Priv.-Doz. Dr. Dominik Kowald

Curriculum Vitae

Scholar: https://scholar.google.at/citations?user=qQ-L8rUAAAAJ
ORCID: https://orcid.org/0000-0003-3230-6234
Twitter/X: https://twitter.com/dkowald1
Website: https://dominikkowald.info

Education

2017–2024 **Priv.-Doz. (Habilitation), Applied Computer Science**, *TU Graz, Institute of Interactive Systems and Data Science (ISDS)*, Graz, Austria.
Thesis: Transparency, Privacy, and Fairness in Recommender Systems

2012–2017 **Dr.techn. (Ph.D.), Computer Science**, *TU Graz, Institute of Interactive Systems and Data Science (ISDS)*, Graz, Austria, *with distinction*.
Thesis: Modeling Activation Processes in Human Memory to Improve Tag Recommendations
Supervisors: Prof. Stefanie Lindstaedt & Prof. Tobias Ley, advisor: Assoc.Prof. Elisabeth Lex

2009–2012 **Dipl.Ing. (MSc.), Computer Science**, *TU Graz, Institute of Interactive Systems and Data Science (ISDS)*, Graz, Austria, *with distinction*.
Thesis: Combining Computer-Supported, Collaborative Learning with E-Assessment: Enhancing a Wiki System with Flexible Assessment Methods
Supervisors: Assoc.Prof. Christian Gütl, advisor: Assoc.Prof. Mohammad Al-Smadi

2006–2009 **BSc., Computer Science**, *TU Graz, Institute of Interactive Systems and Data Science (ISDS)*, Graz, Austria.
Thesis: Peer Assessment in Computer Science and Modern Technologies to Build a Flexible E-Learning System around It
Supervisor: Assoc.Prof. Christian Gütl, *co-author:* Joachim Maderer

2001–2006 **Matura, Manufacturing Computer Science**, *College of Industrial Engineering (BULME), Business Informatics*, Graz, Austria, *with distinction*.
Project: Implementation of a medical practice management system with online user administration

Professional Positions Held

since 2024 **Lecturer**, *University of Graz, Business Analytics and Data Science Center (BANDAS)*, Graz, Austria.
Teaching focus: relational databases, digitalization

since 2022 **Lecturer and Senior Researcher**, *TU Graz, Institute of Interactive Systems and Data Science (ISDS), FAIR-AI*, Graz, Austria.
Venia docendi: scientific subject Applied Computer Science (since June 2024)
Teaching focus: relational databases, data management, scientific writing with focus on recommender systems and trustworthy AI

since 2021 **Research Area Manager**, *Know-Center GmbH, FAIR-AI*, Graz, Austria.
Research focus: trustworthy AI, reproducibility in machine learning, differential privacy in recommender systems, long-term dynamics of algorithmic fairness, popularity bias in recommender systems and information retrieval
Research visit: XAI group of Prof. Nava Tintarev, Maastricht University, The Netherlands (November 2021), funded by the Provincial Government of Styria

2018–2021 **Deputy Research Area Manager**, *Know-Center GmbH, FAIR-AI (formerly called Social Computing)*, Graz, Austria.
Research focus: cognitive-inspired and psychology-informed recommender systems, social network analysis, mutli-domain recommender systems, learning analytics

2012–2018 **Ph.D. Candidate and Researcher**, *Know-Center GmbH, FAIR-AI (formerly called Social Computing) and TU Graz, Institute of Interactive Systems and Data Science (ISDS)*, Graz, Austria.
Research focus: cognitive-inspired and psychology-informed recommender systems, social tagging and microblogging systems, technology-enhanced learning

2010–2012 **Research Project Assistant**, *TU Graz, Institute of Interactive Systems and Data Science (ISDS)*, Graz, Austria.
Research focus: Wiki systems, e-assessment, Web technologies

University Courses Taught

since 2024 **Data Management**, *TU Graz*, 4 ECTS, Bachelor Software Engineering & Management, Computer Science, Information & Computer Engineering.
Role: lecturer

since 2024 **Foundations of Digitalization**, *University of Graz*, 4 ECTS, Bachelor Business Administration, Economics, Sociology.
Role: lectures on relational databases

since 2023 **Databases**, *TU Graz*, 3 ECTS, Bachelor Information & Computer Engineering, Master Computational Social Systems, Electrical & Audio Engineering.
Role: lecturer

since 2023 **Introduction to Scientific Writing**, *TU Graz*, 2 ECTS, Bachelor Information & Computer Engineering, Computer Science, Software Engineering & Management.
Role: offering seminar topics on trustworthy AI and recommender systems

2016 **Science 2.0**, *TU Graz*, 3 ECTS, Master Software Engineering & Management, Computer science.
Role: practical part

since 2014 **Guest Lectures**, FH Joanneum (recommender systems for journalism), PUC Chile (practical assignment, content-based recommender systems), University of Graz (AI reproducibility).

