

Priv.-Doz. Dr. Dominik Kowald

Curriculum Vitae

Scholar: <https://scholar.google.at/citations?user=qQ-L8rUAAAAJ>

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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)***, Graz, Austria.
Venia docendi: scientific subject Applied Computer Science (since June 2024)
Teaching focus: relational databases, data management and data science, NoSQL databases, scientific writing with focus on recommender systems, trustworthy AI, data science, and machine learning
- since 2021 **Research Area Manager, *Know Center Research 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, responsible machine learning and data science
Research visit: XAI group of Prof. Nava Tintarev, Maastricht University, The Netherlands (November 2021); funded by the Provincial Government of Styria

- 2017–2021 **Deputy Research Area Manager**, [Know Center Research GmbH, FAIR-AI \(formerly called Social Computing\)](#), Graz, Austria.
Research focus: psychology-informed recommender systems, social data science, multi-domain recommender systems, data platforms, microservice-based software architectures, machine learning
- 2012–2017 **Ph.D. Candidate and Researcher**, [Know Center Research 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 data science
- 2010–2012 **Research Project Assistant**, [TU Graz, Institute of Interactive Systems and Data Science \(ISDS\)](#), Graz, Austria.
Research focus: collaborative Web systems, e-assessment, learning analytics, Web technologies

University Courses Taught

- since 2024 **Data Management**, [TU Graz](#), 4 ECTS, Bachelor Software Engineering & Management, Computer Science, Information & Computer Engineering.
Role: [lecturer](#) (~500 students)
- since 2024 **Foundations of Digitalization**, [University of Graz](#), 4 ECTS, Bachelor Business Administration, Economics, Sociology.
Role: [lecturer responsible for course content on relational databases](#) (~500 students)
- since 2024 **Privatissimum**, [TU Graz](#), Doctoral school, Trustworthy AI and recommender systems.
Role: [mentoring Ph.D. students](#) (~1 to 2 students)
- 2024 **Case Studies Business Analytics**, [University of Graz](#), Guest lecture, AI reproducibility.
Role: [guest lecturer on reproducibility of AI-driven research](#) (~50 students)
- since 2023 **Databases**, [TU Graz](#), 3 ECTS, Bachelor Information & Computer Engineering, Master Computational Social Systems, Electrical & Audio Engineering.
Role: [lecturer](#) (~100 students)
- 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](#) (~1 to 10 students)
- 2022 **Journalism and Public Relations**, [FH Joanneum](#), Guest lecture, News recommender systems.
Role: [guest lecturer on news recommender systems for journalists](#) (~50 students)
- 2016 **Science 2.0**, [TU Graz](#), 3 ECTS, Master Software Engineering & Management, Computer science.
Role: [course assistant responsible for the exercises](#) (~50 students)
- 2014 **Recommender Systems**, [PUC Chile](#), Practical assignment, Content-based recommender systems.
Role: [guest course assistant responsible for one exercise](#) (~50 students)
- 2014 **Web Science & Web Technology**, [TU Graz](#), 3 ECTS, Bachelor Software Engineering & Management, Master Information & Computer Engineering.
Role: [course assistant responsible for the exercises](#) (~200 students)
- 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](#) (~100 students)
- 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 exercise group](#) (~30 students)

Student Supervision, Mentoring, & Examination Committee Member

- since 2025 **Master's thesis and internship**, [Know Center Research GmbH](#) and [University of Vienna](#), Anja Rejc: Cognitive Biases and Trustworthy AI.
- since 2025 **Master's thesis**, [TU Graz](#), Juergen Stumpf: *Regulation and Governance of AutoML Tools in Industrial Settings*, Co-supervision with Prof. Stefan Thalmann, [University of Graz](#).
- 2025 **Master's thesis**, [TU Graz](#), Valentin Forster: *Detecting Price Anomalies Indicative of Antitrust Violations with Machine Learning*, Co-supervision with Dr. Juergen Fleiss, [University of Graz](#).
- 2025 **Examination committee chairperson**, [TU Graz](#), Thomas Zenkl: *The Trouble with Algorithms: Conceptualizing Algorithmic Breaching Experiments*, Master's exam with Prof. Juliane Jarke, [University of Graz](#), and Assoc.Prof. Bernhard Wieser, [TU Graz](#).
- since 2024 **Ph.D. thesis**, [TU Graz](#), Florian Atzenhofer-Baumgartner: *Recommender Systems in Digital Humanities*, Co-supervision with Prof. Georg Vogeler, [University of Graz](#).
- since 2024 **Master's thesis**, [TU Graz](#), Andrea Forster: *Popularity Bias in Point-of-interest Recommender Systems*, Co-supervision with Prof. Stefan Thalmann, [University of Graz](#).
- 2024 **Examination committee chairperson**, [TU Graz](#), Sara Skardelly: *Environmental (In)justice: Vienna as Best Practice?*, Master's exam with Prof. Juliane Jarke, [University of Graz](#), and Assoc.Prof. Bernhard Wieser, [TU Graz](#).
- 2024 **Internship**, [Know Center Research GmbH](#), Adrian Marangoni: Fairness in AI for Mobility.
- 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*.
- 2023 **Internship**, [Know Center Research GmbH](#), Gökay Yildirim: Popularity Bias in Recommender Systems.
- 2022 **Bachelor thesis and Master's project**, [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](#).

