

# Dimitar Dimitrov

## Curriculum Vitae

Cologne, Germany

+49 (179) 1475505

✉ [dimitar.dimitrov@gesis.org](mailto:dimitar.dimitrov@gesis.org)

🌐 [www.dimitardimitrov.info](http://www.dimitardimitrov.info)

Citizenship Bulgaria  
Place of birth Plovdiv, Bulgaria  
Date of birth 09.02.1984  
Interests Machine Learning, Network Science, and Data Science

### Experience

- 2011 to current **Research associate** in Knowledge Technologies for the Social Sciences at GESIS — Leibniz Institute for the Social Science, Cologne, Germany
- 2019–2019 **Visiting researcher** at the eXascale Infolab at University of Fribourg, Fribourg, Switzerland; Host: Prof. Dr. Philippe Cudré-Mauroux, Duration: two months
- 2014–2014 **Visiting researcher** at the Knowledge Technologies Institute at Graz University of Technology, Graz, Austria; Host: Prof. Dr. Denis Helic, Duration: two months
- 2008–2011 **Software developer** at InnoSysTec GmbH, Salem, Germany
- 2006–2007 **Software development Internship** in Reading/Coding Department at Siemens Postal Automation, Konstanz, Germany
- 2005–2006 **Software development Internship** in Software Applications Department at Siemens Postal Automation, Konstanz, Germany

### Education

- 2013–2018 **Ph.D.** in Computer Science at University of Koblenz-Landau, Koblenz, Germany; Dissertation: Aspects of Information Access: Modeling Navigation on Wikipedia; Advisors: Prof. Dr. Markus Strohmaier and JProf. Dr. Claudia Wagner
- 2009–2011 **Master of Science** in Computer Science at HTWG Konstanz, Konstanz, Germany; Thesis: Investigations of Pivot Tightening for the Interval Cholesky Method and of the Solution of Toeplitz Systems of Linear Interval Equations; Advisor: Prof. Dr. Jürgen Garloff
- 2004–2009 **Diplom** in Software Engineering at HTWG Konstanz, Konstanz, Germany; Thesis: Construction of Totally Non-negative Interval Matrices and Experimental Studies of Interval-Neville-Elimination (in German); Advisor: Prof. Dr. Jürgen Garloff
- 2003–2004 **German Matura** at HTWG Konstanz, Konstanz, Germany
- 2002–2003 **Intensive German language course** at Unilingua, Göttingen, Germany
- 1997–2002 **Bulgarian Matura** at TEE Plovdiv, Plovdiv, Bulgaria

## Personal and Technical Skills

- Data Analysis Statistical hypothesis testing, regression analysis, feature engineering and outlier detection for further machine learning and data mining activities, e.g., classification, clustering, pattern mining, and information retrieval
- Network Analysis Analysis of large-scale information and social networks, e.g., identifying and understanding collective behavior phenomena shaping the network structure, i.e., degree distribution, clustering coefficients, k-core and bow-tie structures
- User Modeling Data driven development and evaluation of agent-based models capturing user behavior in information and social networks, e.g., Markov chains- and decentralized search-based click models
- Web-based Systems Design and architecture of web-based systems for parallel processing of large-scale and high frequency data requests
- Programming Skills **Python:** SciKit Learn, Pandas, NumPy; **Java:** Spring, Tomcat, Solr, ActiveMQ; further knowledge in R, SQL, Matlab, Grails, Groovy, C/C++, L<sup>A</sup>T<sub>E</sub>X, HTML
- Databases MySQL, PostgreSQL
- Project- and Team-leading Team and project leadership and coordination experience throughout various academic and industry projects

## Languages

- Bulgarian **Native:** my native language
- German **Fluent:** written and spoken
- English **Fluent:** written and spoken