2014 **Web Science & Web Technology**, *TU Graz*, 3 ECTS, Bachelor Software Engineering & Management, Master Information & Computer Engineering.
Role: practical part

2011–2012 **Information Search & Retrieval**, *TU Graz*, 5 ECTS, Master Software Engineering & Management, Computer Science, Information & Computer Engineering.
Role: practical part

2009 **Data Structures & Algorithms**, *TU Graz*, 1.5 ECTS, Bachelor Biomedical Engineering, Technical Mathematics, Software Engineering & Management, Computer Science, Information & Computer Engineering.
Role: student assistant

Student Supervision and Mentoring

since 2024 **Ph.D. thesis**, *TU Graz*, Florian Atzenhofer-Baumgartner: *Recommender Systems in Digital Humanities*, Co-supervision with Prof. Georg Vogeler, University of Graz.

2024 **Master's thesis**, *TU Graz*, Andrea Forster: *Multi-stakeholder Recommender Systems*, Co-supervision with Prof. Stefan Thalmann, University of Graz.

2024 **Master's thesis**, *TU Graz*, Valentin Forster: *Detecting Price Anomalies Indicative of Antitrust Violations with Unsupervised Machine Learning*, Co-supervision with Prof. Stefan Thalmann, University of Graz.

2024 **Master's thesis**, *TU Graz*, Ioana Serban: Bias in Public Datasets.

2024 **Bachelor thesis**, *TU Graz*, Gregor Autischer: *Practical Aspects of AI Certification*.

2023 **Bachelor thesis**, *TU Graz*, Harald Semmelrock: *Reproducibility in Machine Learning-based Research*.

2023 **Bachelor thesis**, *TU Graz*, Michael Pöchlinger: *Metrics to Measure Dataset Quality and Bias in Data*.

2022 **Bachelor thesis**, *TU Graz*, Gregor Mayr: *Calibration in Recommender Systems*, Co-supervision with Assoc.Prof. Elisabeth Lex, TU Graz.

since 2020 **Ph.D. thesis**, *TU Graz*, Peter Müllner: *Privacy in Recommender Systems*, Co-supervision with Assoc.Prof. Elisabeth Lex, TU Graz.

since 2020 **Ph.D. thesis**, *TU Graz*, Tomislav Duricic: *Sparsity and Interpretability of Graph-based Recommender Systems*, Co-supervision with Assoc.Prof. Elisabeth Lex, TU Graz.

2020 **Master's thesis**, *TU Graz*, Mario Wagner: *Diversity-Aware Recommendation of Tweets*, Co-supervision with Assoc.Prof. Elisabeth Lex, TU Graz.

2019 **Master's thesis**, *TU Graz*, Peter Müllner: *Studying Non-Mainstream Listening Behavior For Music Recommendations*, Co-supervision with Assoc.Prof. Elisabeth Lex, TU Graz.

2016 **Bachelor thesis**, *TU Graz*, Andreas Punz: *Detection and Analysis of Communities on Twitter*, Co-supervision with Assoc.Prof. Elisabeth Lex, TU Graz.

Session Chairing, Workshops, & Seminar Participation

2024 **Dagstuhl Seminar**, *Evaluation perspectives of recommender systems Dagstuhl seminar*, Schloß Dagstuhl, Germany, *Role:* participant.

2024 **CRBAM Workshop**, *Fair recommendations for cyclists workshop at 8th Cycling Research Board Annual Meeting (CRBAM)*, Zürich, Switzerland, *Role:* co-organizer.

2022 **DIH Süd Workshop**, *Recommender systems and trustworthy Digital Innovation Hub (DIH) Süd workshop*, Graz, Austria, *Role:* co-organizer.

2020 **Know-Center Summer Academy**, *Know-Center summer academy on recommender systems*, Graz, Austria, *Role:* co-organizer.

2018 **CIKM Conference**, *Recommendation track of the ACM CIKM*, Turin, Italy, *Role:* session chair.

2017 **RSBDA Workshop**, *Second workshop on recommender systems and big data analytics (RSBDA) at i-KNOW*, Graz, Austria, *Role:* co-organizer.

2016 **RSBDA Workshop**, *First workshop on recommender systems and big data analytics (RSBDA) at i-KNOW*, Graz, Austria, *Role:* co-organizer.

2015 **i-KNOW Conference**, *Social Computing track at i-KNOW*, Graz, Austria, *Role:* session chair.

2013 **i-KNOW Conference**, *Science 2.0 track at i-KNOW*, Graz, Austria, *Role:* session chair.

Awards

2024 **Outstanding Reviewer Award**, *ACM UMAP conference*, Cagliari, Italy.

2022 **Gender & Diversity Award**, *TU Graz Gender & Diversity*, Graz, Austria, 450€.

2018 **Ph.D. Thesis Award**, *Chamber of Labor Styria*, Graz, Austria, 650€.

2015 **Best Demo Honourable Mention**, *Demo track at i-KNOW conference*, Graz, Austria.

2014 **Best Poster Award**, *Poster track at Hypertext conference*, Santiago, Chile.

Project Grants

2024–2027 **HorizonEurope**, *Linked User-driven Multidisciplinary Exploration Network (LUMEN)*, 415K€ for Know-Center (83K€ for FAIR-AI), *Role:* key researcher.

