Dr. Dominik Kowald

Research Area Manager at Know-Center Graz

"If scientific reasoning were limited to the logical processes of arithmetic, we should not get very far in our understanding of the physical world. One might as well attempt to grasp the game of poker entirely by the use of the mathematics of probability." (Vannevar Bush, Author of "As We May Think")

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Education

Dr.techn. (Ph.D.), *Graz University of Technology*, Graz, Austria, *with distinction*. **2012–2017**
Institute of Interactive Systems and Data Science (ISDS)

Dipl.Ing. (MSc.), *Graz University of Technology*, Graz, Austria, *with distinction*. **2009–2012**
Institute for Information Systems and Computer Media (IICM)

BSc., *Graz University of Technology*, Graz, Austria. **2006–2009**
Institute for Information Systems and Computer Media (IICM)

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

Habilitation (under review)

title: *Transparency, Privacy, and Fairness in Recommender Systems*

scientific subject: Applied Computer Science (TU Graz)

submitted: November 2023

Ph.D. thesis

title: *Modeling Activation Processes in Human Memory to Improve Tag Recommendations*

supervisors: Prof. Stefanie Lindstaedt (TU Graz), Assoc. Prof. Elisabeth Lex (TU Graz), Prof. Tobias Ley (Tallinn University)

Master thesis

title: *Combining Computer-Supported, Collaborative Learning with E-Assessment: Enhancing a Wiki System with Flexible Assessment Methods*

supervisor: Assoc. Prof. Christian Gütl (TU Graz)

Bachelor thesis

title: *Peer Assessment in Computer Science and Modern Technologies to Build a Flexible E-Learning System around it*

supervisor: Assoc. Prof. Christian Gütl (TU Graz)

Academic Positions

Research Area Manager, *Know-Center, Graz.* **2021–now**
Research Area Manager for FAIR-AI
- Lecturer and researcher at TU Graz
  Institute of Interactive Systems and Data Science (ISDS)
- Research visit at XAI group at Maastricht University,
  The Netherlands led by Prof. Nava Tintarev (Nov. 2021)

Deputy Research Area Manager, *Know-Center*, Graz. **2018–2020**
Deputy Research Area Manager for Social Computing.

Researcher, *Know-Center*, Graz. **2012–2018**
Researcher (FFG COMET and EU projects), Social Computing.

Ph.D. candidate, *Graz University of Technology*, Graz. **2012–2017**
Institute of Interactive Systems and Data Science (ISDS).

Project assistant, *Graz University of Technology*, Graz. **2010–2012**
Institute for Information Systems and Computer Media (IICM).

Software Developer, *IVM Technical Consultants*, Graz. **2009–2010**
Software developer (Microsoft .NET) in the automotive sector.

Student assistant, *Graz University of Technology*, Graz. **2008–2009**
Institute of Theoretical Computer Science (IGI).

International & National Research Projects

KnowCertifAI (FFG COMET): scientific lead (2023 - 2026)

Data-driven Immersive Analytics - DDIA (FFG COMET module): key researcher (2022 - 2026)

FairRecSys (SFG): key researcher (2024 - 2025)

SAIROM (FFG): key researcher (2024 - 2025)

TIER-2 (Horizon Europe): key researcher (2023 - 2025)

AI-Xciting (FFG): key researcher (2022 - 2025)

Radreisen4All (FFG Femtech): key researcher (2022 - 2024)

Data-driven Artifical Intelligence - DDAI (FFG COMET module): key researcher (2020 - 2023)

AI in Elderly Care (FFG): key researcher (2021 - 2023)

COGSTEPS (Erasmus+): key researcher (2020 - 2023)

TRIPLE (H2020): key researcher (2019 - 2023)

TRUSTS (H2020): task lead and key researcher (2020 - 2022)

MarineXChange (FFG): researcher (2020 - 2021)

JOLIOO (FFG): researcher (2020 - 2021)

AI4EU (H2020): co-task lead and key researcher (2019 - 2021)

Heli-D (SFG): work package lead and researcher (2018 - 2021)

Studo (FFG): researcher (2018 - 2020)

Data Market Austria (FFG flagship project): researcher (2017 - 2019)

AFEL (H2020): co-task lead (2017 - 2018) and researcher (2016 - 2018)

MoreGrasp (H2020): researcher (2016 - 2018)

Learning Layers (FP7): co-work package lead (2012 - 2016)

Organic.Lingua (FP7): developer (2012 - 2013)

ALICE (FP7): developer (2010 - 2012)

Awards

Mind-the-Gap Gender and Diversity Award: Fairness in Recommender Systems. TU Graz. 2022.

