Priv.-Doz. Dr. Dominik Kowald

Curriculum Vitae

Scholar: https://scholar.google.at/citations?user=qQ-L&rUAAAAJ 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 (TU Graz) & Prof. Tobias Ley (Tallinn University), advisor: Assoc.Prof. Elisabeth Lex (TU Graz)

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 (TU Graz), advisor: Assoc.Prof. Mohammad Al-Smadi (TU Graz)
- 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 (TU Graz), co-author: Joachim Maderer

2001–2006 Matura, Manufacturing Computer Science, College of Industrial Engineering (BULME), Business Informatics, Graz, Austria, with distinction.

Matura 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, query languages, business analytics and 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, NoSQL databases, scientific writing with focus on recommender systems and trustworthy AI; advanced teaching certificate by TU Graz teaching academy

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

Team lead experience: Know-Center team lead certificate by Wolfgang Eder HR development

2018–2021 Deputy Research Area Manager, Know-Center GmbH, FAIR-AI (formerly called Social Computing), Graz, Austria.

Research focus: psychology-informed recommender systems, social network analysis, multi-domain recommender systems, data platforms, microservice-based software architectures, 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 recommender systems, social tagging and microblogging systems
- 2010–2012 **Research Project Assistant**, *TU Graz, Institute of Interactive Systems and Data Science (ISDS)*, Graz, Austria.

Research focus: Wiki systems, e-assessment, technology-enhanced learning, 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: lecturer responsible for course content 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:* course assistant responsible for the exercises
- 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:* course assistant responsible for the exercises
- 2011–2012 Information Search & Retrieval, *TU Graz*, 5 ECTS, Master Software Engineering & Management, Computer Science, Information & Computer Engineering. *Role:* course assistant responsible for the exercises
 - 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 (tutor) responsible for one group

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 Machine Learning*, Co-supervision with Prof. Stefan Thalmann, University of Graz.
 - 2024 Master's thesis and Internship, 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 Al4Green**, *Strategic Al 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 Know-Center, *Role:* researcher.
- 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 Recommender Systems Section, 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, AJSE, TLT
- o 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)
- o Invited Research Talks: MediaFutures Bergen, Wissenschaftsforum Cologne, EBDVA, DataWeek

Peer-Reviewed Publications (* indicates equal contributions)

- Oleg Lesota, Jonas Geiger, Max Walder, Dominik Kowald, and Markus Schedl. Oh, behave! Country representation dynamics created by feedback loops in music recommender systems. In *RecSys'24*, 2024. URL https://doi.org/10.48550/arXiv. 2408.11565.
- [2] 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.
- [3] 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/10.1007/978-3-031-70368-3_21.
- [4] 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.
- [5] 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.
- [6] Florian Königsdorfer, Armin Haberl, Dominik Kowald, Tony Ross-Hellauer, and Stefan Thalmann. Black box or open science? A study on reproducibility in Al development papers. In HICSS'24, 2024. URL https://hdl.handle.net/10125/106458.
- [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] 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.
- [20] 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/10.1561/150000090.
- [21] Markus Schedl, Christine Bauer, Wolfgang Reisinger, Dominik Kowald, and Elisabeth Lex. Listener modeling and contextaware music recommendation based on country archetypes. Frontiers in AI, 3, 2021. URL https://doi.org/10.3389/ frai.2020.508725.
- [22] 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.
- [23] 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.
- [24] 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.
- [25] 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.
- [26] 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.
- [27] 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.
- [28] Dominik Kowald*, Elisabeth Lex*, and Markus Schedl. Utilizing human memory processes to model genre preferences for personalized music recommendations. In HUMANIZE@IUI'20. ACM, 2020. URL https://doi.org/10.48550/arXiv. 2003.10699.
- [29] 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.
- [30] 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.
- [31] 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.
- [32] 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.
- [33] 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.
- [34] 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, 2018. URL https://doi.org/10.1145/3184558.3186899.
- [35] Mathieu d'Aquin, Dominik Kowald, Angela Fessl, Elisabeth Lex, and Stefan Thalmann. AFEL-analytics for everyday learning. In WWW'18, 2018. URL https://doi.org/10.1145/3184558.3186206.
- [36] 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.
- [37] 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.

- [38] 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.
- [39] 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.
- [40] 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 HCl, 34(6), 2018. URL https://doi.org/10.1080/10447318.2017.1379240.
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- [42] 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.
- [43] 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. 000000007.
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- [45] 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.
- [46] 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.
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- [48] 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.
- [49] 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.
- [50] Dominik Kowald. Modeling cognitive processes in social tagging to improve tag recommendations. In WWW'15, 2015. URL https://doi.org/10.1145/2740908.2741746.
- [51] 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, 2015. URL https: //doi.org/10.1145/2740908.2743057.
- [52] Dominik Kowald, Simone Kopeinik, Paul Seitlinger, Tobias Ley, Dietrich Albert, and Christoph Trattner. Refining frequencybased 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.
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