2024–2025 **OpenWebSearch Third-Party Call**, *Trustworthy Access to Knowledge from the Indexed Web (TILDE)*, 100K€ for Know-Center (33K€ for FAIR-AI), *Role:* key researcher.

2024–2025 **FFG AI4Green**, *Strategic AI Roadmap for Mobility (SAIROM)*, 50K€ for Know-Center (25K€ for FAIR-AI), *Role:* key researcher.

2024–2025 **Styrian AI Future Fund**, *FairRecSys*, 74K€ for TU Graz (37K€ for FAIR-AI), *Role:* co-PI.

2023–2026 **FFG COMET Research Center**, *Know-Center - Research Center for Trustworthy AI*, 20.4M€ for Know-Center (3.4M€ for FAIR-AI), *Role:* research area manager for FAIR-AI.

2022–2026 **FFG COMET Module**, *Data-Driven Immersive Analytics (DDIA)*, 3.7M€ for Know-Center (350K€ for FAIR-AI), *Role:* key researcher for subproject on recommendations.

2022–2025 **FFG FemTech**, *Radreisen4All*, 150K€ for FAIR-AI at Know-Center, *Role:* key researcher.

2020–2023 **FFG COMET Module**, *Data-Driven Artifical Intelligence (DDAI)*, 3.7M€ for Know-Center (700K for Social Computing), *Role:* key researcher for subproject on explainable and private AI for users.

2020–2023 **Erasmus+**, *Cogsteps*, 130K€ for FAIR-AI at Know-Center and TU Graz, *Role:* key researcher.

2020–2022 **Horizon2020**, *Trusted Secure Data Sharing Space (TRUSTS)*, 730K€ for Know-Center (138k for Social Computing), *Role:* task lead.

2020–2022 **Horizon2020**, *TRIPLE*, 377K€ for Know-Center (120K for Social Computing), *Role:* co-task lead.

2020–2022 **Horizon2020**, *AI4EU*, 147K€ for Know-Center (73.5K for Social Computing), *Role:* co-task lead.

2019–2022 **FFG COMET Research Center**, *Know-Center - Research Center for Big Data Analytics*, 20.4M€ for Know-Center (3.4M for Social Computing), *Role:* deputy research area manager for Social Computing.

2019–2021 **FFG BASIS**, *Automated Marketing and Loyalty System for Retailers and Stores (Jolioo)*, 120K€ for Social Computing at Know-Center, *Role:* researcher for recommender systems part.

2018–2020 **FFG BASIS**, *Studo App Sales Offensive*, 120K€ for Social Computing at Know-Center, *Role:* researcher for recommender systems part.

2018–2020 **Styrian Health Fund**, *Health-Literacy und Diversity (HeLi-D)*, 75K€ for Know-Center (37.5K€ for Social Computing), *Role:* work package lead.

2018–2020 **OpenAIRE Tender Call**, *OpenAIRE Matchmaker*, 75K€ for Social Computing at Know-Center, *Role:* researcher for recommender systems part.

2015–2018 **FFG Lighthouse**, *Data Market Austria (DMA)*, 75K€ for Know-Center (286K€ for Know-Center (170K€ for Social Computing), *Role:* researcher for recommender systems part.

Membership and Activities in Professional Associations

since 2024 **Austrian Standards**, *Committee for AI standardization*, *Role:* committee member.

since 2023 **Big Data Value Association Task Force**, *Ethical and Trustworthy Artifical and Machine Intelligence (ETAMI) task force of the Big Data Value Association (BDVA)*, *Role:* task force member.

since 2023 **Know-Center**, *Works Council of Know-Center*, *Role:* substitute member.

since 2021 **Frontiers in Big Data**, *Editorial board of Frontiers in Big Data - Section Recommender Systems*, *Role:* review editor.

since 2014 **ACM**, *Association for Computing Machinery (ACM)*, *Role:* member (since 2017 professional member).

Research Community Services

- **Reviewing for Journals:** Journal of HCI, TIST, Frontiers in Psychology, Applied Soft Computing, EPJ Data Science, TWEB, TCSS, PlosOne, JSS, TKDE, IR Journal, SNAM, TLT
- **Journal Special Issue Editor:** Frontiers in Big Data - Reviewers in Recommender Systems
- **Reviewing for Conferences:** SIGIR, ECAI, ECIR (senior reviewer for reproducibility track), ICWE, CIKM, WWW, IUI, HT, EuroCSS, RecSys, WebSci, OpenSym, UMAP, ECTEL (senior reviewer)
- **Invited Research Talks:** MediaFutures Bergen, Wissenschaftsforum Cologne, EBDVA, DataWeek

Peer-Reviewed Publications (* indicates equal contributions)

[1] Tomislav Duricic, Peter Müllner, Nicole Weidinger, Neven Elsayed, Dominik Kowald, and Eduardo Veas. Ai-powered immersive assistance for interactive task execution in industrial environments. In *ECAI'24'*, 2024. URL https://doi.org/10.48550/arXiv.2407.09147.