Scientific Event Organization & Conference Session Chairing

- 2025 **CLARIAH Hackathon**, [Efficient Similarity: A Hackathon for Advanced Search in Cultural Heritage 3-days hackathon at Department of Digital Humanities at University of Graz](#), Graz, Austria, Role: co-organizer.
- 2025 **UMAP Workshop**, [Hybrid AI for Human-Centric Personalization Workshop co-located with UMAP'25](#), New York City, United States, Role: co-organizer.

- 2025 **ReproAI Workshop**, *Reproducibility and AI Workshop co-located with “Yes, we are open” Weizenbaum Institute Conference*, Berlin, Germany, Role: co-organizer.
- 2025 **STS Workshop**, *Fairness and Artificial Intelligence workshop at the 23rd Conference on Critical Issues in Science, Technology and Society Studies*, Graz, Austria, Role: co-organizer.
- 2024 **CRBAM Workshop**, *Fair recommendations for cyclists workshop at 8th Cycling Research Board Annual Meeting (CRBAM)*, Zurich, Switzerland, Role: co-organizer.
- 2022 **DIH Süd Workshop**, *Digital Innovation Hub (DIH) Süd workshop on recommender systems and trustworthy AI*, Graz, Austria, Role: co-organizer.
- 2020 **BigData Summer Academy**, *Know Center Research GmbH summer academy on recommender systems*, Graz, Austria, Role: co-organizer.
- 2018 **ACM CIKM**, *Recommendation track of ACM CIKM'18*, Turin, Italy, Role: session chair.
- 2017 **RSBDA Workshop**, *Second workshop on recommender systems and big data analytics (RSBDA) at i-KNOW'17*, Graz, Austria, Role: co-organizer.
- 2016 **RSBDA Workshop**, *First workshop on recommender systems and big data analytics (RSBDA) at i-KNOW'16*, Graz, Austria, Role: co-organizer.
- 2015 **i-KNOW**, *Social Computing track at i-KNOW'15*, Graz, Austria, Role: session chair.
- 2013 **i-KNOW**, *Science 2.0 track at i-KNOW'13*, Graz, Austria, Role: session chair.

Awards & Honours

- 2024 **Outstanding Reviewer Award**, *ACM UMAP'24*, Cagliari, Italy.
- 2022 **Mind-the-gap Award**, *TU Graz Gender & Diversity department*, Graz, Austria, worth 450€.
- 2018 **Ph.D. Thesis Award**, *Chamber of Labor Styria*, Graz, Austria, worth 650€.
- 2015 **Best Demo Honourable Mention**, *Demo track at i-KNOW'15*, Graz, Austria.
- 2014 **Best Poster Award**, *Poster track at Hypertext'14*, Santiago, Chile.

Project Grants & Research Funding

- 2025–2027 **HorizonEurope**, *Linked User-driven Multidisciplinary Exploration Network (LUMEN)*, 415k€ for Know Center (83k€ for FAIR-AI), Role: key researcher.
- 2025–2026 **FFG FemTech**, *Internship Grant*, 8.5k€ for FAIR-AI at Know Center, Role: (co)-supervisor.
- 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 and LLMs.
- 2022–2025 **FFG FemTech**, *Radreisen4All*, 150k€ for FAIR-AI at Know Center, Role: key researcher.
- 2022–2023 **FFG FemTech**, *Internship Grant*, 8.5k€ for FAIR-AI at Know Center, Role: (co)-supervisor.
- 2020–2023 **FFG COMET Module**, *Data-Driven Artificial Intelligence (DDAI)*, 3.7M€ for Know Center (700k for FAIR-AI), 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 \(Joloo\)](#), 120k€ for Social Computing at Know Center, *Role*: researcher for recommender systems.
- 2018–2020 **FFG BASIS**, [Studo App Sales Offensive](#), 120k€ for Social Computing at Know Center, *Role*: researcher for recommender systems.
- 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 \(DMA\)](#), 286k€ for Know Center (170k€ for Social Computing), *Role*: researcher for recommender systems.

