

# Weiwei Cheng

## *Curriculum Vitae*

weiwei.cheng@outlook.com

### WORK EXPERIENCE

#### Full-time positions

- 2017 – now      **Senior scientist**  
Research on machine learning and natural language processing for teams across Amazon including Alexa, search, marketplace  
Amazon  
Berlin, Germany
- 2013 – 2017      **Scientist**  
Research on machine learning and natural language processing for teams across Amazon including consumer electronics, customer reviews, Kindle  
Amazon  
Berlin, Germany
- 2007 – 2013      **Researcher**  
Machine learning research funded by German Research Foundation & Hessen State Ministry for Higher Education, Research and the Arts  
Faculty of Mathematics and Computer Science  
Philipps University Marburg  
Marburg, Germany

#### Part-time positions & internships

- 2011 – 2012      **Student consultant**  
Consulting service for Asian students  
Faculty of Mathematics and Computer Science  
Philipps University Marburg  
Marburg, Germany
- 2010              **Research intern**  
Improving machine learning with large-scale ontological knowledge  
Machine Learning and Perception Group  
Microsoft Research Cambridge  
Cambridge, UK
- 2009              **Data mining consulting intern**  
Analyzing and mining IT-related audit issues  
Group Technology and Operations  
Deutsche Bank  
Frankfurt, Germany

- 2006 – 2007     **Research assistant**  
Efficient preference operators in very large database systems  
Faculty of Computer Science  
Otto von Guericke University Magdeburg  
Magdeburg, Germany
- 2003             **Software development intern**  
Geographic information system for electricity distribution management  
Xinli Software  
Hefei, China

## EDUCATION

- 2007 – 2012     **PhD *magna cum laude* in Computer Science (Dr. rer. nat.)** *Chinese government award*  
Thesis: Label ranking with probabilistic models  
Faculty of Mathematics and Computer Science  
Philipps University Marburg, Germany
- 2005 – 2007     **MS with *highest distinction* in Computer Science** *best graduate award*  
Subject: Data and Knowledge Engineering  
GPA: 4.0/4.0  
Thesis: Interactive ranking of skylines using machine learning techniques  
Otto von Guericke University Magdeburg, Germany
- 2000 – 2004     **BS in Computer Science & Business Administration**  
Thesis of CS: Database systems for personnel management  
Thesis of BA: Retail analysis and development in Zhengzhou  
Zhengzhou University, China

## HONORS & AWARDS

### Awards

- Jul. 2015         **Prominent paper award**  
Artificial Intelligence Journal Prominent Paper Award 2015  
The 24th International Joint Conference on Artificial Intelligence  
Buenos Aires, Argentina
- Jul. 2013         **Best paper award**  
The 21st International Conference on Case-Based Reasoning  
Saratoga Springs, USA
- May 2013         **Notable Computing Books and Articles of 2012**  
ACM Computing Reviews  
New York City, USA
- Apr. 2012         **Data mining competition award**  
The 2nd place at JRS 2012 Data Mining Competition  
Chengdu, China

- Jul. 2011      **Nomination for best student paper award**  
The 7th Conference of the European Society for Fuzzy Logic and Technology  
Aix-les-Bains, France
- Jun. 2010      **Outstanding student award**  
Chinese Government Award for Outstanding Self-Financed Students Abroad  
Ministry of Education of China  
Berlin, Germany
- Sep. 2009      **Best paper award**  
Machine Learning Journal Best Student Paper Award  
The 19th European Conference on Machine Learning  
Bled, Slovenia
- Oct. 2008      **Best graduate award**  
Best Graduate 2007/2008 in Master of Data and Knowledge Engineering  
Otto von Guericke University Magdeburg  
Magdeburg, Germany
- Sep. 2008      **Nomination for best paper award**  
The 9th European Conference on Case-Based Reasoning  
Trier, Germany
- Jun. 2002      **Best debater award**  
The 1st Henan Varsity Debate Tournament  
Zhengzhou, China
- Aug. 1999      **Speech contest award**  
The 3rd prize at national speech contest “The 50 Years”  
Anqing, China