[2] Gustavo Escobeda, Marta Moscati, Peter Müllner, Simone Kopeinik, Dominik Kowald, Elisabeth Lex, and Markus Schedl. Making alice appear like bob: A probabilistic preference obfuscation method for implicit feedback recommendation models. In *ECML-PKDD'24'*. Springer, 2024. URL https://doi.org/10.48550/arXiv.2406.11505.

[3] Peter Müllner, Elisabeth Lex, Markus Schedl, and Dominik Kowald. The impact of differential privacy on recommendation accuracy and popularity bias. In *ECIR'24'*. Springer, 2024. URL https://doi.org/10.1007/978-3-031-56066-8_33.

[4] Armin Haberl, Jürgen Fleiß, Dominik Kowald, and Stefan Thalmann. Take the aTrain. Introducing an interface for the accessible transcription of interviews. *Journal of Behavioral and Experimental Finance*, 2024. URL https://doi.org/10.1016/j.jbef.2024.100891.

[5] Florian Königsdorfer, Armin Haberl, Dominik Kowald, Tony Ross-Hellauer, and Stefan Thalmann. Black box or open science? A study on reproducibility in AI development papers. In *HICSS'24*, 2024. URL https://hdl.handle.net/10125/106458.

[6] Dominik Kowald, Yang Deqing, and Emanuel Lacic, editors. *Reviews in recommender systems*, 2024. Frontiers Media. URL https://doi.org/10.3389/978-2-8325-4766-3.

[7] Dominik Kowald, Deqing Yang, and Emanuel Lacic. Editorial: Reviews in recommender systems. *Frontiers in Big Data*, 6, 2024. URL https://doi.org/10.3389/fdata.2024.1384460.

[8] Dominik Kowald, Markus Reiter-Haas, Simone Kopeinik, Markus Schedl, and Elisabeth Lex. Transparent music preference modeling and recommendation with a model of human memory theory. In *A Human-centered Perspective of Intelligent Personalized Environments and Systems*. Springer, 2024. URL https://doi.org/10.1007/978-3-031-55109-3_4.

[9] Peter Müllner, Elisabeth Lex, Markus Schedl, and Dominik Kowald. ReuseKNN: Neighborhood reuse for differentially private KNN-based recommendations. *ACM TIST*, 14(5), 2023. URL https://doi.org/10.1145/3608481.

[10] Sebastian Scher, Simone Kopeinik, Andreas Trügler, and Dominik Kowald. Modelling the long-term fairness dynamics of data-driven targeted help on job seekers. *Nature Scientific Reports*, 13(1), 2023. URL https://doi.org/10.1038/s41598-023-28874-9.

[11] Peter Müllner, Elisabeth Lex, Markus Schedl, and Dominik Kowald. Differential privacy in collaborative filtering recommender systems: A review. *Frontiers in Big Data*, 6, 2023. URL https://doi.org/10.3389/fdata.2023.1249997.

[12] Tomislav Duricic, Dominik Kowald, Emanuel Lacic, and Elisabeth Lex. Beyond-accuracy: A review on diversity, serendipity and fairness in recommender systems based on graph neural networks. *Frontiers in Big Data*, 6, 2023. URL https://doi.org/10.3389/fdata.2023.1251072.

[13] Marta Moscati, Christian Wallmann, Markus Reiter-Haas, Dominik Kowald, Elisabeth Lex, and Markus Schedl. Integrating the ACT-R framework with collaborative filtering for explainable sequential music recommendation. In *RecSys'23*, 2023.