## Publications

### Proceedings

- 2018 **D. Dimitrov**, F. Lemmerich, F. Flöck, and M. Strohmaier. *Query for Architecture, Click through Military: Comparing the Roles of Search and Navigation on Wikipedia*. In 10th ACM Conference on Web Science (WebSci18), 27-30 May, Amsterdam, Netherlands, 2018.
- 2017 F. Lemmerich, P. Singer, M. Becker, L. Espín-Noboa, **D. Dimitrov**, D. Helic, A. Hotho, and M. Strohmaier. *Comparing hypotheses on sequential behavior: A Bayesian approach and its applications*. In European Conference on Machine Learning and Knowledge Discovery in Databases (ECML/PKDD'2017), 18-22 September, Skopje, Macedonia, 2017.
- 2017 **D. Dimitrov**, P. Singer, F. Lemmerich and M. Strohmaier. *What Makes a Link Successful on Wikipedia?* In 26th International World Wide Web Conference (WWW'2017), 3-7 April, Perth, Australia, 2017. (CORE A\* conference, acceptance rate 164/966, 17% quota)
- 2017 **D. Dimitrov**. *Modeling Navigation in Information Networks*. In Doctoral Consortium at the 10th ACM International Conference on Web Search and Data Mining (WSDM'2017), 6-10 February, Cambridge, United Kingdom, 2017. (CORE A\* conference)

- 2016 D. Lamprecht, **D. Dimitrov**, D. Helic and M. Strohmaier. *Evaluating and Improving Navigability of Wikipedia: A Comparative Study of Eight Language Editions*. In 12th International Symposium on Open Collaboration (OpenSym'2016), 17-19 August, Berlin, Germany, 2016.
- 2015 **D. Dimitrov**, P. Singer, D. Helic and M. Strohmaier. *The Role of Structural Information for Designing Navigational User Interfaces*. In 26th ACM Conference on Hypertext and Social Media (HT'2015), 1-4 September, Middle East Technical University Northern Cyprus Campus, Cyprus, 2015. (CORE A conference)
- 2013 **D. Dimitrov**, E. Baran and D. Wegener. *Making Data Citable - A Web-based System for the Registration of Social and Economics Science Data*. In 9th International Conference on Web Information Systems and Technologies (WEBIST'2013) 8-10 May, Aachen, Germany, 2013.
- 2012 A. Wira-Alam, **D. Dimitrov** and W. Zenk-Möltgen. *Extending Basic Dublin Core Elements for an Open Research Data Archive*. In International Conference on Dublin Core and Metadata Applications (DCMI'2012), 3-7 September, Malaysia, 2012.

#### Posters

- 2016 **D. Dimitrov**, P. Singer, F. Lemmerich and M. Strohmaier. *Visual Positions of Links and Clicks on Wikipedia*. In 25th International World Wide Web Conference (WWW'2016), 11-15 April, Montreal, Canada, 2016. (CORE A\* conference)
- 2016 M. Becker, H. Mewes, A. Hotho, **D. Dimitrov**, F. Lemmerich and M. Strohmaier. *SparkTrails: A MapReduce Implementation of HypTrails for Comparing Hypotheses About Human Trails*. In 25th International World Wide Web Conference (WWW'2016), 11-15 April, Montreal, Canada, 2016. (CORE A\* conference)
- 2013 **D. Dimitrov**, D. Hienert, K. Boland and D. Wegener. *Linking Research Data and Literature: Integration of da|ra and Sowiport based on Link Information from InFoLiS*. In IASSIST Conference (IASSIST'2013) 28-31 May, Cologne, Germany, 2013.

#### Journals

- 2019 **D. Dimitrov**, F. Lemmerich, F. Flöck and M. Strohmaier. *Different Topic, Different Traffic: How Search and Navigation Interplay on Wikipedia*. The Journal of Web Science online first (1), 2019.

#### Book

##### Chapters

- 2018 **D. Dimitrov**, D. Helic and M. Strohmaier. *Tag-based Navigation and Visualization*. In: Peter Brusilovsky, Daqing He (eds) Social Information Access: Systems and Technologies, LNCS, vol 10100, pages 181–212, Springer International Publishing, 2018.

## Awards

- RCC Finalist NYU Coleridge Initiative's Rich Context Competition (RCC), New York, USA  
<https://coleridgeinitiative.org/richcontextcompetition>