#### **Scholarships & grants**

- Jul. 2012      **DAAD conference scholarship**  
German Academic Exchange Service (DAAD)  
Vilnius, Lithuania
- Dec. 2011      **NIPS travel grant**  
Sponsored by Winton Capital, etc.  
The 25th Annual Conference on Neural Information Processing Systems  
Granada, Spain
- Apr. 2011      **DAAD STIBET scholarship**  
Sponsored by German Academic Exchange Service (DAAD)  
Marburg University Research Academy  
Marburg, Germany
- Sep. 2010      **UNESCO ECMLPKDD conference grant**  
Sponsored by UNESCO Chair in Data Privacy  
European Conference on Machine Learning and Principles and Practice of Knowledge  
Discovery in Databases  
Barcelona, Spain

- Jun. 2010      **ICML scholarship**  
Sponsored by IBM, National Science Foundation (NSF), etc.  
The 27th International Conference on Machine Learning  
Haifa, Israel
- Jun. 2009      **ICML scholarship**  
Sponsored by National Science Foundation (NSF), etc.  
The 26th International Conference on Machine Learning  
Montreal, Canada
- Sep. 2008      **MLSS scholarship**  
Sponsored by Predict & Control and Lille's Computer Science Laboratory  
The 10th Machine Learning Summer School  
Ile De Re, France
- Oct. 2006      **Outstanding international student scholarship**  
Saxony-Anhalt State Ministry for Education and Cultural Affairs  
Magdeburg, Germany

## PUBLICATIONS

- Jun. 2018      Nam Khanh Tran, Weiwei Cheng  
**Multiplicative tree-structured long short-term memory networks for semantic representations**  
Proceedings of the 7th Joint Conference on Lexical and Computational Semantics (\*SEM-18): 276-286, ACL  
New Orleans, USA *long oral presentation*
- Jul. 2017      Nedelina Teneva, Weiwei Cheng  
**Saliency rank: efficient keyphrase extraction with topic modeling**  
Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (ACL-17), Vol. 2: 530-535, ACL  
Vancouver, Canada
- Sep. 2015      Eyke Hüllermeier, Weiwei Cheng  
**Superset learning based on generalized loss minimization**  
LNAI 9285 Machine Learning and Knowledge Discovery in Databases: 260-275, Springer  
European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-15)  
Porto, Portugal
- Dec. 2014      Róbert Busa-Fekete, Balázs Szörényi, Paul Weng, Weiwei Cheng, Eyke Hüllermeier  
**Preference-based reinforcement learning: evolutionary direct policy search using a preference-based racing algorithm**  
Machine Learning 97: 327-351, Springer
- Nov. 2014      Willem Waegeman, Krzysztof Dembczyński, Arkadiusz Jachnik, Weiwei Cheng, Eyke Hüllermeier  
**On the Bayes-optimality of F-measure maximizers**  
Journal of Machine Learning Research 15: 3333-3388, Microtome Publishing