URL https://doi.org/10.1145/3604915.3608838.
[14] Emanuel Lacic, Tomislav Duricic, Leon Fadljevic, Dieter Theiler, and Dominik Kowald. Uptrendz: API-centric real-time recommendations in multi-domain settings. In *ECIR'23*. Springer, 2023. URL https://doi.org/10.1007/978-3-031-28241-6_23.
[15] Dominik Kowald*, Gregor Mayr*, Markus Schedl, and Elisabeth Lex. A study on accuracy, miscalibration, and popularity bias in recommendations. In *BIAS'23*, pages 1–16. Springer, 2023. URL https://doi.org/10.1007/978-3-031-37249-0_1.
[16] Peter Muellner, Stefan Schmerda, Dieter Theiler, Stefanie Lindstaedt, and Dominik Kowald. Towards employing recommender systems for supporting data and algorithm sharing. In *DataEconomy@CoNext'22*, 2022. URL https://doi.org/10.1145/3565011.3569055.
[17] Emanuel Lacic, Leon Fadljevic, Franz Weissenboeck, Stefanie Lindstaedt, and Dominik Kowald. What drives readership? An online study on user interface types and popularity bias mitigation in news article recommendations. In *ECIR'22*, 2022. URL https://doi.org/10.1007/978-3-030-99739-7_20.
[18] Dominik Kowald and Emanuel Lacic. Popularity bias in collaborative filtering-based multimedia recommender systems. In *BIAS'22*. Springer, 2022. URL https://doi.org/10.1007/978-3-031-09316-6_1.
[19] Emanuel Lacic and Dominik Kowald. Recommendations in a multi-domain setting: Adapting for customization, scalability and real-time performance. In *Industry-Day Track of ECIR'22*, 2022. URL https://doi.org/10.48550/arXiv.2203.01256.
[20] Dominik Kowald, Peter Muellner, Eva Zangerle, Christine Bauer, Markus Schedl, and Elisabeth Lex. Support the underground: Characteristics of beyond-mainstream music listeners. *EPJ Data Science*, 10(1), 2021. URL https://doi.org/10.1140/epjds/s13688-021-00268-9.
[21] Elisabeth Lex, Dominik Kowald, Paul Seitlinger, Thi Ngoc Trang Tran, Alexander Felfernig, Markus Schedl, et al. Psychology-informed recommender systems. *Foundations and Trends® in Information Retrieval*, 15(2), 2021. URL https://doi.org/10.1561/1500000090.
[22] Markus Schedl, Christine Bauer, Wolfgang Reisinger, Dominik Kowald, and Elisabeth Lex. Listener modeling and context-aware music recommendation based on country archetypes. *Frontiers in AI*, 3, 2021. URL https://doi.org/10.3389/frai.2020.508725.
[23] Peter Muellner, Dominik Kowald, and Elisabeth Lex. Robustness of meta matrix factorization against strict privacy constraints. In *ECIR'21*. Springer, 2021. URL https://doi.org/10.1007/978-3-030-72240-1.
[24] Oleg Lesota, Alessandro Melchiorre, Navid Rekabsaz, Stefan Brandl, Dominik Kowald, Elisabeth Lex, and Markus Schedl. Analyzing item popularity bias of music recommender systems: Are different genders equally affected? In *RecSys'21*, 2021. URL https://doi.org/10.1145/3460231.3478843.
[25] Tomislav Duricic, Dominik Kowald, Markus Schedl, and Elisabeth Lex. My friends also prefer diverse music: Homophily and link prediction with user preferences for mainstream, novelty, and diversity in music. In *MSDNS@ASONAM'21*, 2021. URL https://doi.org/10.1145/3487351.3492706.
[26] Peter Muellner, Elisabeth Lex, and Dominik Kowald. Position paper on simulating privacy dynamics in recommender systems. In *SimuRec@RecSys'21*, 2021. URL https://doi.org/10.48550/arXiv.2109.06473.
[27] Elisabeth Lex*, Dominik Kowald*, and Markus Schedl. Modeling popularity and temporal drift of music genre preferences. *TISMIR*, 3(1), 2020. URL https://doi.org/10.5334/tismir.39.
[28] Emanuel Lacic, Markus Reiter-Haas, Dominik Kowald, Manoj Reddy Dareddy, Junghoo Cho, and Elisabeth Lex. Using autoencoders for session-based job recommendations. *UMUAI*, 30, 2020. URL https://doi.org/10.1007/s11257-020-09269-1.
[29] Dominik Kowald, Markus Schedl, and Elisabeth Lex. The unfairness of popularity bias in music recommendation: A reproducibility study. In *ECIR'20*. Springer, 2020. URL https://doi.org/10.1007/978-3-030-45442-5_5.
[30] Dominik Kowald*, Elisabeth Lex*, and Markus Schedl. Utilizing human memory processes to model genre preferences for personalized music recommendations. In *HUMANIZE@IUI'20*. Association of Computing Machinery, 2020. URL https://doi.org/10.48550/arXiv.2003.10699.
[31] Tomislav Duricic, Hussain Hussain, Emanuel Lacic, Dominik Kowald, Denis Helic, and Elisabeth Lex. Empirical comparison of graph embeddings for trust-based collaborative filtering. In *ISMIS'20*. Springer, 2020. URL https://doi.org/10.1007/978-3-030-59491-6_17.
[32] Leon Fadljevic, Katharina Maitz, Dominik Kowald, Viktoria Pammer-Schindler, and Barbara Gasteiger-Klipcera. Slow is good: The effect of diligence on student performance in the case of an adaptive learning system for health literacy. In *LAK'20*, 2020. URL https://doi.org/10.1145/3375462.3375502.
[33] Adolfo Ruiz-Calleja, Sebastian Dennerlein, Dominik Kowald, Dieter Theiler, Elisabeth Lex, and Tobias Ley. An infrastructure for workplace learning analytics: Tracing knowledge creation with the Social Semantic Server. *Journal of Learning Analytics*, 6(2), 2019. URL http://dx.doi.org/10.18608/jla.2019.62.9.
[34] Simone Kopeinik, Elisabeth Lex, Dominik Kowald, Dietrich Albert, and Paul Seitlinger. A real-life school study of confirmation bias and polarisation in information behaviour. In *ECTEL'19*, 2019. URL https://doi.org/10.1007/978-3-030-29736-7_31.
[35] Emanuel Lacic*, Dominik Kowald*, Dieter Theiler, Matthias Traub, Lucky Kuffer, Stefanie Lindstaedt, and Elisabeth Lex. Evaluating tag recommendations for e-book annotation using a semantic similarity metric. In *REVEAL@RecSys'19*, 2019. URL https://doi.org/10.48550/arXiv.1908.04042.
[36] Dominik Kowald, Matthias Traub, Dieter Theiler, Heimo Gursch, Stefanie Lindstaedt, Roman Kern, and Elisabeth Lex. Using the open Meta Kaggle dataset to evaluate tripartite recommendations in data markets. In *REVEAL@RecSys'19*, 2019. URL https://doi.org/10.48550/arXiv.1908.04017.