Selected Media Reactions & Scientific Dissemination to the Public

- 2025 **HTS Highlights**, [Trustworthy AI for the Medicine of the Future](#), News Article on trustworthy AI in healthcare in the highlights report of the Humantechnology Styria hub, *Language*: English.
- 2024 **Trend**, [Der AI Act - Chance für Europa](#), News Article on legal aspects of trustworthy AI, *Language*: German.
- 2024 **MediaFutures**, [Transparency, privacy and fairness in recommender systems](#), News article on trustworthiness aspects of recommender systems, *Language*: English.
- 2023 **DerStandard**, [Wie Recruiting mit KI in Zukunft auch ohne Diskriminierung möglich ist](#), News article on fair AI in the labor market, *Language*: German.
- 2022 **APA Science**, [Digitale Stereotype](#), News article on fairness in AI, *Language*: German.
- 2022 **APA Science**, [Wie digitale Stereotype aus der Welt geschafft werden sollen](#), News article on popularity bias in recommender systems, *Language*: German.
- 2022 **TU Graz**, [Research and Teaching for Equal Opportunities](#), News article about the winners of the TU Graz Mind-the-gap gender and diversity award, *Language*: English.
- 2021 **BiomedCentral**, [Algorithm-Generated Music Recommendations: Low Accuracy for Fans of Beyond-Mainstream Music](#), News article on beyond-mainstream users in music recommender systems, *Language*: English.
- 2021 **BackstagePro**, [Studie zeigt: Metal- und Hip-Hop-Fans haben bei Empfehlungs-Algorithmen das Nachsehen](#), News article on beyond-mainstream music in recommender systems, *Language*: German.

Additional Technical, Leadership, & Gender Mainstreaming Qualifications

- 2023 **Leadership**, [Wolfgang Eder HR development](#), [Future team lead certificate](#), Know Center Research GmbH team lead programme on gender- and diversity-sensitive leading strategies.
- 2022–2025 **FFG Femtech**, [Key researcher for FFG Femtech project including a Femtech internship](#), gender- and diversity-sensitive recommender systems in Radreisen4All project.

FAIR-AI, Know Center Research GmbH & TU Graz – Sandgasse 34 – Graz, Austria

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- 2022 **Gender & Diversity Award**, [TU Graz Gender, Diversity and Equal Opportunity](#), Awarded for my research on fairness, diversity, and gender and popularity bias in recommender systems.
- 2023 **Teaching**, [TU Graz Teaching Academy](#), [Advanced teaching certificate](#), Didactics and communication skills for gender- and diversity-sensitive teaching and mentoring techniques.
- 2023 **Summer school**, [Recommender systems summer school](#), Participant, Copenhagen, Denmark.
- 2022 **Teaching**, [TU Graz Teaching Academy](#), [Basic teaching certificate](#), Didactics and teaching skills on university lecturing and supervising students.
- 2019 **Summer school**, [Computational Social Science summer school on methods for analyzing multimedia data](#), Participant, Berlin, Germany.

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 Artificial and Machine Intelligence \(ETAMI\) task force of the Big Data Value Association \(BDVA\)](#), Role: member.
- since 2023 **Know Center Research GmbH**, [Works Council of Know Center Research GmbH](#), Role: substitute member.
- since 2021 **Frontiers in Big Data**, [Editorial board of Recommender Systems Section](#), Role: review editor and research topic editor.
- since 2014 **ACM**, [Association for Computing Machinery \(ACM\)](#), Role: member (since 2017: professional member).