- Oct. 2013      Weiwei Cheng, Sascha Henzgen, Eyke Hüllermeier  
**Labelwise versus pairwise decomposition in label ranking**  
 Proceedings of Lernen-Wissen-Adaptivität 2013 (LWA-13): 140-147, Otto Friedrich University Bamberg  
 Bamberg, Germany
- Aug. 2013      Weiwei Cheng, Eyke Hüllermeier  
**A nearest neighbor approach to label ranking based on generalized labelwise loss minimization**  
 Proceedings of the 7th Multidisciplinary Workshop on Advances in Preference Handling (M-PREF-13)  
 The 23rd International Joint Conference on Artificial Intelligence (IJCAI-13)  
 Beijing, China
- Aug. 2013      Eyke Hüllermeier, Weiwei Cheng  
**Preference-based CBR: general ideas and basic principles**  
 Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI-13): 3012-3016, AAAI Press  
 Beijing, China *invited paper*
- Jul. 2013      Amira Abdel-Aziz, Weiwei Cheng, Marc Strickert, Eyke Hüllermeier  
**Preference-based CBR: a search-based problem solving framework**  
 LNAI 7969 Case-Based Reasoning Research and Development: 1-14, Springer  
 The 21st International Conference on Case-Based Reasoning (ICCBR-13)  
 Saratoga Springs, USA *best paper award*
- Jun. 2013      Dominik Heider, Robin Senge, Weiwei Cheng, Eyke Hüllermeier  
**Multilabel classification for exploiting cross-resistance information in HIV-1 drug resistance prediction**  
 Bioinformatics 29: 1946-1952, Oxford University Press
- Jun. 2013      Róbert Busa-Fekete, Balázs Szörényi, Paul Weng, Weiwei Cheng, Eyke Hüllermeier  
**Top-k selection based on adaptive sampling of noisy preferences**  
 Proceedings of the 30th International Conference on Machine Learning (ICML-13): 1094-1102, Microtome Publishing  
 Atlanta, USA
- May 2013      Róbert Busa-Fekete, Balázs Szörényi, Paul Weng, Weiwei Cheng, Eyke Hüllermeier  
**Preference-based evolutionary direct policy search**  
 Workshop Proceedings of Autonomous Learning 2013 (AL-13)  
 IEEE International Conference on Robotics and Automation (ICRA-13)  
 Karlsruhe, Germany
- Dec. 2012      Weiwei Cheng, Eyke Hüllermeier, Willem Waegeman, Volkmar Welker  
**Label ranking with partial abstention based on thresholded probabilistic models**  
 Advances in Neural Information Processing Systems 25 (NIPS-12): 2510-2518, Curran Associates  
 Lake Tahoe, USA
- Dec. 2012      Ali Fallah Tehrani, Weiwei Cheng, Eyke Hüllermeier  
**Preference learning using the Choquet integral: the case of multipartite ranking**

IEEE Transactions on Fuzzy Systems 20: 1102-1113, IEEE Computational Intelligence Society

- Sep. 2012      Weiwei Cheng, Eyke Hüllermeier  
**Probability estimation for multi-class classification based on label ranking**  
LNAI 7524 Machine Learning and Knowledge Discovery in Databases: 83-98, Springer  
European Conference on Machine Learning and Principles and Practice of Knowledge  
Discovery in Databases (ECMLPKDD-12)  
Bristol, UK
- Aug. 2012      Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier, Adrian Jaroszewicz, Willem  
Waegeman  
**F-measure maximization in topical classification**  
LNAI 7413 Rough Sets and Current Trends in Computing: 422-431, Springer  
Joint Rough Set Symposium (JRS-12)  
Chengdu, China *invited paper of JRS 2012 Data Mining Competition*
- Aug. 2012      Ali Fallah Tehrani, Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier  
**Learning monotone nonlinear models using the Choquet integral**  
Machine Learning 89: 183-211, Springer *selected paper (7 out of 599) from ECMLPKDD-  
11*
- Aug. 2012      Johannes Fürnkranz, Eyke Hüllermeier, Weiwei Cheng, Sang-Hyeun Park  
**Preference-based reinforcement learning: a formal framework and a policy iter-  
ation algorithm**  
Machine Learning 89: 123-156, Springer *selected paper (7 out of 599) from ECMLPKDD-  
11*
- Jul. 2012      Krzysztof Dembczyński, Willem Waegeman, Weiwei Cheng, Eyke Hüllermeier  
**On label dependence and loss minimization in multi-label classification**  
Machine Learning 88: 5-45, Springer *listed in Notable Computing Books and Articles  
2012 by ACM Computing Reviews*
- May 2012      Weiwei Cheng  
**Label ranking with probabilistic models**  
Doctoral thesis  
Faculty of Mathematics and Computer Science, Philipps University Marburg  
Marburg, Germany *magna cum laude*
- Dec. 2011      Krzysztof Dembczyński, Willem Waegeman, Weiwei Cheng, Eyke Hüllermeier  
**An exact algorithm for F-measure maximization**  
Advances in Neural Information Processing Systems 24 (NIPS-11): 223-230, Curran  
Associates  
Granada, Spain *NIPS travel grant*
- Dec. 2011      Weiwei Cheng, Eyke Hüllermeier  
**Label ranking with abstention: predicting partial orders by thresholding proba-  
bility distributions**  
Workshop Proceedings of Choice Models and Preference Learning 2011 (CMPL-11)  
The 25th Annual Conference on Neural Information Processing Systems (NIPS-11)  
Sierra Nevada, Spain *NIPS travel grant*