[37] Dominik Kowald*, Elisabeth Lex*, and Markus Schedl. Modeling artist preferences for personalized music recommendations. In *ISMIR'19*, 2019. URL https://archives.ismir.net/ismir2019/latebreaking/000001.pdf.
[38] Elisabeth Lex and Dominik Kowald. The impact of time on hashtag reuse in twitter: A cognitive-inspired hashtag recommendation approach. In *INFORMATIK'19*, 2019. URL https://doi.org/10.18420/inf2019_46.
[39] Dominik Kowald*, Elisabeth Lex*, and Markus Schedl. Modeling artist preferences of users with different music consumption patterns for fair music recommendations. In *EUROCSS'19*, 2019. URL https://doi.org/10.48550/arXiv.1907.09781.
[40] Tomislav Duricic, Emanuel Lacic, Dominik Kowald, and Elisabeth Lex. Exploiting weak ties in trust-based recommender systems using regular equivalence. In *EUROCSS'19*, 2019. URL https://doi.org/10.48550/arXiv.1907.11620.
[41] Ilire Hasani-Mavriqi, Dominik Kowald, Denis Helic, and Elisabeth Lex. Consensus dynamics in online collaboration systems. *Computational Social Networks*, 5(1), 2018. URL https://doi.org/10.1186/s40649-018-0050-1.
[42] Dominik Kowald, Paul Seitlinger, Tobias Ley, and Elisabeth Lex. The impact of semantic context cues on the user acceptance of tag recommendations: An online study. In *WWW'18 Companion*, 2018. URL https://doi.org/10.1145/3184558.3186899.
[43] Mathieu d'Aquin, Dominik Kowald, Angela Fessl, Elisabeth Lex, and Stefan Thalmann. AFEL-analytics for everyday learning. In *WWW'18 Companion*, 2018. URL https://doi.org/10.1145/3184558.3186206.
[44] Tomislav Duricic, Emanuel Lacic, Dominik Kowald, and Elisabeth Lex. Trust-based collaborative filtering: Tackling the cold start problem using regular equivalence. In *RecSys'18*, 2018. URL https://doi.org/10.1145/3240323.3240404.
[45] Dominik Kowald, Emanuel Lacic, Dieter Theiler, and Elisabeth Lex. AFEL-REC: A recommender system for providing learning resource recommendations in social learning environments. In *SIR@CIKM'18*, 2018. URL https://ceur-ws.org/Vol-2482/paper46.pdf.
[46] Emanuel Lacic, Dominik Kowald, and Elisabeth Lex. Neighborhood troubles: On the value of user pre-filtering to speed up and enhance recommendations. In *EYRE@CIKM'18*, 2018. URL https://ceur-ws.org/Vol-2482/paper9.pdf.
[47] Emanuel Lacic, Dominik Kowald, Markus Reiter-Haas, Valentin Slawicek, and Elisabeth Lex. Beyond accuracy optimization: On the value of item embeddings for student job recommendations. In *IFUP@WSDM'18*, 2018. URL https://doi.org/10.48550/arXiv.1711.07762.
[48] Dominik Kowald and Elisabeth Lex. Studying confirmation bias in hashtag usage on Twitter. In *EUROCSS'18*, 2018. URL https://doi.org/10.48550/arXiv.1809.03203.
[49] Elisabeth Lex, Mario Wagner, and Dominik Kowald. Mitigating confirmation bias on Twitter by recommending opposing views. In *EUROCSS'18*, 2018. URL https://doi.org/10.48550/arXiv.1809.03901.
[50] Angela Fessl, Dominik Kowald, Susana López Sola, Ana Moreno, Ricardo Alonso, and Stefan Thalmann. Analytics for everyday learning from two perspectives: Knowledge workers and teachers. In *AFEL@ECTEL'18*, 2018. URL https://ceur-ws.org/Vol-2209/paper5.pdf.