Research Talks at International Conferences & Events

- 2025 **HabilTalk**, *Invited talk on transparency, privacy, and fairness in recommender systems as part of the HabilTalk series of TU Graz*, Graz, Austria.
- 2024 **RecSys**, *Contributing talk on popularity bias simulation studies at RecSys*, Bari, Italy.
- 2024 **OEGGF**, *Contributing talk on fair AI in the labor market at the 10. Tagung der Oesterreichischen Gesellschaft für Geschlechterforschung (OEGGF)*, Graz, Austria.
- 2024 **AI-Know**, *Contributing talk on evaluation and certification of trustworthy AI at AI-Know*, Graz, Austria.
- 2024 **MediaFutures**, *Invited talk on trustworthy recommender systems and research/industry collaborations at MediaFutures SFI*, Bergen, Norway.
- 2024 **Wissenschaftsforum**, *Invited speaker and panelist on fair AI in the labor market at the Wissenschaftsforum*, Cologne, Germany.
- 2023 **ECIR**, *Contributing talk on recommendations-as-a-service at ECIR*, Dublin, Ireland.
- 2023 **BIAS**, *Contributing talk on recommendation calibration at BIAS@ECIR*, Dublin, Ireland.
- 2022 **EBDVA**, *Invited panelist and speaker on trustworthy AI and EU AI Act as part of the European Big Data Value Forum*, Prague, Czech Republic.
- 2022 **ECIR**, *Contributing talk on popularity bias mitigation in news recommender systems at ECIR*, Stavanger, Norway.
- 2022 **BIAS**, *Contributing talk on fairness in multimedia recommender systems at BIAS@ECIR*, Stavanger, Norway.
- 2021 **DataWeek**, *Invited panelist and speaker on breaking silos in data innovation in Europe as part of BDVA Data Week*, online due to COVID-19.
- 2021 **Science4Future**, *Contributing talk on fairness in AI at Science4Future@TUGraz*, Graz, Austria.

- 2020 **ECIR**, *Contributing talk on music recommendations at [ECIR](#)*, online due to COVID-19.
- 2019 **REVEAL**, *Contributing talk on recommender systems in data markets at [REVEAL@RecSys](#)*, Copenhagen, Denmark.
- 2019 **EUROCSS**, *Contributing talk on network polarization at [EUROCSS](#)*, Zurich, Switzerland.
- 2018 **CIKM**, *Contributing talk on social recommendations at [CIKM](#)*, Turin, Italy.
- 2018 **WebConf**, *Contributing talk on semantic context in tag recommendations at [WebConf](#)*, Lyon, France.
- 2018 **EUROCSS**, *Contributing talk on confirmation bias in hashtag recommendations [EUROCSS](#)*, Cologne, Germany.
- 2017 **UMAP**, *Contributing talk on recommendation frameworks at [UMAP](#)*, Bratislava, Slovakia.
- 2017 **WebConf**, *Contributing talk on hashtag recommendations at the [WebConf](#)*, Perth, Austria.
- 2017 **UMAP**, *Contributing talk on the TagRec tag recommendation evaluation framework [UMAP](#)*, Bratislava, Slovakia.
- 2017 **EUROCSS**, *Contributing talk on imbalances in social tagging systems and recommendations [EUROCSS](#)*, London, England.
- 2016 **Hypertext**, *Contributing talk on cognitive models in tagging at [Hypertext](#)*, Halifax, Canada.
- 2015 **RecSys**, *Contributing talk on recommendation evaluation at [RecSys](#)*, Vienna, Austria.
- 2015 **WWW**, *Contributing talk on recommendations in social tagging systems at [WWW](#)*, Florence, Italy.
- 2015 **CSSWS**, *Contributing talk on activation processes in human memory for tag recommendations at [CSSWS](#)*, Cologne, Germany.
- 2015 **i-KNOW**, *Contributing talk on tourism recommender systems at [i-KNOW](#)*, Graz, Austria.
- 2014 **WWW**, *Contributing talk on cognitive-inspired recommendation at [WWW](#)*, Seoul, Korea.
- 2013 **i-Semantics**, *Contributing talk on a Web framework for social semantic services at [i-Semantics](#)*, Graz, Austria.

