

Curriculum Vitae - Dominik Kowald

Personal Information

Name: Dipl.Ing. Dr.techn. **Dominik Kowald**, BSc.
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Date of Birth: January 11, 1987 (Graz, Austria)
Nationality: Austrian



Research Interests

Recommender Systems, Social Computing, Network Analysis, Cognitive Computing, Data Science

Positions Held

Since 10/2017

Social Computing Research Area, Know-Center

Full time, senior researcher for recommender systems (PostDoc)

09/2012 – 10/2017

Institute of Interactive Systems and Data Science, Graz University of Technology / Know-Center

Full time, University assistant, working in the Social Computing research area on Ph.D. thesis

12/2010 - 03/2012

IICM Institute, Graz University of Technology

Part time, project assistant, working on master thesis in the course of the EU project ALICE

12/2009 – 11/2010

IVM Technical Consultants Graz

Part time, software developer, working on software projects in the automotive sector

07/2009 – 08/2009

GRAWE Insurance AG

Intern, working on various software projects in the insurance sector

10/2008 – 02/2009

IGI Institute, Graz University of Technology

Part time, teaching assistant for the bachelor course “data structures and algorithms” led by Prof.

Robert Legenstein

08/2004, 08/2003

Energie Graz GmbH & Co KG, Gas und Wärme Steiermark

Summer intern

Education

11/2012 – 10/2017

Doctoral studies (Ph.D.), Graz University of Technology

Doctoral school for informatics, Dr.techn. (graduated with highest distinction)

10/2009 – 06/2012

Master studies, Graz University of Technology

Software development and economy, Dipl.Ing. / MSc. (graduated with highest distinction)

10/2006 – 09/2009

Bachelor studies, Graz University of Technology

Software development and economy, BSc.

09/2001 – 06/2006

College of Industrial Engineering, Bulme Graz-Goesting

Manufacturing Computer Science, Ing. (graduated with highest distinction)

09/1997 – 07/2001

Secondary school, Bischoeflisches Gymnasium Graz

09/1993 – 07/1997

Primary school, Schwester Klara-Fitz Volksschule Graz

Awards and Grants (top 5)

- **Nominated for Heinz Zemanek Award 2018** for dissertation
- **Project Grant** OpenAIRE Matchmaker: An innovative recommendation service for finding new scientific collaborators (2018), 15k for the Know-Center as co-writer.
- **Project Grant** for Health-Literacy und Diversity fuer SchuelerInnen der Sekundaerstufe I (HeLi-D), Gesundheitsfonds Steiermark (2017), 75k for the Know-Center as co-writer.
- **Best Demo Honourable Mention** at the 15th International Conference on Knowledge Technologies and Data-Driven Business (i-Know'2015)
- **Best Poster Award** at the 25th ACM Conference on Hypertext and Social Media (HT'2014)

Peer Review Activities (top 5)

- **SNAM Journal**, Social Network Analysis and Mining, since 2017
- **INRT Journal**, Information Retrieval Journal, since 2017
- **TLT Journal**, Transactions on Learning Technologies, since 2017
- **Computers & Education Journal**, since 2017
- **WebScience**, International ACM Web Science Conference, since 2017

Proceedings as Editor

- Alexander Felfernig, Ralf Klamma, Tobias Ley, **Dominik Kowald**, Elisabeth Lex, & Viktoria Pammer-Schindler (2017). Focused topic on "Recommender systems and social network analysis" in Journal of Universal Computer Science (JUICS). Volume 23. Issue 9
- Mario Aehnelt, Olivia Bluder, Gert Breiffuss, Rene Kaiser, Roman Kern, Ralf Klamma, **Dominik Kowald**, Tobias Ley, Elisabeth Lex, Christiana Müller, Viktoria Pammer-Schindler, Romana Rauter, Gerald Reiner, & Eduardo Veas (2017). Proceedings of the Workshop Papers of i-Know 2017, Graz, Austria, October 11-12, 2017

Co-supervised Theses

- Wagner, M. (2018). Diversity-aware recommendation of tweets. Master thesis (TU Graz)
- Punz, A. (2016). Detection and Analysis of Communities on Twitter. Bachelor thesis (TU Graz)

List of Publications

1. Hasani-Mavriqi, I., **Kowald, D.**, Helic, D., & Lex, E. (2018). Consensus Dynamics in Online Collaboration Systems. *Computational Social Networks Journal*
2. **Kowald, D.**, Seitlinger, P., Ley, T., & Lex, E. (2018). The Impact of Semantic Context Cues on the User Acceptance of Tag Recommendations: An Online Study. *WWW'2018 (poster)*

