Net), 2014
- ▷ International Semantic Web Conference (ISWC), 2014
- ▷ Extended Semantic Web Conference (ESWC), 2014
- ▷ International Conference on Knowledge Capture (K-Cap), 2013
- ▷ Ontologies and Data in Life Sciences (ODLS), 2013
- ▷ Linked Data on the Web (LDOW), 2013
- ▷ International Workshop on Description Logics (DL), 2013
- ▷ International Semantic Web Conference (ISWC), 2013
- ▷ International Joint Conference on Artificial Intelligence (IJCAI), 2013
- ▷ Association for the Advancement of Artificial Intelligence Conference (AAAI), 2013
- ▷ ACM Conference on Hypertext and Social Media (Hypertext), 2013
- ▷ Very Large Data Search (VLDS), 2012

- ▷ Studentenkonferenz Informatik Leipzig (SKIL), 2012
- ▷ Linked Data on the Web (LDOW), 2012
- ▷ International Semantic Web Conference (ISWC), 2012
- ▷ International Conference on World Wide Web (WWW), 2012
- ▷ International Conference on Knowledge Engineering and Knowledge Management (EKAW), 2012
- ▷ Interacting with Linked Data (ILD), 2012
- ▷ GIScience in the Big Data Age 2012 (GiBDA), 2012
- ▷ Extended Semantic Web Conference (ESWC), 2012
- ▷ Studentenkonferenz Informatik Leipzig (SKIL), 2011
- ▷ Massive Information Sharing and Integration (MISI), 2011
- ▷ Linked Data on the Web (LDOW), 2011
- ▷ International Workshop on Inductive Reasoning and Machine Learning for the Semantic Web (IRMLeS), 2011
- ▷ International Semantic Web Conference (ISWC), 2011
- ▷ International Joint Conference on Artificial Intelligence (IJCAI), 2011
- ▷ International Conference on Web Engineering (ICWE), 2011
- ▷ Extended Semantic Web Conference (ESWC), 2011
- ▷ Workshop on Trust and Privacy on the Social and Semantic Web (SPOT), 2010
- ▷ Workshop on Inductive Reasoning and Machine Learning on the Semantic Web (IRMLeS), 2010
- ▷ Workshop On Linked Spatiotemporal Data (LSTD), 2010
- ▷ Studentenkonferenz Informatik Leipzig (SKIL), 2010
- ▷ Extended Semantic Web Conference (ESWC), 2010
- ▷ European Semantic Web Conference (ESWC), 2009
- ▷ Workshop on Scripting and Development for the Semantic Web (SFSW), 2009
- ▷ Workshop on Inductive Reasoning and Machine Learning on the Semantic Web (IRMLeS), 2009
- ▷ International Workshop on Web Semantics (WebS), 2009
- ▷ European Semantic Web Conference (ESWC), 2009
- ▷ Workshop on Scripting for the Semantic Web (SFSW), 2008

- ▷ International Conference on Semantic Systems (I-Semantics), 2008
- ▷ I-Semantics (IS), 2008
- ▷ SABRE Conference on Social Semantic Web (CSSW), 2007

### **5.10 Research Proposal Reviewing**

- ▷ Reviewer for Österreichische Forschungsförderungsgesellschaft (FFG) 2020
- ▷ Reviewer for Österreichische Forschungsförderungsgesellschaft (FFG) 2016
- ▷ Reviewer for the Netherlands Organisation for Scientific Research (NWO) 2015
- ▷ Reviewer for the European Science Foundation (ESF) in the Horizon2020 Program 2015
- ▷ Reviewer for Österreichische Forschungsförderungsgesellschaft (FFG) 2015
- ▷ Reviewer for Österreichische Forschungsförderungsgesellschaft (FFG) 2013

### **5.11 Reviewing**

- ▷ Conference on Neural Information Processing Systems (NeurIPS), 2021
- ▷ Conference on Neural Information Processing Systems (NeurIPS), 2020
- ▷ Association for Computational Linguistics (ACL) Conference, 2020
- ▷ Conference on Empirical Methods in Natural Language Processing (EMNLP), 2020
- ▷ Semantic Web Journal (SWJ), 2019
- ▷ Knowledge-Based Systems (KNOSYS), 2018
- ▷ International Joint Conference on Artificial Intelligence (IJCAI), 2018
- ▷ Machine Learning (MLj), 2017
- ▷ Machine Learning (MLj), 2016
- ▷ Journal of Machine Learning Research (JMLR), 2016
- ▷ Semantic Web Journal (SWJ), 2017
- ▷ Journal of Web Semantics (JWS), 2015
- ▷ Language Resources and Evaluation Conference (LREC), 2014
- ▷ Journal of Machine Learning Research (JMLR), 2014
- ▷ Journal of Information Technology Research (JITR), 2014
- ▷ Knowledge-Based Systems (KNOSYS), 2013
- ▷ Journal of Web Semantics (JWS), 2013