Dissertation Award: Chamber of Labor Styria (Arbeiterkammer Steiermark), Austria. 2018.

Nominated for ACM SIGCHI Outstanding Dissertation Award: Faculty for Computer Science of TU Graz for Ph.D. thesis. 2018.

Nominated for Award of Excellence: Faculty for Computer Science of TU Graz for Ph.D. thesis. 2018.

Nominated for Heinz Zemanek Award: Faculty for Computer Science of TU Graz for Ph.D. thesis. 2018.

Best Demo Honourable Mention: Conference on Knowledge Technologies and Data-Driven Business (i-Know'2015) in Graz, Austria. 2015.

Best Poster Award: ACM Conference on Hypertext and Social Media (HT'2014) in Santiago, Chile. 2014.

Grants

FFG – K1 Research Center Grant: 20,4M for the Know-Center (3,4M for FAIR-AI) as research area manager for FAIR-AI. 2023 - 2026.

FFG – COMET Module Grant "Data-Driven Immersive Analytics": 3,7M for the Know-Center GmbH (350k for FAIR-AI) as key researcher. 2022 - 2026.

Project Grant: FairRecSys, SFG, 74k for ISDS@TU-Graz (37k for FAIR-AI) as key researcher. 2024 - 2026.

Project Grant: SAIROM, FFG, 50k for the Know-Center GmbH (25k for FAIR-AI) as key researcher. 2024 - 2025.

Project Grant: Radreisen4All, FFG Femtech, 150k for FAIR-AI, Know-Center GmbH as key researcher. 2022 - 2024.

Intern Grant: Internship for female students, FFG Femtech, 8,5k for FAIR-AI for 6 month internship as co-supervisor. 2022 - 2023.

Project Grant: COGSTEPS, Erasmus+, 130k for Social Computing, Know-Center GmbH and ISDS@TU-Graz as key researcher. 2020 - 2023.

Project Grant: TRUSTS, H2020, 730k for the Know-Center GmbH (138k for Social Computing) as task lead. 2020 - 2022.

FFG – COMET Module Grant "DDAI": 3,7M for the Know-Center GmbH (700k for Social Computing) as key researcher. 2020 - 2022.

Project Grant: TRIPLE, H2020, 377k for the Know-Center GmbH (120k for Social Computing) as co-task lead. 2019 - 2022.

FFG – K1 Research Center Grant: 20,4M for the Know-Center (3,4M for Social Computing) as deputy research area head. 2019 - 2022.

Project Grant: AI4EU, H2020, 147k for the Know-Center GmbH (73,5k for Social Computing) as co-task lead. 2019 - 2021.

Travel Grant: Research stay (1 week) at XAI group at Maastricht University, The Netherlands, by Land Steiermark. 2021.

Project Grant: Health-Literacy und Diversity (HeLi-D), SFG, 75k for the Know-Center (37.5k for Social Computing) as WP lead. 2018 - 2020.

Travel Grant: Research stay (1 week) at WIS Group at TU Delft, The Netherlands, by Land Steiermark (postponed due to COVID-19). 2020.

Project Grant: JOLIOO, FFG Basisantrag, 120k for Social Computing, Know-Center GmbH as researcher. 2020.

Travel Grant: European Symp. on Computational Social Science (EUROCSS) in Zürich, Switzerland. 2019.

Travel Grant: European Symp. on Computational Social Science (EUROCSS) in Cologne, Canada. 2018.

Project Grant: OpenAIRE Matchmaker, OpenAIRE Open Tender Calls, 15k for Social Computing, Know-Center GmbH as researcher. 2018.

Travel Grant: ACM Conference on Hypertext and Social Media (HT'2016) in Halifax, Canada. 2016.