- Dec. 2011 Thomas Fober, Weiwei Cheng, Eyke Hüllermeier  
**Focusing search in multiobjective evolutionary optimization through preference learning from user feedback**  
 Proceedings of the 21st Workshop Computational Intelligence (WCI-11): 107-117, KIT Scientific Publishing  
 Dortmund, Germany
- Oct. 2011 Weiwei Cheng, Gjergji Kasneci, Thore Graepel, David Stern, Ralf Herbrich  
**Automated feature generation from structured knowledge**  
 Proceedings of the 20th ACM Conference on Information and Knowledge Management (CIKM-11): 1395-1404, ACM  
 Glasgow, UK
- Sep. 2011 Ali Fallah Tehrani, Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier  
**Learning monotone nonlinear models using the Choquet integral**  
 LNAI 6913 Machine Learning and Knowledge Discovery in Databases: 414-429, Springer  
 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-11)  
 Athens, Greece *invited to Machine Learning Journal Special Issue*
- Sep. 2011 Weiwei Cheng, Johannes Fürnkranz, Eyke Hüllermeier, Sang-Hyeun Park  
**Preference-based policy iteration: leveraging preference learning for reinforcement learning**  
 LNAI 6911 Machine Learning and Knowledge Discovery in Databases: 312-327, Springer  
 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-11)  
 Athens, Greece *invited to Machine Learning Journal Special Issue*
- Jul. 2011 Ali Fallah Tehrani, Weiwei Cheng, Eyke Hüllermeier  
**Choquistic regression: generalizing logistic regression using the Choquet integral**  
 Proceedings of the 7th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT-11): 868-875, Atlantis Press  
 Aix-les-Bains, France *nominated for best student paper award*
- Dec. 2010 Ali Fallah Tehrani, Weiwei Cheng, Eyke Hüllermeier  
**Preference learning using the Choquet integral: the case of multipartite ranking**  
 Proceedings of the 20th Workshop Computational Intelligence (WCI-10): 119-130, KIT Scientific Publishing  
 Dortmund, Germany
- Sep. 2010 Weiwei Cheng, Michaël Rademaker, Bernard De Baets, Eyke Hüllermeier  
**Predicting partial orders: ranking with abstention**  
 LNAI 6321 Machine Learning and Knowledge Discovery in Databases: 215-230, Springer  
 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-10)  
 Barcelona, Spain *UNESCO ECMLPKDD conference grant*
- Sep. 2010 Krzysztof Dembczyński, Willem Waegeman, Weiwei Cheng, Eyke Hüllermeier  
**Regret analysis for performance metrics in multi-label classification: the case of Hamming and subset zero-one loss**

LNAI 6321 Machine Learning and Knowledge Discovery in Databases: 280-295, Springer  
European Conference on Machine Learning and Principles and Practice of Knowledge  
Discovery in Databases (ECMLPKDD-10)  
Barcelona, Spain *UNESCO ECMLPKDD conference grant*

