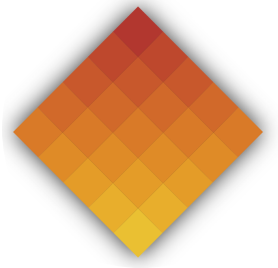

Michael **Behrisch**

Visual Analytics · Big Data Analytics · Information Visualization

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(+31) 687-110577 | m.behrisch@uu.nl | michael.behrisch.info

"We are drowning in information and starving for knowledge. — John Naisbitt"

Academic Positions

11/2019 **Tenured Assistant Professor**, Universitair Docent 1, *Utrecht University, The Netherlands*
Visualization and Graphics Group, Group Leader prof. Alexandru Telea, Sub-Group Leader on Visual Analytics, ***tenured after 2.5 years***

10/2019 – 05/2019 **Postdoctoral Research Fellow**, Visual Analytics Laboratory, *Tufts University*
Involved Projects: *D3M - Data-Driven Discovery of Models*, *CHESS - Computers and Humans Exploring Software Security*, *Material - Accelerating the Discovery of Electronic Materials through Human-Computer Active Search*, *GenoPheNoEnvo - Converging Genomics, Phenomics, and Environments using Interpretable Machine Learning Models*

04/2019 – 2017 **Postdoctoral Research Fellow**, Visual Computing Group, *Harvard University*
Involved Projects: *4DN - Analysis of local patterns in genome interaction matrices*, *Connectomics - Study of neural connections within an organism's nervous system, esp. brain research*, *CyCIF - Cyclic Immunofluorescence; Cell and tissue imaging and analysis for cancer research*

2017 **Doctor of Computer Science**, Dr. rer. nat., *University of Konstanz, Germany*
Visual Analytics Methods for Exploring Large Amounts of Relational Data with Matrix-based Representations, Data Analysis and Visualization Group; Prof. Dr. Tobias Schreck, Prof. Dr. Jean-Daniel Fekete, Prof. Dr. Ulrik Brandes, Prof. Dr. Falk Schreiber, ***Final Grade: Summa Cum Laude***

Involved Projects: *Fraunhofer IGD Cooperation I & II - Visual Analysis of Large Relational, Time-Dependent and Multi-Dimensional Data & Visual Interactive Techniques for the Analysis of Large Matrix Data*, *Vis-Sense - Visual Analytic Representation of Large Datasets for Enhanced Network Security*, *VASA - Visual Analytics for Security Applications*, *CONCENSUS - Multi-Objective Decision Making Tools through Citizen Engagement*

2011 **Master in Computer Science**, Msc., *University of Konstanz, Germany*
Explorative Analysis of Structure and Semantics in Topic-Coherent News Articles, Data Analysis and Visualization Group; Jun.-Prof. Dr. Tobias Schreck, Prof. Dr. Daniel Keim, ***Final Thesis Grade: 1.7***

2009 **Bachelor in Computer Science**, Bsc., *Technical University of Darmstadt*
Autonomic Computing in Peer-to-Peer Systems, Multimedia Communications Lab - KOM; Prof. Dr.-Ing. Ralf Steinmetz, ***Final Thesis Grade: 1.0***

Work Experience

2011 – 2005 **Business Analyst**, T-Systems Business Services GmbH, *Darmstadt, Germany*
Innovation management for telecommunication companies; ***Technology Radar****: Innovation description, -assessment and -analysis, description and evaluation of market trends*

2009 **Business Analyst**, Detecon Inc., *San Francisco, USA*

2008 Innovation management for telecommunication companies; ***Technology Radar*** *and* ***Product and Service Radar****: Innovation description, -assessment and -analysis, description and evaluation of market trends*

Honors & Awards

2022 **Best Paper Award**, EuroVA, *2022*
Multivariate Time Series Retrieval with Symbolic Aggregate Approximation, Regular Expression, and Query Expansion

2018 **Best Teacher Award**, Harvard University, *Cambridge, USA*
CS171 Information Visualization Course

2018 **Honorable Mention Award**, IEEE VAST, *2018*
Seq2Seq-Vis: A Visual Debugging Tool for Sequence-to-Sequence Models

2015 **Best Paper Award**, IVAPP, *2015*
Visual Exploration of Aggregate Similarity for Multi-Dimensional Clustering

2015 **Best Paper Award**, IEEE BDVA, *2015*
Guiding the Exploration of Scatter Plot Data Using Motif-based Interest Measures

Membership in Academic Associations

2022 **ASCI**, Member
Advanced School for Computing and Imaging

2021 **GQL (Graph Query Language)**, Standardization Body Member, *ISO/IEC*
GQL is a proposed standard graph query language.

