

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 marketplace, search
Amazon
Berlin, Germany
- 2013 – 2017 **Scientist**
Research on machine learning and natural language processing for teams across Amazon including Kindle, customer reviews, consumer electronics
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
- 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 Chinese 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 (ICCB-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. 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 dynamic selection strategy
US patent application
- Apr. 2016 Weiwei Cheng, inventor; Amazon Technologies, Inc., assignee
Generating a set of representative items using a clustering selection strategy
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

Jul. 2018	The 22nd International Conference on Artificial Intelligence and Statistics (AISTATS-19)
Apr. 2018	The 32nd Annual Conference on Neural Information Processing Systems (NIPS-18)
Feb. 2018	European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-18)
Jan. 2018	The 35th International Conference on Machine Learning (ICML-18)
Jan. 2018	The 17th International Semantic Web Conference (ISWC-18)
Dec. 2017	The 16th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT-18)
Nov. 2017	The 27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence (IJCAI-ECAI-18)
Oct. 2017	The 32nd AAAI Conference on Artificial Intelligence (AAAI-18)
Sep. 2017	The 6th International Conference on Learning Representations (ICLR-18)

Aug. 2017 The 16th International Semantic Web Conference (ISWC-17)

Mar. 2017 The 31st Annual Conference on Neural Information Processing Systems (NIPS-17)

Mar. 2017 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-17)

Feb. 2017 The 26th International Joint Conference on Artificial Intelligence (IJCAI-17)

Feb. 2017 The 34th International Conference on Machine Learning (ICML-17)

Sep. 2016 The 20th International Conference on Artificial Intelligence and Statistics (AISTATS-17)

Jun. 2016 The 30th Annual Conference on Neural Information Processing Systems (NIPS-16)

May 2016 The 15th International Semantic Web Conference (ISWC-16)

Mar. 2016 2016 Conference on Technologies and Applications of Artificial Intelligence (TAAI-16)

Feb. 2016 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-16)

Jan. 2016 From Multiple Criteria Decision Aid to Preference Learning (DA2PL-16)

Jan. 2016 The 27th International Conference on Genome Informatics (GIW-16)

Nov. 2015 Knowledge Discovery and Data Mining Meets Linked Open Data workshop at the 13th Extended Semantic Web Conference (ESWC-16)

Oct. 2015 The 33rd International Conference on Machine Learning (ICML-16)

Jun. 2015 2015 Conference on Technologies and Applications of Artificial Intelligence (TAAI-15)

May 2015 The 29th Annual Conference on Neural Information Processing Systems (NIPS-15)

Feb. 2015 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-15)

Nov. 2014 The 32nd International Conference on Machine Learning (ICML-15)

Nov. 2014 Workshop on Machine Learning, Optimization and Big Data (MOD-15)

Nov. 2014 Knowledge Discovery and Data Mining Meets Linked Open Data workshop at the 12th Extended Semantic Web Conference (ESWC-15)

May 2014 The 28th Annual Conference on Neural Information Processing Systems (NIPS-14)

Mar. 2014 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-14)

May 2013 2013 Conference on Technologies and Applications of Artificial Intelligence (TAAI-13)

Mar. 2013	European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-13)
Jan. 2013	The 23rd International Joint Conference on Artificial Intelligence (IJCAI-13)
Dec. 2012	The 16th International Conference on Discovery Science (DS-2013)
Nov. 2012	Knowledge Discovery and Data Mining Meets Linked Open Data workshop at the 10th Extended Semantic Web Conference (ESWC-13)
Jun. 2012	The 26th Annual Conference on Neural Information Processing Systems (NIPS-12)
Mar. 2012	The 29th International Conference on Machine Learning (ICML-12)
Feb. 2012	The 14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU-12)
Feb. 2012	Knowledge Discovery and Data Mining Meets Linked Open Data workshop at the 9th Extended Semantic Web Conference (ESWC-12)
Jan. 2012	European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-12)
Jan. 2012	The 20th European Conference on Artificial Intelligence (ECAI-12)
Nov. 2011	2012 SIAM International Conference on Data Mining (SDM-12)
Nov. 2011	The 16th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD-12)
Jun. 2011	The 20th ACM Conference on Information and Knowledge Management (CIKM-11)
May 2011	The 5th International Conference on Scalable Uncertainty Management (SUM-11)
Mar. 2011	The 11th European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU-11)
Mar. 2011	European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-11)
Jul. 2010	2010 IEEE International Conference on Data Mining (IEEEICDM-10)
Jul. 2010	The 19th ACM International Conference on Information and Knowledge Management (CIKM-10)
May 2010	The 11th International Conference on Parallel Problem Solving from Nature (PPSN-10)
Mar. 2010	The 10th Industrial Conference on Data Mining (ICDM-10)
Mar. 2010	The 36th Annual Convention of the Society for the Study of Artificial Intelligence and Simulation of Behaviour (AISB-10)

Feb. 2010	The 27th International Conference on Machine Learning (ICML-10)
Sep. 2009	Preference Learning workshop at European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-09)
Aug. 2009	The 26th IEEE International Conference on Data Engineering (ICDE-10)
Jul. 2009	International Fuzzy Systems Association World Congress and European Society for Fuzzy Logic and Technology Conference (IFSA-EUSFLAT-09)
Jul. 2009	2009 IEEE International Conference on Data Mining (IEEEICDM-09)
Jun. 2009	The 32nd Annual Conference on Artificial Intelligence (KI-09)
May 2009	European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-09)
Apr. 2009	The 8th International Symposium on Intelligent Data Analysis (IDA-09)
Nov. 2008	2009 IEEE Symposium on Computational Intelligence and Data Mining (CIDM-09)
Sep. 2008	Preference Learning workshop at European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD-08)
Jul. 2008	The 32nd Annual Conference of the German Classification Society (GfKI-08)
May 2008	The 34th International Conference on Very Large Data Bases (VLDB-08)

Teaching

2008 – 2010 Lecture of Machine Learning, Philipps University Marburg

Supervised students

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 Keypphrase 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>