- Jun. 2010 Krzysztof Dembczyński, Willem Waegeman, Weiwei Cheng, Eyke Hüllermeier  
**On label dependence in multi-label classification**  
Workshop Proceedings of Learning from Multi-Label Data 2010 (MLD-10): 5-12  
The 27th International Conference on Machine Learning (ICML-10)  
Haifa, Israel *invited paper*
- Jun. 2010 Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier  
**Label ranking methods based on the Plackett-Luce model**  
Proceedings of the 27th International Conference on Machine Learning (ICML-10):  
215-222, Omnipress  
Haifa, Israel *ICML scholarship*
- Jun. 2010 Weiwei Cheng, Krzysztof Dembczyński, Eyke Hüllermeier  
**Graded multi-label classification: the ordinal case**  
Proceedings of the 27th International Conference on Machine Learning (ICML-10):  
223-230, Omnipress  
Haifa, Israel *ICML scholarship*
- Jun. 2010 Krzysztof Dembczyński, Weiwei Cheng, Eyke Hüllermeier  
**Bayes optimal multi-label classification via probabilistic classifier chains**  
Proceedings of the 27th International Conference on Machine Learning (ICML-10):  
279-286, Omnipress  
Haifa, Israel *ICML scholarship*
- Sep. 2009 Weiwei Cheng, Eyke Hüllermeier  
**Label ranking with partial abstention using ensemble learning**  
Workshop Proceedings of Preference Learning 2009 (PL-09): 17-23  
European Conference on Machine Learning and Principles and Practice of Knowledge  
Discovery in Databases (ECMLPKDD-09)  
Bled, Slovenia
- Sep. 2009 Weiwei Cheng, Eyke Hüllermeier  
**A simple instance-based approach to multi-label classification using the Mallows  
model**  
Workshop Proceedings of Learning from Multi-Label Data 2009 (MLD-09): 28-38  
European Conference on Machine Learning and Principles and Practice of Knowledge  
Discovery in Databases (ECMLPKDD-09)  
Bled, Slovenia
- Sep. 2009 Weiwei Cheng, Eyke Hüllermeier  
**Combining instance-based learning and logistic regression for multi-label classi-  
fication**  
Machine Learning 76: 211-225, Springer  
European Conference on Machine Learning and Principles and Practice of Knowledge  
Discovery in Databases (ECMLPKDD-09)  
Bled, Slovenia *Machine Learning Journal Best Student Paper Award*



- Jun. 2009      Weiwei Cheng, Jens Hühn, Eyke Hüllermeier  
**Decision tree and instance-based learning for label ranking**  
 Proceedings of the 26th International Conference on Machine Learning (ICML-09):  
 161-168, Omnipress  
 Montreal, Canada *ICML scholarship*
- May 2009      Weiwei Cheng, Eyke Eyke Hüllermeier  
**A new instance-based label ranking approach using the Mallows model**  
 LNCS 5551 Advances in Neural Networks: 707-716, Springer  
 The 6th International Symposium on Neural Networks (ISNN-09)  
 Wuhan, China
- Oct. 2008      Weiwei Cheng, Eyke Hüllermeier  
**Ranking skylines using active learning techniques**  
 Proceedings of Chinese Intelligent Systems Engineering 2008 (CNISE-08)  
 Chengdu, China
- Sep. 2008      Weiwei Cheng, Eyke Hüllermeier  
**Instance-based label ranking using the Mallows model**  
 Workshop Proceedings of Preference Learning 2008 (PL-08)  
 European Conference on Machine Learning and Principles and Practice of Knowledge  
 Discovery in Databases (ECMLPKDD-08)  
 Antwerp, Belgium
- Sep. 2008      Weiwei Cheng, Eyke Hüllermeier  
**Instance-based label ranking using the Mallows model**  
 Workshop Proceedings of ECCBR-08: 143-157  
 Uncertainty and Knowledge Discovery in CBR  
 The 9th European Conference on Case-Based Reasoning (ECCBR-08)  
 Trier, Germany
- Sep. 2008      Weiwei Cheng, Eyke Hüllermeier  
**Learning similarity functions from qualitative feedback**  
 LNAI 5239 Advances in Case-Based Reasoning: 120-134, Springer  
 The 9th European Conference on Case-Based Reasoning (ECCBR-08)  
 Trier, Germany *nominated for best paper award*
- Aug. 2008      Eyke Hüllermeier, Johannes Fürnkranz, Weiwei Cheng, Klaus Brinker  
**Label ranking by learning pairwise preferences**  
 Artificial Intelligence 172: 1897-1916, Elsevier *Artificial Intelligence Journal Prominent  
 Paper Award 2015*
- Oct. 2007      Weiwei Cheng  
**Interactive ranking of skylines using machine learning techniques**  
 Master's thesis  
 Faculty of Computer Science, Otto von Guericke University Magdeburg  
 Magdeburg, Germany *mit Auszeichnung*
- Sep. 2007      Weiwei Cheng, Eyke Hüllermeier, Bernhard Seeger, Ilya Vladimirskiy  
**Interactive ranking of skylines using machine learning techniques**  
 Proceedings of Lernen-Wissen-Adaptivität 2007 (LWA-07): 141-148, Martin Luther