Project Grant: Data Market Austria (DMA), IKT der Zukunft, 286k for the Know-Center (170k for Social Computing) as researcher. 2015 - 2019.

Session Chairing, Workshops, and Seminars

Dagstuhl'2024: Participant of the "Evaluation Perspectives of Recommender Systems" Dagstuhl seminar, 2024.

DIH-Sued'2022: Co-Organizer of DIH-Sued workshop on recommender systems and trustworthy AI, 2022.

SummerAcademy'2020: Co-Organizer of Know-Center summer academy on recommender systems, Graz, Austria (online due to COVID-19), 2020.

CIKM'2018: Session chair of the Recommendation track of the ACM CIKM conference, Turin, Italy, 2018.

RSBDA'2017: Co-Organizer of the Second Workshop on Recommender Systems and Big Data Analytics of i-KNOW 2017, Graz, Austria, 2017.

RSBDA'2016: Co-Organizer of the First Workshop on Recommender Systems and Big Data Analytics of i-KNOW 2016, Graz, Austria, 2016.

i-Know'2015: Session chair of the Social Computing track of the i-KNOW conference, Graz, Austria, 2015.

i-Know'2013: Session chair of the Science 2.0 track of the i-KNOW conference, Austria, 2013.

Program Committee Membership, and Reviewing

SIGIR: ACM Conference on Research and Development in Information Retrieval, since 2024.

ECAI: European Conference on Artificial Intelligence, since 2024.

ECIR: IR for Good track of the European Conference on Information Retrieval, since 2024.

PsyIAS: First Workshop on Psychology-informed Information Access Systems co-located with WSDM, since 2024

IronGraphs: First International Workshop on Graph-Based Approaches in Information Retrieval co-located with ECIR, since 2024.

HUMANIZE: A Human-centered Perspective of Intelligent Personalized Environments and Systems (Springer book), since 2023.

ECIR (senior PC): Reproducibility track of the European Conference on Information Retrieval, 2023.

INTRS: Joint Workshop on Interfaces and Human Decision Making for Recommender Systems co-located with RecSys, 2023.

FRONTIERS (special issue editor): Reviews in RecSys, since 2022.

IJHCI: International Journal of Human–Computer Interaction, 2022.

HAAPIE: International Workshop on Human Aspects in Adaptive and Personalized Interactive Environments co-located with UMAP, 2022.

ICWE: International Conference on Web Engineering, 2022.

FRONTIERS (review editor): Frontiers in Big Data - Section Recommender Systems, since 2021.

MORS: Workshop on Multi-Objective Recommender Systems co-located with RecSys, since 2021.

PERSPECTIVES: Perspectives on the Evaluation of Recommender Systems co-located with RecSys, since 2021.

TIST: ACM Transactions on Intelligent Systems and Technology, 2021.

CIKM: ACM International Conference on Information and Knowledge Management, since 2020.

WWW: International World Wide Web Conference, since 2020.

IUI: ACM Conf. on Intelligent User Interfaces, since 2020.

FRONTIERS: Frontiers in Psychology, 2020.

RDSM: International Workshop on Rumours and Deception in Social Media co-located with COLING conference, 2020.

HT: ACM Conference on Hypertext and Social Media, since 2019.

ASC: Applied Soft Computing, since 2019.

EPJ: EPJ Data Science, 2019.

TWEB: ACM Transactions on the Web, 2019.

EUROCSS: EU Symp. on Computational Social Science, 2019.

TCSC: IEEE Transactions on Computational Social Systems, 2019.

RecSys: ACM Conference on Recommender Systems, since 2018.

PlosOne: PlosOne Journal, 2018.

Journal of Systems and Software: Elsevier, 2018.

TKDE: IEEE Transactions of Knowledge and Data Management, 2018.

INRT: Information Retrieval Journal, 2018.

AJSE: Arabian Journal for Science and Engineering, 2018.

SoAPS: Workshop on Social Aspects in Personalization and Search co-located with ECIR conference, 2018.

AFEL: Analytics for Everyday Learning Workshop co-located with ECTEL conference, 2018.

WebSci: Int. ACM Web Science Conference, since 2017.

SNAM: Social Network Analysis and Mining Journal, 2017.

C&E: Computers and Education Journal, 2017.