2015 **IEEE**, Member
Institute of Electrical and Electronics Engineers

2015 **ACM**, Member
Association for Computing Machinery

2015 **EG**, Member
EuroGraphics European Association for Computer Graphics

University and Departmental Services

2020 **Board of Examiners**, Chairman, *Applied Data Science*

now As the chairman of the Board of Examiners, I have the task of ensuring the quality of the examinations for the Applied Data Science program. Moreover, we work as a team to constantly streamline processes and optimize the program's operations.

2021 **Accreditation New Master Program**, Lead, *Data Science Research Master*
I worked successfully on the accreditation process for the new Data Science Research master (start Sept. 2023). This program will shape UU's appearance on the international Data Science market and establish the CS department as a key player in the field.

2020 now | **Informatics Research Advisory Committee**, MEMBER
IRAC is the advisory committee concerned with the research organization and -policy. It provides a platform for discussions with the Research Director and gives advice on all matters related to research.

2020 now | **AI & Sustainability Lab**, COORDINATOR
In the AI & Sustainability Lab, researchers from the Faculty of GeoSciences and the Faculty of Science set out to collaborate with other departments, institutes, companies and public organizations.

2022 | **Data Science Research Master**, COORDINATOR, *Design of New Master Program*
My task is to design and establish an effective, high-quality research program, whose goal is to train future elite Data Science personnel and set the foundation for Ph.D.s, which are able to compete internationally renowned (academic) researchers.

Publications

The majority of the papers on my publication record are peer-reviewed and submitted to internationally renowned conferences and journals. As of June 2022, the 37 publications have resulted in 1180 citations, an h-index of 16 and an i10-index of 17. Three of my highest cited papers are above 150 citations.

My Google Scholar profile is accessible here:
`https://scholar.google.com/citations?user=12Bl2VgAAAAJ`
My Orcid profile is accessible here:
`https://orcid.org/0000-0002-1102-103X`
My DBLP profile is accessible here:
`https://dblp.org/pid/30/2940-1.html`

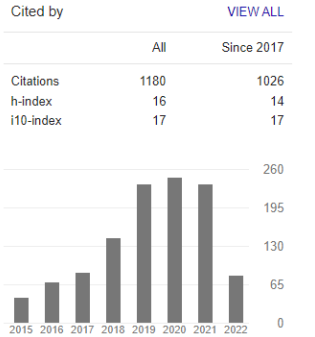

Figure 1: Google Scholar Metrics, per 23.06.2022

SELECTED PUBLICATIONS

2019 **Behrisch**, **Michael**, Hanspeter Pfister, and Tobias Schreck (2019). "Guiro: User-Guided Matrix Reordering". In: *IEEE Transactions on Visualization and Computer Graphics*. DOI: 10.1109/TVCG.2019.2934300. eprint: `http://bit.ly/guiropaperpreprint`.

Strobelt, Hendrik, Sebastian Gehrmann, **Michael Behrisch**, Adam Perer, Hanspeter Pfister, and Alexander M. Rush (2019). "Seq2seq-Vis: A Visual Debugging Tool for Sequence-to-Sequence Models". In: *IEEE Transactions on Visualization and Computer Graphics (Honorable Mention Award)* 25.1, pp. 353–363. DOI: 10.1109/TVCG.2018.2865044. URL: `http://seq2seq-vis.io/`.

2018 **Behrisch**, **Michael**, Michael Blumenschein, Nam Wook Kim, Lin Shao, Mennatallah El-Assady, Johannes Fuchs, Daniel Seebacher, Alexandra Diehl, Ulrik Brandes, Hanspeter Pfister, Tobias Schreck, Daniel Weiskopf, and Daniel A. Keim (2018). "Quality Metrics for Information Visualization". In: *Computer Graphics Forum* 37.3, pp. 625–662. DOI: 10.1111/cgf.13446. URL: `http://visualquality.dbvis.de`.