University Halle-Wittenberg  
Halle, Germany

## **PATENTS**

- Nov. 2018      Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee  
**Artificial intelligence system for automated generation of realistic question and answer pairs**  
US patent application
- Oct. 2018      Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee  
**Generating a set of representative items using a dynamic selection strategy**  
US patent 10,114,887
- Oct. 2018      Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee  
**Generating a set of representative items using a clustering-selection strategy**  
US patent 10,114,885
- Nov. 2017      Valentin Flunkert, Weiwei Cheng, inventors; Amazon Technologies, Inc., assignee  
**Artificial intelligence system using deep neural networks for pairwise character-level text analysis and recommendations**  
US patent application
- Sep. 2017      Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee  
**Artificial intelligence system for generating network-accessible recommendations with explanatory metadata**  
US patent application
- Nov. 2016      Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee  
**Determining representative items using a diversity scoring strategy**  
US patent application
- Sep. 2016      Weiwei Cheng, Christopher Gonzales, inventors; Amazon Technologies, Inc., assignee  
**Document content analysis based on topic modeling (user interfaces)**  
US patent application
- Sep. 2016      Weiwei Cheng, Christopher Gonzales, inventors; Amazon Technologies, Inc., assignee  
**Document content analysis based on topic modeling**  
US patent application
- Sep. 2016      Weiwei Cheng, Amanda Dee Bottorff, Sandeep Ranganathan, inventors; Amazon Technologies, Inc., assignee  
**Extracting keywords from a document**  
US patent application
- Apr. 2016      Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee  
**Generating a set of representative items using a maximum-set-coverage selection strategy**  
US patent application

Dec. 2015      Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee  
**Generating a set of diversified items**  
US patent application

Dec. 2014      Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee  
**Machine learning based analysis of reviews**  
US patent application

## TALKS & TUTORIALS

Sep. 2017      **Saliency rank: efficient keyphrase extraction with topic modeling**  
Data Science Luxembourg  
Luxembourg City, Luxembourg

May 2017      **Saliency rank: efficient unsupervised keyphrase extraction with topic modeling**  
The 5th Amazon Machine Learning Conference  
Seattle, US

May 2016      **Applying natural language processing at Amazon**  
Amazon-Oxford-Warwick Workshop on Machine Learning Applications and Computational Statistics  
Berlin, Germany

Mar. 2014      **Preference learning using statistical methods for label ranking**  
Seminars on Machine Learning at Poznan University of Technology  
Poznan, Poland

Aug. 2013      **Preference-based evolutionary direct policy search**  
Dagstuhl Seminar 13321: The 11th European Workshop on Reinforcement Learning (EWRL-13)  
Dagstuhl, Germany

Jul. 2012      **Preference-based reinforcement learning**  
The 25th European Conference on Operational Research (EURO-12)  
Vilnius, Lithuania *DAAD conference scholarship*

Sep. 2011      **Learning monotone nonlinear models using the Choquet integral**  
Lernen-Wissen-Adaptivität (LWA-11)  
Magdeburg, Germany

Dec. 2010      **The RipOff! game: a tutorial of cooperative game theory**  
with Yoram Bachrach  
Think Computer Science  
Cambridge, UK