Selected Research Community Services, Open Software, & Datasets

- 2022-2023 **Journal Special Issue Editor**, [Frontiers in Big Data - Reviews in Recommender Systems](#), (co-) editor of 10 review articles in the field of recommender systems.
- since 2021 **Journal Review Editor**, [Frontiers in Big Data - Recommender Systems Section](#).
- since 2020 **Senior Program Committee Member**, [ECAI](#), [RecSys](#) (reproducibility track), [ECIR](#) (reproducibility track), [ECTEL](#).
- since 2020 **Open Datasets**, [LFMUserGroups - User Groups to Study Popularity Bias in Music Recommendation](#), [FairRecSys - Datasets for Studying Popularity Bias in Recommender Systems](#), [LFMBeyMS - Beyond-Mainstream Users in the Last.fm Dataset](#).
- since 2017 **Reviewing for Journals and Books**, [TORS](#), [Journal of HCI](#), [TIST](#), [Frontiers in Psychology](#), [Applied Soft Computing](#), [EPJ Data Science](#), [HUMANIZE](#), [TWEB](#), [TCSS](#), [PlosOne](#), [JSS](#), [TKDE](#), [IR Journal](#), [SNAM](#), [AJSE](#), [TLT](#), [Computers & Education](#), [Systems & Software](#).
- since 2015 **Reviewing for Workshops and Symposia**, [BIAS](#), [IronGraphs](#), [MURS](#), [PysIAS](#), [HAAPIE](#), [MORS](#), [INTRS](#), [Perspectives](#), [RDSM](#), [SOAPS](#), [AFEL](#), [SNAMS](#), [MSM](#).
- since 2014 **Reviewing for Conferences**, [SIGIR](#), [ECAI](#), [ECIR](#), [ICWE](#), [CIKM](#), [WWW](#), [IUI](#), [HT](#), [EuroCSS](#), [RecSys](#), [WebSci](#), [OpenSym](#), [UMAP](#), [ECTEL](#).
- since 2013 **Open Software Projects**, [TagRec - Tag Recommendation Evaluation Framework](#), [FairRecSys - Scripts for Studying Bias in Recommender Systems](#), [LearningLayers - Technical Infrastructure](#).

International Research Projects Participated

- 2025–2027 **HorizonEurope**, *Linked User-driven Multidisciplinary Exploration Network (LUMEN)*, Led by [CNRS](#), Role: key researcher.
- 2024–2026 **HorizonEurope**, *Enhancing Trust, Integrity and Efficiency in Research through next-level Reproducibility (TIER-2)*, Led by [Know Center Research GmbH](#), Role: key researcher.
- 2024–2025 **FFG BASIS**, *Prognosen von Ressourcenbedarfen (Pro'K'ress)*, Led by [DaphOS](#), Role: key researcher for privacy-preserving machine learning and recommender systems.
- 2024–2025 **OpenWebSearch Third-Party Call**, *Trustworthy Access to Knowledge from the Indexed Web (TILDE)*, Led by [University of Passau](#), Role: key researcher.
- 2024–2025 **FFG AI4Green**, *Strategic AI Roadmap for Mobility (SAIROM)*, Led by [University of Graz](#), Role: key researcher.
- 2024–2025 **Styrian AI Future Fund**, *FairRecSys*, Led by [TU Graz](#), Role: co-PI.
- 2023–2026 **FFG COMET Research Center**, *Know Center - Research Center for Trustworthy AI*, Led by [Know Center Research GmbH](#), COMET-funded research projects conducted with e.g., [SGS](#), Role: research area manager for FAIR-AI.
- 2022–2026 **FFG COMET Module**, *Data-Driven Immersive Analytics (DDIA)*, Led by [Know Center Research GmbH](#), research conducted with partners, e.g., [University of Stuttgart](#), Role: key researcher for subproject on recommendations and LLMs.
- 2022–2025 **FFG FemTech**, *Radreisen4All*, Led by [Cyclebee](#), Role: key researcher.
- 2020–2023 **FFG COMET Module**, *Data-Driven Artificial Intelligence (DDAI)*, Led by [Know Center Research GmbH](#), research conducted with partners, e.g., [TU Delft](#), Role: key researcher for subproject on explainable and private AI for users.
- 2020–2023 **Erasmus+**, *Cogsteps*, Led by [University of Zagreb](#), Role: key researcher.
- 2020–2022 **Horizon2020**, *Trusted Secure Data Sharing Space (TRUSTS)*, Led by [Leibniz University Hannover](#), Role: task lead.
- 2020–2022 **Horizon2020**, *TRIPLE*, Led by [CNRS](#), Role: co-task lead.
- 2020–2022 **Horizon2020**, *AI4EU*, Led by [Thales SIX GTS France SAS](#), Role: co-task lead.
- 2019–2022 **FFG COMET Research Center**, *Know Center - Research Center for Big Data Analytics*, Led by [Know Center Research GmbH](#), COMET-funded research projects conducted with e.g., [DiePresse](#), Role: deputy research area manager for Social Computing.
- 2019–2021 **FFG BASIS**, *Automated Marketing and Loyalty System for Retailers and Stores (Jolioo)*, Led by [Jolioo GmbH](#), Role: researcher for recommender systems.
- 2018–2020 **FFG BASIS**, *Studo App Sales Offensive*, Led by [Moshbit GmbH](#), Role: researcher.
- 2018–2020 **Styrian Health Fund**, *Health-Literacy und Diversity (HeLi-D)*, Led by [University of Graz](#), Role: work package lead.
- 2018–2020 **OpenAIRE Tender Call**, *OpenAIRE Matchmaker*, Led by [OpenAire](#), Role: researcher.
- 2015–2018 **Horizon2020**, *Analytics for Everyday Learning (AFEL)*, Led by [University of Galway](#), Role: co-task lead.
- 2015–2018 **Horizon2020**, *MoreGrasp*, Led by [TU Graz](#), Role: researcher for recommender systems.
- 2015–2018 **FFG Lighthouse**, *Data Market Austria (DMA)*, Led by [Research Studios Austria](#), Role: researcher for recommender systems.
- 2012–2016 **FP7**, *Learning Layers*, Led by [Tallinn University](#), Role: Ph.D. candidate.
- 2012–2014 **FP7**, *Organic Lingua*, Led by [University of Alcalá](#), Role: researcher.
- 2010–2012 **FP7**, *ALICE*, Led by [University of Milano-Bicocca](#), Role: researcher.