TLT: Transactions on Learning Technologies, 2017.

SNAMS'2017: Int. Symp. on Social Networks Analysis, Management and Security, 2017.

OpenSym: Int. Symp. on Open Collaboration, 2017.

MSM: Social Media Workshop co-located with WWW, since 2015.

UMAP: ACM Conf. on User Modelling, Adaption and Personalization, since 2014.

EC-TEL: EU Conference on Technology Enhanced Learning, since 2014 (since 2020 as leading reviewer).

Presentations at International Conferences & Events

MediaFutures'2024: Invited talk on trustworthy recommender systems at MediaFutures. Bergen, Norway.

WF'2024: Invited speaker and panelist on fair AI in the labor market at the Wissenschaftsforum. Köln, Germany.

ECIR'2023: Demo/poster session and Bias Workshop of the 45th European Conference on Information Retrieval. Dublin, Ireland.

ECIR'2022: Poster session, Industry track and Bias Workshop of the 44th European Conference on Information Retrieval. Stavanger, Norway.

EBDVA'2022: Panel discussion on trustworhty AI and EU AI Act as part of the European Big Data Value Forum. Prague, Czech Republic.

DataWeek'2021: Panel on Breaking silos in data innovation in Europe as part of BDVA Data Week. Online event.

ECIR'2020: Reproducibility track of the 42nd European Conference on Information Retrieval. Lisbon, Portugal (online due to COVID-19).

RECSYS'2019: Poster session of the REVEAL workshop co-located with RECSYS'2019. Copenhagen, Denmark.

EUROCSS'2019: Pecha Kucha and poster sessions of the EU Symp. on Computational Social Science. Zurich, Switzerland.

EUROCSS'2018: Pecha Kucha and poster sessions of the EU Symp. on Computational Social Science. Cologne, Germany.

CSS-SummerSchool'2019: Madness session and mini-project presentation. Berlin, Germany.

CIKM'2018: Paper session of the Social Interaction-Based Recommender Systems Workshop co-located with CIKM'2018. Turin, Italy.

WWW'2018: Poster session of the 27th International World Wide Web Conference. Lyon, France.

EUROCSS'2017: Algorithms paper and poster sessions of the EU Symp. on Computational Social Science. London, England.

UMAP'2017: Poster session of the 25th Conference on User Modeling, Adaption and Personalization. Bratislava, Slovakia.

WWW'2017: Data Mining paper session of the 26th International World Wide Web Conference. Perth, Australia.

HT'2016: Social Media Analytics paper session of the 27th ACM Conference on Hypertext and Social Media. Halifax, Canada.

CSSWS'2015: Pecha Kucha and poster session of the 2nd Computational Social Sciences Winter Symp. Cologne, Germany.

RECSYS'2015: Short paper at 9th ACM RecSys Conf. Vienna, Austria.

WWW'2015: PhD Symp. of the 24th Int. WWW Conf. Florence, Italy.

i-Know'2015: Demo session of 15th Int. Conference on Knowledge Technologies. Graz, Austria (best demo honourable mention award).

WWW'2014: WebScience track and Social Recommender Systems Workshop of the 23rd International World Wide Web Conference. Seoul, Korea.

i-Semantics'2013: Minute madness and poster session of the 9th Int. Conference on Semantic Systems. Graz, Austria.

Teaching Experience

Course: TU Graz, Summer term. Data Management, selected lectures and practical assignment, since 2024

Course: TU Graz, Winter term. Databases, set up new and own course on databases for Computational Social Systems students, since 2023

Course: TU Graz, Winter+Summer term. Introduction to scientific working (seminar), since 2023

Advanced Teaching certificate: TU Graz Teaching Academy. 2023.

Invited lecture: TU Graz, Winter+Summer term. Databases/Data Management, invited lectures on database APIs, 2022-2023

Basic Teaching certificate: TU Graz Teaching Academy. 2022.

Invited lecture: FH Joanneum, Summer term. Journalism course, invited lecture on recommender systems in media and beyond, 2022

Course support: TU Graz, Summer term. Science 2.0. 2016.

Course support: PUC Chile. Winter term. Recommender Systems (remote). 2014.

Practical assignment: TU Graz, Summer term. Web Science and Web Technologies. 2014.