Behrisch, **Michael**, Dirk Streeb, Florian Stoffel, Daniel Seebacher, Brian Matejek, Stefan Hagen Weber, Sebastian Mittelstaedt, Hanspeter Pfister, and Daniel Keim (July 2018). "Commercial Visual Analytics Systems-Advances in the Big Data Analytics Field". In: *IEEE Transactions on Visualization and Computer Graphics*, pp. 1–24. ISSN: 1077-2626. DOI: 10.1109/TVCG.2018.2859973. URL: `http://commercialtools.dbvis.de`.

2017 **Behrisch**, **Michael**, Benjamin Bach, Michael Hund, Michael Delz, Laura von Rüden, Jean-Daniel Fekete, and Tobias Scheck (Oct. 2017). "Magnostics: Image-based Search of Interesting Matrix Views for Guided Network Exploration". In: *IEEE Transactions on Visualization and Computer Graphics* 23.1, pp. 31–40. DOI: 10.1109/TVCG.2016.2598467. URL: `http://magnostics.dbvis.de`.

2016 **Behrisch**, **Michael**, Benjamin Bach, Nathalie Henry Riche, Tobias Schreck, and Jean-Daniel Fekete (June 2016). "Matrix Reordering Methods for Table and Network Visualization". In: *Computer Graphics Forum* 35.3, pp. 693–716. ISSN: 1467-8659. DOI: 10.1111/cgf.12935. URL: http://matrixreordering.dbvis.de.

Full Publication List

2022 Jiao, Jiao, Heike Brugger, **Michael Behrisch**, and Wolfgang Eichhammer (2022a). "Identifying Drivers of Residential Energy Consumption by Explainable Energy Demand Forecasting". In: *European Council for an Energy Efficient Economy (ECEEEE), Summer Study Proceedings 2022*. ECEEEE.

– (2022b). "Visual Analysis-based Social Trend Tracking for Energy Efficient Smart Buildings". In: *Smart Energy Journal (Under Review)* 8, pp. 0-0. ISSN: 2666-9552.

Montambault, Brian, Camelia D. Brumar, **Michael Behrisch**, and Remco Chang (2022a). "PIXAL: Anomaly Reasoning with Visual Analytics". In: *CoRR* abs/2205.11004. DOI: 10.48550/arXiv.2205.11004. arXiv: 2205.11004. URL: https://doi.org/10.48550/arXiv.2205.11004.

– (2022b). "PIXAL: Anomaly Reasoning with Visual Analytics". In: *IEEE Transactions on Visualization and Computer Graphics, Under Review*.

Telea, Alexandru and **Michael Behrisch** (2022). "Visual Exploration of Large Multidimensional Trajectory Data (Book Chapter, To Appear)". In: *Data Science for Migration and Mobility*. Oxford University Press, pp. 1–25.

Yu, Yuncong, Tim Becker, and **Michael Behrisch** (2022). "Multivariate Time Series Retrieval with Symbolic Aggregate Approximation, Regular Expression, and Query Expansion". In: *EuroVis Workshop on Visual Analytics (EuroVA) (Best Paper Award)*. Ed. by Jürgen Bernard and Marco Angelini. The Eurographics Association. ISBN: 978-3-03868-183-0. DOI: 10.2312/eurova.20221081.

Yu, Yuncong, Dylan Kruyff, Jiao Jiao, Tim Becker, and **Michael Behrisch** (2022a). "PSEUDo: Interactive Pattern Search in Multivariate Time Series with Locality-Sensitive Hashing and Relevance". In: *2022 IEEE Visualization in Data Science (VDS), Accepted, Not published*. Vol. 0. 0, pp. 1–10. DOI: tbd.

– (2022b). "PSEUDo: Interactive Pattern Search in Multivariate Time Series with Locality-Sensitive Hashing and Relevance Feedback". In: *EuroVis 2022 - Posters*. Ed. by Michael Krone, Simone Lenti, and Johanna Schmidt. The Eurographics Association. ISBN: 978-3-03868-185-4. DOI: 10.2312/evp.20221127.

2021 Beauxis-Aussalet, Emma, **Michael Behrisch**, Rita Borgo, Duen Horng Chau, Christopher Collins, David S. Ebert, Mennatallah El-Assady, Alex Endert, Daniel A. Keim, Jörn Kohlhammer, Daniela Oelke, Jaakko Peltonen, Maria Riveiro, Tobias Schreck, Hendrik Strobelt, Jarke J. van Wijk, and Theresa-Marie Rhyne (2021). "The Role of Interactive Visualization in Fostering Trust in AI". In: *IEEE Computer Graphics and Applications* 41.6, pp. 7–12. DOI: 10.1109/MCG.2021.3107875. URL: https://doi.org/10.1109/MCG.2021.3107875.