- ▷ International Conference on World Wide Web (WWW), 2013
- ▷ Semantic Web Journal (SWJ), 2012
- ▷ Journal of Web Semantics (JWS), 2012
- ▷ Journal of Information Technology Research (JITR), 2012
- ▷ International Workshop on Description Logics (DL), 2012
- ▷ International Symposium on Rules (RuleML), 2012
- ▷ IEEE Intelligent Systems, 2012
- ▷ Semantic Web Journal (SWJ), 2011
- ▷ Knowledge-Based Systems (KNOSYS), 2011
- ▷ International Journal On Semantic Web and Information Systems (IJSWIS), 2011
- ▷ International Conference on Inductive Logic Programming (ILP), 2011
- ▷ IEEE Intelligent Systems, 2011
- ▷ Semantic Web Journal (SWJ), 2010
- ▷ Knowledge-Based Systems (KNOSYS), 2010
- ▷ Journal of Web Semantics (JWS), 2010
- ▷ International Conference on Inductive Logic Programming (ILP), 2010
- ▷ Journal of Web Semantics (JWS), 2009
- ▷ Journal of Information Technology Research (JITR), 2009
- ▷ International Semantic Web Conference (ISWC), 2009
- ▷ IEEE International Conference on Semantic Computing (ICSC), 2009
- ▷ European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD), 2009
- ▷ Workshop on Linked Data on the Web (LDOW), 2008
- ▷ International Journal of Metadata, Semantics and Ontologies (IJMSO) (IJMSO), 2008
- ▷ IEEE International Conference on Web Services (ICWS), 2008
- ▷ Journal of Web Semantics (JWS), 2007
- ▷ International Joint Conference on Neural Networks (IJCNN), 2007
- ▷ European Semantic Web Conference (ESWC), 2007



### **5.12 Senior PC Member**

- ▷ International Joint Conference on Artificial Intelligence (IJCAI), 2021
- ▷ International Joint Conference on Artificial Intelligence (IJCAI), 2020
- ▷ International Joint Conference on Artificial Intelligence (IJCAI), 2019
- ▷ Association for the Advancement of Artificial Intelligence Conference (AAAI), 2018
- ▷ Association for the Advancement of Artificial Intelligence Conference (AAAI), 2017
- ▷ Association for the Advancement of Artificial Intelligence Conference (AAAI), 2016
- ▷ Association for the Advancement of Artificial Intelligence Conference (AAAI), 2014

### **5.13 Software**

- ▷ PyKEEN - Python package designed to train and evaluate knowledge graph embedding models
- ▷ SANSa - Distributed Semantic Analytics Stack (since 2016, founder, leader)
- ▷ Sparqlify - SPARQL-SQL rewriter (since 2012, supervisor)
- ▷ DeFacto - Deep Fact Validation (since 2012, founder, co-leader)
- ▷ DL-Learner - A tool for supervised Machine Learning in OWL and Description Logics (since 2007, founder, leader)

### **5.14 Special Issue Editorial Boards**

- ▷ Semantic Web Journal Special Issue on Machine Learning for Knowledge Base Generation and Population 2016
- ▷ Semantic Web Journal Special Issue on Linked Dataset Descriptions 2013

### **5.15 Sponsorship Chair**

- ▷ International Semantic Web Conference (ISWC), 2014

### **5.16 Track/Area Chair**

- ▷ International Conference on Learning Representations (ICLR), 2023
- ▷ Extended Semantic Web Conference (ESWC), 2016
- ▷ Extended Semantic Web Conference (ESWC), 2013
- ▷ Extended Semantic Web Conference (ESWC), 2011

### **5.17 Tutorial Chair**

- ▷ SANSAs Leap of Faith: Scalable RDF and Heterogeneous Data Lakes, Extended Semantic Web Conference (ESWC), 2019
- ▷ QA-Tutorial: How to build a Question Answering system overnight, Extended Semantic Web Conference (ESWC), 2019
- ▷ QA-Tutorial: How to build a Question Answering system overnight, Extended Semantic Web Conference (ESWC), 2018