Priv.-Doz. Dr. Dominik Kowald

List of Publications (* indicates equal contributions)

Scholar: <https://scholar.google.at/citations?user=qQ-L8rUAAAAJ>

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Website: <https://dominikkowald.info>

Monographs

- [1] Dominik Kowald. Transparency, privacy, and fairness in recommender systems. *arXiv preprint arXiv:2406.11323 (habilitation at Graz University of Technology)*, 2024. URL <https://doi.org/10.48550/arXiv.2406.11323>.
- [2] 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>.
- [3] Dominik Kowald. Modeling activation processes in human memory to improve tag recommendations. *arXiv preprint arXiv:1803.03176 (Ph.D. thesis at Graz University of Technology)*, 2017. URL <https://doi.org/10.48550/arXiv.1803.03176>.

Journal Articles

- [4] Harald Semmelrock, Tony Ross-Hellauer, Simone Kopeinik, Dieter Theiler, Armin Haberl, Stefan Thalmann, and Dominik Kowald. Reproducibility in machine-learning-based research: Overview, barriers, and drivers. *AI Magazine*, 46(2), 2025. URL <https://doi.org/10.1002/aaai.70002>.
- [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] Dominik Kowald, Sebastian Scher, Viktoria Pammer-Schindler, Peter Müllner, Kerstin Waxnegger, Lea Demelius, Angela Fessl, Maximilian Toller, Inti Gabriel Mendoza Estrada, Ilija Simic, Vedran Sabol, Andrea Truegler, Eduardo Veas, Roman Kern, Tomislav Nad, and Simone Kopeinik. Establishing and evaluating trustworthy AI: Overview and research challenges. *Frontiers in Big Data, Research Topic on Towards Fair AI for Trustworthy Artificial Intelligence*, 2024. URL <https://doi.org/10.3389/fdata.2024.1467222>.
- [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] 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>.
- [9] 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>.
- [10] 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>.

- [11] 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>.
- [12] 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>.
- [13] 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/10.1561/15000000090>.
- [14] 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>.
- [15] 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>.
- [16] 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>.
- [17] 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>.
- [18] 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>.
- [19] 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>.
- [20] 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>.
- [21] 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>.
- [22] 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>.

Conference Publications and Proceedings

- [23] Dominik Kowald. Investigating popularity bias amplification in recommender systems employed in the entertainment domain. In *EWAF'25*, 2025. URL <https://doi.org/10.48550/arXiv.2504.04752>.