3. Lacic, E., **Kowald, D.**, Reiter-Haas, M., Slawicek, V., & Lex, E. (2018). Beyond Accuracy Optimization: On the Value of Item Embeddings for Student Job Recommendations. *WSDM'2018 (IFUP Workshop)*
4. D'Aquin, M., **Kowald, D.**, Fessl, A., Lex, E., & Thalmann, S. (2018). AFEL - Analytics for Everyday Learning. *WWW'2018 (international projects track)*
5. Lex, E., Ross-Hellauer, T., & **Kowald, D.** (2018). Recommender Systems as Enabling Technology to Interlink Scholarly Information. *WWW'2018 (Researcher Centric Scholarly Communication Workshop)*
6. Seitlinger, P., Ley, T., **Kowald, D.**, Theiler, D., Hasani-Mavriqi, I., Dennerlein, S., Lex, E., & Albert, D. (2017). Balancing the Fluency-Consistency Tradeoff in Collaborative Information Search with a Recommender Approach. *Journal of Human-Computer Interaction*
7. Kopeinik, S., **Kowald, D.**, Hasani-Mavriqi, I., & Lex, E. (2017). Improving Collaborative Filtering Using a Cognitive Model of Human Category Learning. *The Journal of Web Science*. Vol. 2, 1.
8. **Kowald, D.**, Pujari, S., & Lex, E. (2017). Temporal Effects on Hashtag Reuse in Twitter: A Cognitive-Inspired Hashtag Recommendation Approach. *WWW'2017*
9. **Kowald, D.**, Kopeinik, S., & Lex, E. (2017). The TagRec Framework as a Toolkit for the Development of Tag-Based Recommender Systems. *UMAP'2017 (late-breaking results)*
10. **Kowald, D.**, & Lex, E. (2017). Overcoming the Imbalance Between Tag Recommendation Approaches and Real-World Folksonomy Structures with Cognitive-Inspired Algorithms. *European Symposium on Computational Social Sciences*
11. D'Aquin, M., Adamou, A., Dietze, S., Fetahu, B., Gadiraju, U., Hasani-Mavriqi, I., Holtz, P., Kimmerle, J., **Kowald, D.**, Lex, E., Lopez.Sola, S., Maturana, R., Sabol, V., Troullinou, P., & Veas, E. (2017). AFEL: Towards Measuring Online Activities Contributions to Self-directed Learning. *EC-TEL 2017 (ARTEL Workshop)*
12. Lacic, E., **Kowald, D.**, & Lex, E. (2017). Tailoring Recommendations for a Multi-Domain Environment. *RecSys'2017 (ReySysKTL Workshop)*
13. **Kowald, D.** (2017). Modeling Activation Processes in Human Memory for Tag Recommendations: Using Models from Human Memory Theory to Implement Recommender Systems for Social Tagging and Microblogging Environments. *Suedwestdeutscher Verlag fuer Hochschulschriften*. ISBN: 978-620-2-32072-6.
14. **Kowald, D.** (2017). Modeling Activation Processes in Human Memory to Improve Tag Recommendations. *SIGIR Forum December 2017, 51, Number 3 (dissertation abstract)*
15. Trattner, C., **Kowald, D.**, Seitlinger, P., Kopeinik, S. & Ley, T. (2016). Modeling Activation Processes in Human Memory to Predict the Reuse of Tags. *The Journal of Web Science* (2, 1)
16. Santos, P., Dennerlein, S., Theiler, D., Cook, J., Treasure-Jones, T., Holley, D., Kerr, M., Attwell, G., **Kowald, D.**, & Lex, E. (2016) 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 (JUICS)*
17. Kopeinik, S., **Kowald, D.**, & Lex, E. (2016). Which Algorithms Suit Which Learning Environments? A Comparative Study of Recommender Systems in TEL. *EC-TEL'2016*
18. **Kowald, D.**, & Lex, E. (2016). The Influence of Frequency, Recency and Semantic Context on the Reuse of Tags in Social Tagging Systems. *HT'2016*
19. Lacic, E., **Kowald, D.**, & Lex, E. (2016). High Enough? Explaining and Predicting Traveler Satisfaction in Airline Reviews. *HT'2016*
20. Traub, M., Lacic, E., **Kowald, D.**, Kahr, M., & Lex, E. (2016). Need Help? Recommending Social Institutions. *i-KNOW'2016 (RSBDA Workshop)*