### **5.18 Workshop Chair**

- ▷ New Trends in Representation Learning with Knowledge Graphs (KGRL), 2021
- ▷ New Trends in Representation Learning with Knowledge Graphs (KGRL), 2019
- ▷ Large Scale RDF Analytics (LASCAR), 2019
- ▷ Linked Data on the Web (LDOW), 2018
- ▷ Linked Data on the Web (LDOW), 2017
- ▷ International Workshop on Knowledge Discovery and Data Mining Meets Linked Open Data (Know@LOD), 2016
- ▷ Special session on: Open Data and Geographical Information System applications(ODaGIS), 2015
- ▷ International Workshop on Knowledge Discovery and Data Mining Meets Linked Open Data (Know@LOD), 2015
- ▷ Linked Data Europe (LDE), 2014
- ▷ International Workshop on Knowledge Discovery and Data Mining Meets Linked Open Data (Know@LOD), 2014
- ▷ International Workshop on Geospatial Linked Data (GeoLD), 2014
- ▷ International Workshop on Knowledge Discovery and Data Mining Meets Linked Open Data (Know@LOD), 2013
- ▷ International Workshop on Crowdsourcing the Semantic Web (CrowdSem), 2013
- ▷ International Workshop on Knowledge Discovery and Data Mining Meets Linked Open Data (Know@LOD), 2012

## **6 Teaching**

### **6.1 Courses at TU Dresden**

- ▷ Seminar Conversational AI at TU Dresden
- ▷ Seminar Knowledge Graph Representation Learning at TU Dresden

### **6.2 Courses at University of Bonn**

- ▷ General Chair of the Computer Science Conference of University of Bonn students (CSCUBS), A popular initiative to help students organize their own conference
- ▷ Lab Semantic Web, Yearly from 2018 until 2021
- ▷ Project group Applied Software Technology (AST), 2017
- ▷ Seminar and Lab Natural Language Processing, 2017 - 2020
- ▷ Lecture , Seminar and Exercises Semantic Web, Yearly since 2017/2018
- ▷ Lab Distributed Big Data Analytics, Each semester, 2017 - 2020
- ▷ Seminar on Model-Driven Software Engineering, 2016
- ▷ Master Thesis Seminar, Each semester since 2016
- ▷ Knowledge Graph Analysis (lecture, exercises, seminar), Yearly from 2016/2017 until 2018/2019

### **6.3 Courses at University of Leipzig**

- ▷ Seminar Semantic Web, 2012/13
- ▷ Practical course software technology, 2012/13
- ▷ Practical course Semantic Web, 2009, 2010, 2011, 2012, 2013 and 2014
- ▷ I was assistant lecturer for the Semantic Web course at the University of Leipzig and became lecturer of the course together with my colleague Axel Ngonga, 2009 - 2011 and 2012 - 2015
- ▷ Seminar software product line management, 2008/09
- ▷ Seminar semantic support for software development processes, 2007/08
- ▷ Seminar Semantic Web applications, 2007
- ▷ I led the research seminar for the chair of business information systems, University of Leipzig, 2006 - 2010
- ▷ Seminar Semantic Web services and interfaces, 2006/07

#### **6.4 Other lectures**

- $\triangleright$  4 invited lectures at the ICCL (International Center for Computational Logic) Summer School in 2013 on the Linked Data Life-Cycle, 2013
- $\triangleright$  2 full lecture days (20 hours) in 2012 and 1.5 full lecture days (15 hours) in 2013 for the School of Media in Leipzig, Germany, 2012 and 2013
- $\triangleright$  Half day lecture at the Leipziger Semantic Web day 2011 on web technology and semantics, 2011
- $\triangleright$  Invited lecture on ontology learning at the Reasoning Web Summer School 2010 in Dresden, Germany, 2010

## **7 Supervision**

### **7.1 Assistant Professors**

### **7.2 PostDocs**

- ▷ Kossi Amouzouvi, TU Dresden, Since 2022
- ▷ Robert Wardenga, University of Leipzig, Since 2021
- ▷ Giulio Napolitano, University of Bonn, Since 2017