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- [24] Gregor Autischer, Kerstin Waxnegger, and Dominik Kowald. Ai certification and assessment catalogues: Practical use and challenges in the context of the european ai actai certification and assessment catalogues: Practical use and challenges in the context of the european ai act. In *EWAF'25*, 2025. URL <https://dx.doi.org/10.2139/ssrn.5242556>.
- [25] Elisabeth Lex, Kevin Innerebner, Marko Tkalcic, Dominik Kowald, and Markus Schedl. Hybrid AI for human-centric personalization (HyPer). In *UMAP'25 Adjunct*, 2025. URL <https://doi.org/10.1145/3708319.3727563>.
- [26] Kevin Innerebner, Dominik Kowald, Markus Schedl, and Elisabeth Lex. Hybrid personalization using declarative and procedural memory modules of the cognitive architecture ACT-R. In *UMAP'25 Adjunct*, 2025. URL <https://doi.org/10.1145/3708319.3734176>.
- [27] 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/10.1145/3640457.3688187>.
- [28] 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://www.doi.org/10.3233/FAIA241037>.
- [29] 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.
- [30] 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.
- [31] 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>.
- [32] 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>.
- [33] Florian Atzenhofer-Baumgartner, Bernhard Geiger, Georg Vogeler, and Dominik Kowald. Value identification in multistakeholder recommender systems for humanities and historical research: The case of the digital archive monasterium net. In *Normalize@RecSys'24*, 2024. URL <https://ceur-ws.org/Vol-3898/paper4.pdf>.
- [34] Florian Atzenhofer-Baumgartner, Bernhard Geiger, Christoph Trattner, Georg Vogeler, and Dominik Kowald. Challenges in implementing a recommender system for historical research in the humanities. In *AltRecSys@RecSys'24*. ACM, 2024. URL <https://doi.org/10.48550/arXiv.2410.20909>.
- [35] 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>.
- [36] 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.

- [37] 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.
- [38] 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>.
- [39] 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.
- [40] 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.
- [41] 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>.
- [42] 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>.
- [43] Peter Müllner, Elisabeth Lex, and Dominik Kowald. Impact of meta learning for privacy-preserving recommender systems. In *TRAIF'21*, 2021. URL <https://doi.org/10.5281/zenodo.15221745>.
- [44] 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>.
- [45] 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>.
- [46] 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>.
- [47] 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.
- [48] 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>.
- [49] 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.
- [50] 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>.

- [51] 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.
- [52] 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>.
- [53] 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>.
- [54] 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>.
- [55] 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.
- [56] 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>.
- [57] 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>.
- [58] 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>.
- [59] Mathieu d'Aquin, Dominik Kowald, Angela Fessel, Elisabeth Lex, and Stefan Thalmann. AFEL-analytics for everyday learning. In *WWW'18 Companion*, 2018. URL <https://doi.org/10.1145/3184558.3186206>.
- [60] Elisabeth Lex, Tony Ross-Hellauer, and Dominik Kowald. Recommender systems as enabling technology to interlink scholarly information. In *Workshop on Researcher Centric Scholarly Communication co-located with TheWebConf '18*, 2018. URL <https://doi.org/10.5281/zenodo.15221678>.
- [61] 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>.
- [62] 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>.
- [63] 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>.
- [64] 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>.

- [65] 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>.
- [66] 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>.
- [67] Angela Fessel, 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>.
- [68] 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.
- [69] 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.
- [70] Mario Aehnelt, Oliver Bluder, Gert Breidfuss, 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/>.
- [71] 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>.
- [72] 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>.
- [73] 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>.
- [74] 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>.
- [75] Matthias Traub, Emanuel Lacic, Dominik Kowald, Martin Kahr, and Elisabeth Lex. Need help? Recommending social care institutions. In *RSBDA@iKnow'16*, 2016. URL <https://doi.org/10.5281/zenodo.8337029>.
- [76] 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>.
- [77] 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>.
- [78] 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>.

- [79] 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.
- [80] 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>.
- [81] 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.
- [82] 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>.
- [83] 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>.
- [84] 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>.
- [85] 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>.
- [86] 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>.
- [87] Dominik Kowald, Seitlinger Paul, Ley Tobias, and Lex Elisabeth. Modeling activation processes in human memory to improve tag recommendations. In *CSSWS'2015*, 2015. URL <https://doi.org/10.5281/zenodo.8338287>.
- [88] 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>.
- [89] 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>.
- [90] 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>.
- [91] 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>.
- [92] 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.
- [93] 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>.

- [94] 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>.

Others (book chapters / published abstracts / preprints / white papers)