Jiao, Jiao, Heike Brugger, **Michael Behrisch**, and Wolfgang Eichhammer (2021). "User engagement analysis for smart buildings based on social trend tracking". In: *European Council for an Energy Efficient Economy (ECEEEE), Summer Study Proceedings 2021*. ECEEEE.

Yu, Yuncong, Dylan Kruyff, Tim Becker, and **Michael Behrisch** (2021). "PSEUDo: Interactive Pattern Search in Multivariate Time Series with Locality-Sensitive Hashing and Relevance Feedback". In: *CoRR* abs/2104.14962. arXiv: 2104.14962. URL: https://arxiv.org/abs/2104.14962.

2020 Bartelme, Ryan Phillip, **Michael Behrisch**, Emily Jean Cain, Remco Chang, Ishita Debnath, Bryan Heidorn, Pankaj Jaiswal, David Shaner LeBauer, Ab Mosca, Monica Munoz-Torres, et al. (2020). "Do androids dream of electric sorghum?: Predicting Phenotypes from Multi-Scale Genomic and Environmental Data using Neural Networks and Knowledge Graphs". In.

Thessen, Anne E, Ryan Bartelme, **Michael Behrisch**, Emily Jean Cain, Remco Chang, Ishita Debnath, P Bryan Heidorn, Pankaj Jaiswal, David S LeBauer, Ab Mosca, et al. (2020). "Predicting phenotype from multi-scale genomic and environment data using neural networks and knowledge graphs". In: *2020 ESA Annual Meeting (August 3-6)*. ESA.

2019 Dennig, Frederik, Tom Polk, Zudi Lin, Tobias Schreck, Hanspeter Pfister, and **Michael Behrisch** (2019). "FDive: Learning Relevance Models using Pattern-based Similarity Measures". In: *IEEE Transactions on Visualization and Computer Graphics*. eprint: http://bit.ly/fdive2paperpreprint.

Lekschas, Fritz, **Michael Behrisch**, Benjamin Bach, Peter Kerpedjiev, Nils Gehlenborg, and Hanspeter Pfister (2019). "Pattern-Driven Navigation in 2D Multiscale Visualizations with Scalable Insets". In: *IEEE Transactions on Visualization and Computer Graphics*. DOI: 10.1109/TVCG.2019.2934555. eprint: http://bit.ly/scalableinsetspaperpreprint.

Pentecost, Lillian, Udit Gupta, Elisa Ngan, Johanna Beyer, Gu-Yeon Wei, David Brooks, and **Michael Behrisch** (2019). "CHAMPVis: Comparative Hierarchical Analysis of Microarchitectural Performance". In: *2019 IEEE/ACM International Workshop on Programming and Performance Visualization Tools (ProTools)*. IEEE, pp. 55–61.

Roessler, Robert, Caiseen Kelly, **Michael Behrisch**, and Johanna Beyer (Oct. 2019). "TexTiles: Exploring Patterns in Historical Discourse". In: *2019 Workshop on Visualization for the Digital Humanities (VIS4DH), Vancouver, Canada, October 20-25, 2019*, pp. 1–5.

Ruta, Nicholas, Naoko Sawada, Katy McKeough, **Michael Behrisch**, and Johanna Beyer (Oct. 2019). "SAX Navigator: Time Series Exploration Through Hierarchical Clustering". In: *2019 IEEE VIS Conference Short Paper Track 2019, Vancouver, Canada, October 20-25, 2019*, pp. 1–5. eprint: http://arxiv.org/abs/1908.05505.

2018

Behrisch, **Michael**, Robert Krüger, Fritz Lekschas, Tobias Schreck, Nils Gehlenborg, and Hanspeter Pfister (2018). "Visual Pattern-Driven Exploration of Big Data". In: *2018 International Symposium on Big Data Visual and Immersive Analytics, BDVA 2018, Konstanz, Germany, October 17-19, 2018*, pp. 1–11. DOI: 10.1109/BDVA.2018.8534028. URL: https://doi.org/10.1109/BDVA.2018.8534028.

Blumenschein, Michael, **Michael Behrisch**, Stefanie Schmid, Simon Butscher, Deborah R. Wahl, Karoline Villinger, Britta Renner, Harald Reiterer, and Daniel A. Keim (2018). "SMARTexplore: Simplifying High-Dimensional Data Analysis through a Table-Based Visual Analytics Approach". In: *Proceedings of IEEE Conference on Visual Analytics Science and Technology (VAST)*.