[51] Sebastian Dennerlein, Dominik Kowald, Viktoria Pammer-Schindler, Elisabeth Lex, and Tobias Ley. Simulation-based co-creation of algorithms. In *CCTEL@ECTEL'18*, 2018. URL https://ceur-ws.org/Vol-2190/CC-TEL_2018_paper_5.pdf.
[52] Paul Seitlinger, Tobias Ley, Dominik Kowald, Dieter Theiler, Ilire Hasani-Mavriqi, Sebastian Dennerlein, Elisabeth Lex, and Dietrich Albert. Balancing the fluency-consistency tradeoff in collaborative information search with a recommender approach. *Int. Journal of HCI*, 34(6), 2018. URL https://doi.org/10.1080/10447318.2017.1379240.
[53] Alexander Felfernig, Ralf Klamma, Tobias Ley, Dominik Kowald, Elisabeth Lex, and Viktoria Pammer-Schindler, editors. *Focused topic on "Recommender systems and social network analysis" in JUCS*, 2017. JUCS. URL https://www.jucs.org/jucs_23_9/editorial/jucs_23_09_0806_0807_editorial.html.
[54] Mario Aehnelt, Oliver Bluder, Gert Breitfuss, Rene Kaiser, Roman Kern, Ralf Klamma, D Kowald, Tobias Ley, Elisabeth Lex, Christiane Müller, Viktoria Pammer-Schindler, Romana Rauter, Gerald Reiner, and Eduardo Veas, editors. *Proceedings of the Workshop Papers of i-Know'17*, 2017. CEUR. URL https://ceur-ws.org/Vol-2025/.
[55] Dominik Kowald, Subhash Chandra Pujari, and Elisabeth Lex. Temporal effects on hashtag reuse in Twitter: A cognitive-inspired hashtag recommendation approach. In *WWW'17*, 2017. URL https://doi.org/10.1145/3038912.3052605.
[56] Dominik Kowald, Simone Kopeinik, and Elisabeth Lex. The TagRec framework as a toolkit for the development of tag-based recommender systems. In *UMAP'17 Adjunct*, 2017. URL https://doi.org/10.1145/3099023.3099069.
[57] Simone Kopeinik, Dominik Kowald, Ilire Hasani-Mavriqi, and Elisabeth Lex. Improving collaborative filtering using a cognitive model of human category learning. *The Journal of Web Science*, 2(1), 2017. URL http://dx.doi.org/10.1561/106.00000007.
[58] Dominik Kowald and Elisabeth Lex. Overcoming the imbalance between tag recommendation approaches and real-world folksonomy structures with cognitive-inspired algorithms. In *EUROCSS'17*, 2017. URL https://doi.org/10.48550/arXiv.1805.03067.
[59] Mathieu d'Aquin, Alessandro Adamou, Stefan Dietze, Besnik Fetahu, Ujwal Gadiraju, Ilire Hasani-Mavriqi, Peter Holtz, Joachim Kimmerle, Dominik Kowald, Elisabeth Lex, Sussane Lopez.Sola, Ricardo Maturana, Vedran Sabol, Pinnelope Troullinou, and Eduardo Veas. AFEL: towards measuring online activities contributions to self-directed learning. In *ARTEL@ECTEL'17*, 2017. URL https://ceur-ws.org/Vol-1997/paper5.pdf.
[60] Emanuel Lacic, Dominik Kowald, and Elisabeth Lex. Tailoring recommendations for a multi-domain environment. In *RecSysKTL@RecSys'17*, 2017. URL https://ceur-ws.org/Vol-1887/paper7.pdf.
[61] Dominik Kowald. Modeling activation processes in human memory to improve tag recommendations. *SIGIR Forum*, 2017. URL https://sigir.org/wp-content/uploads/2018/01/p166.pdf.
[62] Dominik Kowald. *Modeling activation processes in human memory for tag recommendations*. Suedwestdeutscher Verlag fuer Hochschulschriften, 2017. URL https://www.morebooks.shop/shop-ui/shop/product/978-620-2-32072-6.