- [95] Robin Burke, Gediminas Adomavicius, Toine Bogers, Tommaso Di Noia, Dominik Kowald, Julia Neidhardt, Özlem Özgöbek, Maria Soledad Pera, Nava Tintarev, and Jürgen Ziegler. De-centering the (traditional) user: Multistakeholder evaluation of recommender systems. *arXiv preprint arXiv:2501.05170 (in revision in International Journal on Human Computer Studies)*, 2025. URL <https://doi.org/10.48550/arXiv.2501.05170>.
- [96] Valentin Förster, Jürgen Fleiß, Dominik Kowald, and Viktoria HSE Robertson. Detecting resale price maintenance with unsupervised machine learning. *Available at SSRN 5130745*, 2025. URL <https://dx.doi.org/10.2139/ssrn.5130745>.
- [97] Gregor Autischer, Kerstin Waxnegger, and Dominik Kowald. Practical application and limitations of ai certification catalogues in the light of the ai act. *arXiv preprint arXiv:2502.10398*, 2025. URL <https://doi.org/10.48550/arXiv.2502.10398>.
- [98] Anna Schreuer, Bernhard Wieser, Peter Muellner, Simone Kopeinik, and Dominik Kowald. Fair recommendations in tourism. In *STS'2025*, 2025. URL <https://openlib.tugraz.at/download.php?id=68147d4730594&location=browse#page=100>.
- [99] Sebastian Scher, Simone Kopeinik, Christof Wolf-Brenner, Kerstin Waxnegger, Tomislav Nad, and Dominik Kowald. Trustworthy AI: Evaluation methods and frameworks. *SGS White Papers*, 2025. URL <http://dx.doi.org/10.13140/RG.2.2.23016.38409>.
- [100] Kerstin Waxnegger, Sebastian Scher, Simone Kopeinik, Tomislav Nad, and Dominik Kowald. Trustworthy AI: Accountability. *SGS White Papers*, 2024. URL <http://dx.doi.org/10.13140/RG.2.2.15700.82562>.
- [101] Sebastian Scher, Andreas Truegler, Simone Kopeinik, Tomislav Nad, and Dominik Kowald. Trustworthy AI: Robustness and performance of AI applications. *SGS White Papers*, 2024. URL <http://dx.doi.org/10.13140/RG.2.2.19056.26881>.
- [102] Peter Muellner, Emanuel Lacic, Simone Kopeinik, Tomislav Scher, Tomislav Nad, and Dominik Kowald. Trustworthy AI: Transparency and explainability in AI. *SGS White Papers*, 2024. URL <http://dx.doi.org/10.13140/RG.2.2.34155.76320>.
- [103] Simone Kopeinik, Tomislav Scher, Tomislav Nad, and Dominik Kowald. Trustworthy AI: Human agency and oversight. *SGS White Papers*, 2024. URL <http://dx.doi.org/10.13140/RG.2.2.12345.38244>.
- [104] Simone Kopeinik, Tomislav Scher, Tomislav Nad, and Dominik Kowald. Trustworthy AI: Fairness in AI and its relations to social well-being. *SGS White Papers*, 2024. URL <http://dx.doi.org/10.13140/RG.2.2.22647.64168>.
- [105] Lea Demelius, Andreas Truegler, Simone Kopeinik, Tomislav Scher, Tomislav Nad, and Dominik Kowald. Trustworthy AI: Privacy and security in AI. *SGS White Papers*, 2024. URL <http://dx.doi.org/10.13140/RG.2.2.25767.15526>.
- [106] 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.

- [107] Robin Burke, Gediminas Adomavicius, Toine Bogers, Tommaso Di Noia, Dominik Kowald, Julia Neidhardt, Özlem Özgöbek, Maria Soledad Pera, and Jürgen Ziegler. Dagstuhl seminar on evaluation perspectives of recommender systems: Multistakeholder and multimethod evaluation. *Dagstuhl Report on Evaluation Perspectives of Recommender Systems: Driving Research and Education*, 2024. URL <https://drops.dagstuhl.de/storage/04dagstuhl-reports/volume14/issue05/24211/DagRep.14.5.58/DagRep.14.5.58.pdf#page=66>.
- [108] Harald Semmelrock, Simone Kopeinik, Dieter Theiler, Tony Ross-Hellauer, and Dominik Kowald. Reproducibility in machine learning-driven research. *arXiv preprint arXiv:2307.10320*, 2023. URL <https://doi.org/10.48550/arXiv.2307.10320>.
- [109] Sebastian Scher, Bernhard Geiger, Simone Kopeinik, Andreas Trügler, and Dominik Kowald. A conceptual model for leaving the data-centric approach in machine learning. *arXiv preprint arXiv:2302.03361*, 2023. URL <https://doi.org/10.48550/arXiv.2302.03361>.
- [110] Matthias Traub, Heimo Gursch, Dominik Kowald, Dieter Theiler, Roman Kern, and Elisabeth Lex. Providing recommendations of services, datasets and end-users in the Data Market Austria (DMA). In *DMRS'2018*, 2018. URL <https://doi.org/10.5281/zenodo.15349790>.
- [111] 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>.
- [112] 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>.
- [113] 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.
- [114] 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.
- [115] 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.