Lekschas, Fritz, **Michael Behrisch**, Benjamin Bach, Peter Kerpedjiev, Nils Gehlenborg, and Hanspeter Pfister (2018). "Pattern-Driven Navigation in 2D Multiscale Visual Spaces with Scalable Insets". In: *bioRxiv*. DOI: 10.1101/301036. eprint: https://www.biorxiv.org/content/early/2018/04/15/301036.full.pdf. URL: https://www.biorxiv.org/content/early/2018/04/15/301036.

Sacha, Dominik, Matthias Kraus, Jürgen Bernard, **Michael Behrisch**, Tobias Schreck, Yuki Asano, and Daniel A. Keim (2018). "SOMFlow: Guided Exploratory Cluster Analysis with Self-Organizing Maps and Analytic Provenance". In: *IEEE Transactions on Visualization and Computer Graphics* 24.1, pp. 120–130. DOI: 10.1109/TVCG.2017.2744805. URL: https://doi.org/10.1109/TVCG.2017.2744805.

Senaratne, Hansi, Manuel Müller, **Michael Behrisch**, Felipe Lalanne, Javier Bustos-Jiménez, Jörn Schneidewind, Daniel A. Keim, and Tobias Schreck (2018). "Urban Mobility Analysis With Mobile Network Data: A Visual Analytics Approach". In: *IEEE Trans. Intelligent Transportation Systems* 19.5, pp. 1537–1546. DOI: 10.1109/TITS.2017.2727281. URL: https://doi.org/10.1109/TITS.2017.2727281.

Strobelt, Hendrik, Sebastian Gehrmann, **Michael Behrisch**, Adam Perer, Hanspeter Pfister, and Alexander M. Rush (2018). "Debugging Sequence-to-Sequence Models with Seq2Seq-Vis". In: *Proceedings of the Workshop: Analyzing and Interpreting Neural Networks for NLP, BlackboxNLP@EMNLP 2018, Brussels, Belgium, November 1, 2018*, pp. 368–370. URL: https://aclanthology.info/papers/W18-5451/w18-5451.

2017

Behrisch, **Michael** (Feb. 2017). "Visual Analytics Methods for Exploring Large Amounts of Relational Data with Matrix-based Representations." Ph.D. Thesis - Dr. rer. nat. University of Konstanz.

Jäckle, Dominik, Michael Hund, **Michael Behrisch**, Daniel A. Keim, and Tobias Schreck (2017). "Pattern Trails: Visual Analysis of Pattern Transitions in Subspaces". In: *2017 IEEE Conference on Visual Analytics Science and Technology, VAST 2017, Phoenix, AZ, USA, October 3-6, 2017*, pp. 1–12. DOI: 10.1109/VAST.2017.8585613. URL: https://doi.org/10.1109/VAST.2017.8585613.

Merino, Leonel, Johannes Fuchs, Michael Blumenschein, Craig Anslow, Mohammad Ghafari, Oscar Nierstrasz, **Michael Behrisch**, and Daniel A. Keim (2017). "On the Impact of the Medium in the Effectiveness of 3D Software Visualizations". In: *IEEE Working Conference on Software Visualization, VISSOFT 2017, Shanghai, China, September 18-19, 2017*, pp. 11–21. DOI: 10.1109/VISSOFT.2017.17. URL: https://doi.org/10.1109/VISSOFT.2017.17.

Stoffel, Florian, Wolfgang Jentner, **Michael Behrisch**, Johannes Fuchs, and Daniel A. Keim (2017). "Interactive Ambiguity Resolution of Named Entities in Fictional Literature". In: *Computer Graphics Forum* 36.3, pp. 189–200. DOI: 10.1111/cgf.13179. URL: https://doi.org/10.1111/cgf.13179.

2016

Hund, Michael, Ines Färber, **Michael Behrisch**, Andrada Tatu, Tobias Schreck, Daniel A. Keim, and Thomas Seidl (2016). "Visual Quality Assessment of Subspace Clusterings". In: *KDD 2016 Workshop on Interactive Data Exploration and Analytics (IDEA 2016)*, pp. 1–10.