[63] Dominik Kowald and Elisabeth Lex. The influence of frequency, recency and semantic context on the reuse of tags in social tagging systems. In *HT'16*, 2016. URL https://doi.org/10.1145/2914586.2914617.
[64] Emanuel Lacic, Dominik Kowald, and Elisabeth Lex. High enough?: Explaining and predicting traveler satisfaction using airline reviews. In *HT'16*, 2016. URL https://doi.org/10.1145/2914586.2914629.
[65] Christoph Trattner, Dominik Kowald, Paul Seitlinger, Tobias Ley, and Simone Kopeinik. Modeling activation processes in human memory to predict the use of tags in social bookmarking systems. *The Journal of Web Science*, 2(1), 2016. URL http://dx.doi.org/10.1561/106.00000004.
[66] Simone Kopeinik, Dominik Kowald, and Elisabeth Lex. Which algorithms suit which learning environments? A comparative study of recommender systems in TEL. In *ECTEL'16*, 2016. URL https://doi.org/10.1007/978-3-319-45153-4_10.
[67] Patricia Santos, Sebastian Dennerlein, Dieter Theiler, John Cook, Tamsin Treasure-Jones, Debbie Holley, Micky Kerr, Graham Attwell, Dominik Kowald, and Elisabeth Lex. Going beyond your personal learning network, using recommendations and trust through a multimedia question-answering service for decision-support: A case study in the healthcare. *Journal of Universal Computer Science*, 22(3), 2016. URL https://doi.org/10.3217/jucs-022-03-0340.
[68] Dominik Kowald and Elisabeth Lex. Evaluating tag recommender algorithms in real-world folksonomies: A comparative study. In *RecSys'15*, 2015. URL https://doi.org/10.1145/2792838.2799664.
[69] Emanuel Lacic, Dominik Kowald, Matthias Traub, Granit Luzhnica, Joerg Simon, and Elisabeth Lex. Tackling cold-start users in recommender systems with indoor positioning systems. In *RecSys'15 Posters*, 2015. URL https://ceur-ws.org/Vol-1441/recsys2015_poster21.pdf.
[70] Emanuel Lacic, Matthias Traub, Dominik Kowald, and Elisabeth Lex. ScaR: Towards a real-time recommender framework following the microservices architecture. In *LSRS@RecSys'15*, 2015. URL https://doi.org/10.5281/zenodo.8337018.
[71] Dominik Kowald. Modeling cognitive processes in social tagging to improve tag recommendations. In *WWW'15 Companion*, 2015. URL https://doi.org/10.1145/2740908.2741746.
[72] Paul Seitlinger, Dominik Kowald, Simone Kopeinik, Ilire Hasani-Mavriqi, Elisabeth Lex, and Tobias Ley. Attention please! A hybrid resource recommender mimicking attention-interpretation dynamics. In *WWW'15 Companion*, 2015. URL https://doi.org/10.1145/2740908.2743057.
[73] Dominik Kowald, Simone Kopeinik, Paul Seitlinger, Tobias Ley, Dietrich Albert, and Christoph Trattner. Refining frequency-based tag reuse predictions by means of time and semantic context. In *Mining, Modeling, and Recommending 'Things' in Social Media*. Springer, 2015. URL https://doi.org/10.1007/978-3-319-14723-9_4.
[74] Dominik Kowald, Paul Seitlinger, Simone Kopeinik, Tobias Ley, and Christoph Trattner. Forgetting the words but remembering the meaning: Modeling forgetting in a verbal and semantic tag recommender. In *Mining, Modeling, and Recommending 'Things' in Social Media*. Springer, 2015. URL https://doi.org/10.1007/978-3-319-14723-9_5.
[75] Emanuel Lacic, Dominik Kowald, Lukas Eberhard, Christoph Trattner, Denis Parra, and Leandro Balby Marinho. Utilizing online social network and location-based data to recommend products and categories in online marketplaces. In *Mining, Modeling, and Recommending 'Things' in Social Media*. Springer, 2015. URL https://doi.org/10.1007/978-3-319-14723-9_6.
[76] Christoph Trattner, Dominik Kowald, and Emanuel Lacic. TagRec: Towards a toolkit for reproducible evaluation and development of tag-based recommender algorithms. *ACM SIGWEB Newsletter*, 2015. URL https://doi.org/10.1145/2719943.2719946.
[77] Sebastian Dennerlein, Dominik Kowald, Elisabeth Lex, Dieter Theiler, Emanuel Lacic, and Tobias Ley. The Social Semantic Server: A flexible framework to support informal learning at the workplace. In *i-KNOW'15*, 2015. URL https://doi.org/10.1145/2809563.2809614.
[78] Matthias Traub, Dominik Kowald, Emanuel Lacic, Pepijn Schoen, Gernot Supp, and Elisabeth Lex. Smart booking without looking: Providing hotel recommendations in the TripRebel portal. In *i-KNOW'15*, 2015. URL https://doi.org/10.1145/2809563.2809616.
[79] Dominik Kowald, Paul Seitlinger, Christoph Trattner, and Tobias Ley. Long time no see: The probability of reusing tags as a function of frequency and recency. In *WWW'14 Companion*, 2014. URL https://doi.org/10.1145/2567948.2576934.
[80] Emanuel Lacic, Dominik Kowald, Denis Parra, Martin Kahr, and Christoph Trattner. Towards a scalable social recommender engine for online marketplaces: The case of Apache Solr. In *SRS@WWW'14*, 2014. URL https://doi.org/10.1145/2567948.2579245.
[81] Dominik Kowald, Emanuel Lacic, and Christoph Trattner. TagRec: Towards a standardized tag recommender benchmarking framework. In *HT'14*, 2014. URL https://doi.org/10.1145/2631775.2631781.
[82] Emanuel Lacic, Dominik Kowald, and Christoph Trattner. SocRecM: A scalable social recommender engine for online marketplaces. In *HT'14*, 2014. URL https://doi.org/10.1145/2631775.2631783.
[83] Emanuel Lacic*, Dominik Kowald*, Paul Seitlinger, Christoph Trattner, and Denis Parra. Recommending items in social tagging systems using tag and time information. In *SP@HT'14*, 2014. URL https://ceur-ws.org/Vol-1210/SP2014_01.pdf.
[84] Dominik Kowald, Sebastian Dennerlein, Dieter Theiler, Simon Walk, and Christoph Trattner. The Social Semantic Server - A framework to provide services on social semantic network data. In *I-SEMANTICS'13*, volume 1026, 2013. URL https://ceur-ws.org/Vol-1026/paper11.pdf.
[85] Paul Seitlinger, Dominik Kowald, Christoph Trattner, and Tobias Ley. Recommending tags with a model of human categorization. In *CIKM'13*, 2013. URL https://doi.org/10.1145/2505515.2505625.