Sep. 2010      **Graded multi-label classification: the ordinal case**  
Lernen-Wissen-Adaptivität (LWA-10)  
Kassel, Germany

Jun. 2010      **Acceptance speech of 2009 Chinese Government Award for Outstanding Self-Financed Students Abroad**

- Embassy of China  
Berlin, Germany
- Nov. 2009      **Text classification: concepts and methods**  
Association of Chinese Computer Scientists in Germany (GCI) Annual Conference  
Fürth, Germany
- Nov. 2009      **Text classification: a back-to-school tutorial**  
GTO IES Audit & Risk Management Department, Deutsche Bank  
Frankfurt, Germany
- Oct. 2009      **Human vs. computer: case studies**  
Association of Chinese Scholars and Students in Magdeburg (VCWSM e.V.)  
Magdeburg, Germany
- Oct. 2009      **Multi-label classification: a new machine learning problem**  
Lightning Talk, the 4th Annual Google Test Automation Conference (GTAC-09)  
Zurich, Switzerland
- Sep. 2009      **Combining instance-based learning and logistic regression for multi-label classification**  
Lernen-Wissen-Adaptivität (LWA-09)  
Darmstadt, Germany
- Sep. 2009      **Human-computation in internet**  
Association of Chinese Computer Scientists in Germany (GCI) IT Strategy Workshop  
Schwetzingen, Germany
- Nov. 2008      **Ranking the skyline: an application of preference learning**  
Association of Chinese Computer Scientists in Germany (GCI) Annual Conference  
Lahnstein, Germany
- Sep. 2008      **Instance-based label ranking**  
Student Talk, the 10th Machine Learning Summer School (MLSS-08)  
Ile De Re, France *MLSS scholarship*
- Mar. 2007      **A brief introduction to preference handling**  
Colloquium for Graduate Students in Mathematics and Computer Science  
Philipps University Marburg  
Marburg, Germany

## ACADEMIC ACTIVITIES

- Membership**      Association for Advancement of Artificial Intelligence (AAAI)  
Association for Computational Linguistics (ACL)  
Association for Computing Machinery (ACM)  
Association of Chinese Computer Scientists in Germany (GCI)  
Institute of Electrical and Electronics Engineers (IEEE)  
International Machine Learning Society (IMLS)

**Grant reviews** Amazon Research Award (formerly Amazon Academic Research Award)  
AWS Machine Learning Research Awards  
AWS Cloud Credits for Research (formerly AWS Research Grants)  
National Science Centre Poland

**Journal reviews** ACM Transactions on Information Systems (ACM)  
ACM Transactions on Knowledge Discovery from Data (ACM)  
Advances in Data Analysis and Classification (Springer)  
Artificial Intelligence (Elsevier)  
Computational Intelligence (Wiley)  
Communications in Statistics – Simulation and Computation (Taylor & Francis)  
Data Mining and Knowledge Discovery (Springer)  
Engineering Applications of Artificial Intelligence (Elsevier)  
European Journal of Operational Research (Elsevier)  
Expert Systems with Applications (Elsevier)  
Fuzzy Sets and Systems (Elsevier)  
IEEE Access (IEEE)  
IEEE Transactions on Cybernetics (IEEE)  
IEEE Transactions on Fuzzy Systems (IEEE)  
IEEE Transactions on Image Processing (IEEE)  
IEEE Transactions on Knowledge and Data Engineering (IEEE)  
IEEE Transactions on Neural Networks and Learning Systems (IEEE)  
Information Retrieval (Springer)  
Information Sciences (Elsevier)  
Journal of Algorithms (Elsevier)  
Journal of Artificial Intelligence Research (AAAI Press)  
Journal of Machine Learning Research (Microtome Publishing)  
Knowledge and Information Systems (Springer)  
Machine Learning (Springer)  
Mathematical Reviews (AMS)  
Neural Processing Letters (Springer)  
Pattern Recognition (Elsevier)  
Soft Computing (Springer)  
Statistica Sinica (Academia Sinica)  
Uncertainty, Fuzziness and Knowledge-Based Systems (World Scientific)