### **7.3 Former PostDocs**

- ▷ Ricardo Usbeck, Fraunhofer IAIS, 2019 - 2021
- ▷ Michael Galkin, Fraunhofer IAIS, 2019 - 2020
- ▷ Diego Collarana, Fraunhofer IAIS, Since 2019
- ▷ Sahar Vahdati, University of Bonn, Since 2019
- ▷ Anisa Rula, University of Bonn, 2017 - 2021
- ▷ Simon Scerri, University of Bonn, 2017 - 2019
- ▷ Christoph Lange, University of Bonn, 2017 - 2019
- ▷ Ioanna Lytra, University of Bonn, 2017 - 2019
- ▷ Fabrizio Orlandi, University of Bonn, 2017 - 2018
- ▷ Luís Paulo F. Garcia, University of Leipzig, 2017 - 2018
- ▷ Hamed Shariat Yazdi, University of Bonn, 2016 - 2018
- ▷ Henning Petzka, Fraunhofer IAIS, University of Bonn, 2016 - 2018
- ▷ Mohamed Ahmed Sherif, University of Leipzig, 2016 - 2018
- ▷ Bastian Haarmann, Fraunhofer IAIS, 2016 - 2017
- ▷ Alexander Kister, University of Bonn, 2016 - 2017
- ▷ Hajira Jabeen, University of Leipzig, 2015 - 2020
- ▷ Günter Kniesel, University of Bonn, Since 2015
- ▷ Kuldeep Singh, Fraunhofer IAIS, 2017 - 2019
- ▷ Amrapali J. Zaveri, University of Leipzig, 2015 - 2015

#### **7.4 PhD Students**

- ▷ Farshad Bakhshandegan Moghaddam, University of Bonn, Since 2020
- ▷ Carsten Draschner, University of Bonn, Since 2020
- ▷ Md Rashad Al Hasan Rony, Fraunhofer IAIS Dresden, Since 2019
- ▷ Chengjin Xu, University of Bonn, Since 2019
- ▷ Endri Kacupaj, University of Bonn, Since 2019
- ▷ Lars Reimann, University of Bonn, Since 2019
- ▷ Firas Kassawat, University of Bonn, Since 2019
- ▷ Mirza Mohtashim Alam, University of Bonn, Since 2018
- ▷ Mehdi Ali, University of Bonn, Since 2018
- ▷ Shimaa Ibrahim, University of Bonn, Since 2018
- ▷ Rostislav Nedelchev, University of Bonn, Since 2018
- ▷ Mojtaba Nayyeri, University of Bonn, Since 2018
- ▷ Jewgeni Rose, University of Bonn, Since 2018
- ▷ Elisa Margareth Sibarani, University of Bonn, Since 2017
- ▷ Heba Mohamed, University of Bonn, Since 2017
- ▷ Afshin Sadeghi, University of Bonn, Since 2017
- ▷ Patrick Westphal, University of Leipzig, Since 2013

#### **7.5 Former PhD Students**

- ▷ Fathoni Musyaffa, University of Bonn, 2017 - 2021
- ▷ Mohnish Dubey, University of Bonn, 2015 - 2021
- ▷ Harsh Thakkar, University of Bonn, 2017 - 2021
- ▷ Najmeh Mousavi Nejad, University of Bonn, 2017 - 2021
- ▷ Said Fathalla, University of Bonn, 2017 - 2021
- ▷ Gezim Sejdiu, University of Bonn, 2016 - 2020
- ▷ Hamid Zafar, University of Bonn, 2017 - 2020
- ▷ Konrad Höffner, University of Leipzig, 2012 - 2020
- ▷ Diego Esteves, University of Leipzig, 2015 - 2019
- ▷ Diego Collarana, Fraunhofer IAIS, 2017 - 2019

- ▷ Michael Galkin, Fraunhofer IAIS, 2017 - 2019
- ▷ Sahar Vahdati, University of Bonn, 2017 - 2019
- ▷ Sebastian Bader, Fraunhofer IAIS, Since 2018
- ▷ Isaiah Onando Mulang, University of Bonn, Since 2017
- ▷ Denis Lukovnikov, University of Bonn, Since 2017
- ▷ Debanjan Chaudhuri, University of Bonn, Since 2017
- ▷ Dimitris Kontokostas, University of Leipzig, 2012 - 2017
- ▷ Mohamed Ahmed Sherif, University of Leipzig, 2012 - 2016
- ▷ Kuldeep Singh, Fraunhofer IAIS, 2015 - 2019
- ▷ Amrapali J. Zaveri, University of Leipzig, 2010 - 2014
- ▷ Sebastian Hellmann, University of Leipzig, 2010 - 2014
- ▷ Mohamed Morsey, University of Leipzig, 2010 - 2013

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The full CV is available at <http://jens-lehmann.org/files/cv.pdf>. Visit <http://jens-lehmann.org> for more information and updates.