21. **Kowald, D.**, Kopeinik, S., Seitlinger, P., Ley, T., Albert, D., & Trattner, C. (2015). Refining Frequency-Based Tag Reuse Predictions by Means of Time and Semantic Context. *Mining, Modeling, and Recommending Things in Social Media*
22. **Kowald, D.**, Seitlinger, P., Kopeinik, S., Ley, T., & Trattner, C. (2015). Forgetting the Words but Remembering the Meaning: Modeling Forgetting in a Verbal and Semantic Tag Recommender. *Mining, Modeling, and Recommending Things in Social Media*
23. Lacic, E., **Kowald, D.**, Eberhard, L., Trattner, C., Parra, D., & Marinho, L. B. (2015). Utilizing Online Social Network and Location-Based Data to Recommend Products and Categories in Online Marketplaces. *Mining, Modeling, and Recommending Things in Social Media*
24. **Kowald, D.**, & Lex, E. (2015). Evaluating Tag Recommender Algorithms in Real-World Folksonomies: A Comparative Study. *RecSys'2015*
25. Seitlinger, P., **Kowald, D.**, Kopeinik, S., Hasani-Mavriqi, I., Ley, T., & Lex, E. (2015). Attention Please! A Hybrid Resource Recommender Mimicking Attention-Interpretation Dynamics. *WWW'2015 (WebScience track)*
26. **Kowald, D.** (2015). Modeling Cognitive Processes in Social Tagging to Improve Tag Recommendations. *WWW'2015 (PhD symposium)*
27. Dennerlein, S., **Kowald, D.**, Lex, E., Theiler, D., Lacic, E., & Ley, T. (2015). The Social Semantic Server: A Flexible Framework to Support Informal Learning at the Workplace. *i-Know'2015*
28. Lacic, E., **Kowald, D.**, Traub, M., Luzhnica, G., Simon, J., & Lex, E. (2015). Tackling Cold-Start Users in Recommender Systems with Indoor Positioning Systems. *RecSys'2015*
29. Traub, M., **Kowald, D.**, Lacic, E., Schoen, P., Supp, G., & Lex, E. (2015). Smart booking without looking: providing hotel recommendations in the TripRebel portal. *i-Know'2015*
30. Lacic, E., Traub, M., **Kowald, D.**, & Lex, E. (2015). ScaR: Towards a Real-Time Recommender Framework Following the Microservices Architecture. *RecSys'2015 (LSRS Workshop)*
31. Trattner, C., **Kowald, D.**, & Lacic, E. (2015). TagRec: Towards a Toolkit for Reproducible Evaluation and Development of Tag-Based Recommender Algorithms. *SIGWEB Newsletter*
32. **Kowald, D.**, Seitlinger, P., Ley, T., & Lex, E. (2015). Modeling Activation Processes in Human Memory to Improve Tag Recommendations. *Computational Social Sciences Symposium*.
33. **Kowald, D.**, Lacic, E., & Trattner, C. (2014). TagRec: towards a standardized tag recommender benchmarking framework. *HT'2014*
34. Lacic, E., **Kowald, D.**, & Trattner, C. (2014). SocRecM: a scalable social recommender engine for online marketplaces. *HT'2014*
35. **Kowald, D.**, Seitlinger, P., Trattner, C., & Ley, T. (2014). Long Time no See: The Probability of Reusing Tags as a Function of Frequency and Recency. *WWW'2014 (WebScience track)*
36. Lacic, E., **Kowald, D.**, Seitlinger, P., Trattner, C. & Parra, D. (2014). Recommending Items in Social Tagging Systems Using Tag and Time Information. *HT'2014 (SP Workshop)*
37. Lacic, E., **Kowald, D.**, Parra, D., Kahr, M., & Trattner, C. (2014). Towards a scalable social recommender engine for online marketplaces: The case of apache solr. *WWW'2014 (SRS Workshop)*
38. Seitlinger, P., **Kowald, D.**, Trattner, C., & Ley, T. (2013). Recommending tags with a model of human categorization. *CIKM'2013*
39. **Kowald, D.**, Dennerlein, S., Dieter, T., Walk, S. & Trattner, C. (2013). The Social Semantic Server - A Framework to Provide Services on Social Semantic Network Data. *i-Semantics'2013*