Practical assignment: TU Graz, Winter term. Information Search and Retrieval. 2011-2012.

Student assistant: TU Graz, Winter term. Data Structures & Algorithms. 2009.

Student Supervision, Mentoring, and Advising

Supervision: Florian Atzenhofer-Baumgartner. Recommender Systems in Digital Humanities. PhD thesis. TU Graz. 2024-2026.

Supervision: Gregor Autischer. Practical Aspects of AI Certification. Bachelor thesis. TU Graz. 2024-2025.

Supervision: Ioana Serban. Bias in Public Datasets. Master project and thesis. TU Graz. 2023-2024.

Supervision: Harald Semmelrock. Reproducibility in Machine Learning Research. Bachelor thesis. TU Graz. 2023.

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

Supervision: Gökay Yildirim. Popularity Bias in Recommender Systems. Erasmus+ internship. TU Graz. 2023.

Co-supervision: Tomislav Duricic. Sparsity and Interpretability of Graph-based Recommender Systems. PhD thesis. TU Graz. 2020-2024.

Co-supervision: Peter Müllner. Privacy-Aware Recommender Systems. PhD thesis. TU Graz. 2020-2024.

Co-supervision: Gregor Mayr. Calibration in Recommender Systems. Bachelor thesis and Master project. TU Graz. 2022.

Co-supervision: Mario Wagner. Diversity-Aware Recommendation of Tweets. Master thesis. TU Graz. 2020.

Co-supervision: Peter Müllner. Studying Non-Mainstream Listening Behavior For Music Recommendations. Master thesis. TU Graz. 2019.

Co-supervision: Andreas Punz. Detection and Analysis of Communities on Twitter. Bachelor thesis. TU Graz. 2016.

Dr. Dominik Kowald - Peer-Reviewed Publications

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

[2] 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.

[3] 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 *Proceedings of The Hawaii International Conference on System Sciences (HICSS'2024)*, 2024. URL https://hdl.handle.net/10125/106458.

[4] 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.

[5] 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/10.5281/zenodo.10077925.

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

[7] Sebastian Scher, Simone Kopeinik, Andreas Trügler, and Dominik Kowald. Modelling the long-term fairness dynamics of data-driven targeted help on job seekers. *Scientific Reports*, 13(1):1727, 2023. URL https://doi.org/10.1038/s41598-023-28874-9.

[8] 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.

[9] 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.

[10] 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 *Proceedings of the 17th ACM Conference on Recommender Systems*, 2023. URL https://doi.org/10.1145/3604915.3608838.

[11] Emanuel Lacic, Tomislav Duricic, Leon Fadljevic, Dieter Theiler, and Dominik Kowald. Uptrendz: API-centric real-time recommendations in multi-domain settings. In *European Conference on Information Retrieval*, pages 255–261. Springer, 2023. URL https://doi.org/10.1007/978-3-031-28241-6_23.

[12] Dominik Kowald*, Gregor Mayr*, Markus Schedl, and Elisabeth Lex. A study on accuracy, miscalibration, and popularity bias in recommendations. In *Advances in Bias and Fairness in Information Retrieval, BIAS 2023*, pages 1–16. Springer, 2023, *equal contribution. URL https://doi.org/10.1007/978-3-031-37249-0_1.

[13] Peter Muellner, Stefan Schmerda, Dieter Theiler, Stefanie Lindstaedt, and Dominik Kowald. Towards employing recommender systems for supporting data and algorithm sharing. In *DataEconomy Workshop co-located with the 18th International Conference on emerging Networking EXperiments and Technologies*, CoNext '22, 2022. URL https://doi.org/10.1145/3565011.3569055.

[14] 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 *Proceedings of the 44th European Conference on Information Retrieval*, ECIR '22, 2022. URL https://doi.org/10.1007/978-3-030-99739-7_20.

[15] Dominik Kowald and Emanuel Lacic. Popularity bias in collaborative filtering-based multimedia recommender systems. In *Advances in Bias and Fairness in Information Retrieval, BIAS 2022*, pages 1–11. Springer, 2022. URL https://doi.org/10.1007/978-3-031-09316-6_1.