**Program committee membership / conference reviews**

Annual Conference on Neural Information Processing Systems (NIPS)  
2019 2018 2017 2016 2015 2014 2012

European Conference on Machine Learning and Principles and Practice of Knowledge  
Discovery in Databases (ECMLPKDD)  
2019 2018 2017 2016 2015 2014 2013 2012 2011 2009

International Joint Conference on Artificial Intelligence (IJCAI)  
2019(SPC) 2018 2017 2013

International Conference on Machine Learning (ICML)  
2019 2018 2017 2016 2015 2012 2010

Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT)  
2019 2018

AAAI Conference on Artificial Intelligence (AAAI)  
2019 2018

International Conference on Artificial Intelligence and Statistics (AISTATS)  
2019 2017

International Conference on Learning Representations (ICLR)  
2019 2018

From Multiple Criteria Decision Aid to Preference Learning (DA2PL)  
2018 2016

Workshop on Fact Extraction and Verification (FEVER)  
2018

International Semantic Web Conference (ISWC)  
2018 2017 2016

European Conference on Artificial Intelligence (ECAI)  
2018 2012

Conference on Technologies and Applications of Artificial Intelligence (TAAI)  
2016 2015 2013

International Conference on Genome Informatics (GIW)  
2016

Knowledge Discovery and Data Mining Meets Linked Open Data workshop at Extended Semantic Web Conference (ESWC)  
2016 2015 2013 2012

Workshop on Machine Learning, Optimization and Big Data (MOD)  
2015

International Conference on Discovery Science (DS)  
2013

International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU)  
2012

SIAM International Conference on Data Mining (SDM)  
2012

Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)  
2012

ACM Conference on Information and Knowledge Management (CIKM)  
2011 2010

International Conference on Scalable Uncertainty Management (SUM)  
2011

European Conference on Symbolic and Quantitative Approaches to Reasoning with  
Uncertainty (ECSQARU)  
2011

IEEE International Conference on Data Mining (IEEEICDM)  
2010 2009

International Conference on Parallel Problem Solving from Nature (PPSN)  
2010

Industrial Conference on Data Mining (ICDM)  
2010

Annual Convention of the Society for the Study of Artificial Intelligence and Simula-  
tion of Behaviour (AISB)  
2010

IEEE International Conference on Data Engineering (ICDE)  
2010

Preference Learning workshop at European Conference on Machine Learning and  
Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD)  
2009 2008

International Fuzzy Systems Association World Congress and European Society for  
Fuzzy Logic and Technology Conference (IFSA-EUSFLAT)  
2009

Annual Conference on Artificial Intelligence (KI)  
2009

International Symposium on Intelligent Data Analysis (IDA)  
2009

IEEE Symposium on Computational Intelligence and Data Mining (CIDM)  
2009

Annual Conference of the German Classification Society (GfKI)  
2008

International Conference on Very Large Data Bases (VLDB)  
2008

## **Teaching**

2008 – 2010      Lecture of Machine Learning, Philipps University Marburg

## Supervised interns & students

- 2018 Michael Schlichtkrull, University of Edinburgh  
Learning to ask diverse questions: generating questions from text with variational autoencoder
- 2017 Joachim Bingel & Mareike Hartmann, University of Copenhagen  
Joint question and answer generation from Amazon customer reviews
- 2017 Arthur Bražinskas, University of Amsterdam  
Neural open information extraction
- 2017 Nam Khanh Tran, L3S Research Center & Leibniz University Hannover  
Multiplicative tree-structured LSTMs
- 2016 Nedelina Teneva, University of Chicago  
Keyphrase extraction with topic modeling
- 2015 Rebecca Knowles, Johns Hopkins University (co-supervised with György Szarvas)  
Helpfulness estimation of Amazon customer reviews

## LINKS

- Research <http://www.weiweicheng.com/research/>
- Video lectures <http://www.weiweicheng.com/videos.htm>