[16] Emanuel Lacic and Dominik Kowald. Recommendations in a multi-domain setting: Adapting for customization, scalability and real-time performance. In *Industry-Day Track of the 44th European Conference on Information Retrieval*, ECIR '22, 2022. URL https://doi.org/10.48550/arXiv.2203.01256.

[17] 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):1–26, 2021. URL https://doi.org/10.1140/epjds/s13688-021-00268-9.

[18] 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):134–242, 2021. URL https://doi.org/10.1561/1500000090.

[19] Markus Schedl, Christine Bauer, Wolfgang Reisinger, Dominik Kowald, and Elisabeth Lex. Listener modeling and context-aware music recommendation based on country archetypes. *Frontiers in Artificial Intelligence*, 3, 2021. URL https://doi.org/10.3389/frai.2020.508725.

[20] Peter Muellner, Dominik Kowald, and Elisabeth Lex. Robustness of meta matrix factorization against strict privacy constraints. In *Advances in Information Retrieval: 43rd European Conference on IR Research, ECIR 2021*, pages 107–119. Springer, 2021. URL https://doi.org/10.1007/978-3-030-72240-1.

[21] 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 *Proceedings of the 15th ACM Conference on Recommender Systems*, pages 601–606, 2021. URL https://doi.org/10.1145/3460231.3478843.

[22] 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 *Proceedings of International Conference on Advances in Social Network Analysis and Mining (MSDNS Workshop)*, ASONAM '21, 2021. URL https://doi.org/10.1145/3487351.3492706.

[23] Peter Muellner, Elisabeth Lex, and Dominik Kowald. Position paper on simulating privacy dynamics in recommender systems. In *Simulation for Recommender Systems Workshop co-located with ACM Conference on Recommender Systems*, SimuRec@RecSys '21, 2021. URL https://doi.org/10.48550/arXiv.2109.06473.

[24] Elisabeth Lex*, Dominik Kowald*, and Markus Schedl. Modeling popularity and temporal drift of music genre preferences. *Transactions of the International Society for Music Information Retrieval*, 3(1), 2020, *equal contribution. URL https://doi.org/10.5334/tismir.39.

[25] Emanuel Lacic, Markus Reiter-Haas, Dominik Kowald, Manoj Reddy Dareddy, Junghoo Cho, and Elisabeth Lex. Using autoencoders for session-based job recommendations. *User Modeling and User-Adapted Interaction*, 30:617–658, 2020. URL https://doi.org/10.1007/s11257-020-09269-1.

[26] Dominik Kowald, Markus Schedl, and Elisabeth Lex. The unfairness of popularity bias in music recommendation: A reproducibility study. In *Advances in Information Retrieval: 42nd European Conference on IR Research, ECIR 2020*, pages 35–42. Springer, 2020. URL https://doi.org/10.1007/978-3-030-45442-5_5.

[27] Dominik Kowald*, Elisabeth Lex*, and Markus Schedl. Utilizing human memory processes to model genre preferences for personalized music recommendations. In *4th Workshop on Transparency and Explainability in Adaptive Systems through User Modeling Grounded in Psychological Theory*. Association of Computing Machinery, 2020, *equal contribution. URL https://doi.org/10.48550/arXiv.2003.10699.

[28] Tomislav Duricic, Hussain Hussain, Emanuel Lacic, Dominik Kowald, Denis Helic, and Elisabeth Lex. Empirical comparison of graph embeddings for trust-based collaborative filtering. In *Foundations of Intelligent Systems: 25th International Symposium, ISMIS 2020*, pages 181–191. Springer, 2020. URL https://doi.org/10.1007/978-3-030-59491-6_17.

[29] 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 *Proceedings of the 10th International Learning Analytics and Knowledge Conference*, LAK '20, 2020, *equal contribution. URL https://doi.org/10.1145/3375462.3375502.

[30] 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.

[31] 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 *Proceedings of the 14th European Conference on Technology Enhanced Learning*, ECTEL '19, 2019. URL https://doi.org/10.1007/978-3-030-29736-7_31.

[32] 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 Workshop co-located with 13th ACM Conference on Recommender Systems*, REVEAL@RECSYS '19, 2019, *equal contribution. URL https://doi.org/10.48550/arXiv.1908.04042.

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