Shao, Lin, Timo Schleicher, **Michael Behrisch**, Tobias Schreck, Ivan Sipiran, and Daniel A. Keim (2016). "Guiding the Exploration of Scatter Plot Data using Motif-based Interest Measures (Journal)". In: *Journal of Visual Languages & Computing* 36, pp. 1–12. DOI: 10.1016/j.jvlc.2016.07.003.

2015

Behrisch, **Michael**, Lin Shao, Juri Buchmüller, and Tobias Schreck (2015). "Quality Metrics Driven Approach to Visualize Multidimensional Data in Scatterplot Matrix". In: *Eurographics Conference on Visualization (EuroVis) - Poster Paper*, pp. 1–2.

Hund, Michael, **Michael Behrisch**, Ines Färber, Michael Sedlmair, Tobias Schreck, Thomas Seidl, and Daniel A. Keim (2015). "Subspace Nearest Neighbor Search - Problem Statement, Approaches, and Discussion". In: *Similarity Search and Applications*. Ed. by Giuseppe Amato, Richard Connor, Fabrizio Falchi, and Claudio Gennaro. 1st ed. Vol. 9371. Lecture Notes in Computer Science. Springer International Publishing, pp. 307–313. DOI: 10.1007/978-3-319-25087-8_29.

Rüden, Laura von, Marc-André Hermanns, **Michael Behrisch**, Daniel Keim, Bernd Mohr, and Felix Wolf (2015). "Separating the Wheat from the Chaff: Identifying Relevant and Similar Performance Data with Visual Analytics". In: *Workshop on Visual Performance Analysis*. VPA '15. Austin, Texas: ACM, 4:1–4:8. ISBN: 978-1-4503-4013-7. DOI: 10.1145/2835238.2835242.

Shao, Lin, Timo Schleicher, **Michael Behrisch**, Tobias Schreck, Ivan Sipiran, and Daniel A. Keim (Sept. 2015). "Guiding the Exploration of Scatter Plot Data Using Motif-based Interest Measures". In: *IEEE Symposium on Big Data Visual Analytics*, pp. 1–8. DOI: 10.1109/BDVA.2015.7314294.

Twellmeyer, James, Marco Hutter, **Michael Behrisch**, Jörn Kohlhammer, and Tobias Schreck (2015). "The Visual Exploration of Aggregate Similarity for Multi-dimensional Clustering". In: *IVAPP 2015 - Proceedings of the 6th International Conference on Information Visualization Theory and Applications, Berlin, Germany, 11-14 March, 2015.* Pp. 40–50. DOI: 10.5220/0005304100400050. URL: https://doi.org/10.5220/0005304100400050.

2014 **Behrisch**, **Michael**, James Davey, Fabian Fischer, Olivier Thonnard, Tobias Schreck, Daniel A. Keim, and Jörn Kohlhammer (July 2014). "Visual Analysis of Sets of Heterogeneous Matrices Using Projection-Based Distance Functions and Semantic Zoom". In: *Computer Graphics Forum* 33.3, pp. 411–420. ISSN: 1467-8659. DOI: 10.1111/cgf.12397. URL: http://dx.doi.org/10.1111/cgf.12397.

Behrisch, **Michael**, Lin Shao, Bum Chul Kwon, Tobias Schreck, I. Sipiran, and Daniel A. Keim (2014). "Quality Metrics Driven Approach to Visualize Multidimensional Data in Scatterplot Matrix". In: *GI Workshop Big Data Visual Computing Quantitative Perspectives for Visual Computing, September 22, 2014 Stuttgart, Germany*, pp. 1–2.

Bernard, Jürgen, Marco Hutter, David Sessler, Tobias Schreck, **Michael Behrisch**, and Jörn Kohlhammer (2014). "Towards a user-defined visual-interactive definition of similarity functions for mixed data". In: *IEEE Conference on Visual Analytics Science and Technology (Poster Paper)*. IEEE, pp. 227–228. DOI: 10.1109/VAST.2014.7042503. URL: http://dx.doi.org/10.1109/VAST.2014.7042503.

Shao, Lin, **Michael Behrisch**, Tobias Schreck, Tatiana von Landesberger, Maximilian Scherer, Sebastian Bremm, and Daniel A. Keim (2014). "Guided Sketching for Visual Search and Exploration in Large Scatter Plot Spaces". In: *Eurographics Workshop on Visual Analytics (EuroVA)*. Ed. by M. Pohl and J. Roberts. The Eurographics Association, pp. 1–5. DOI: 10.2312/eurova.20141140. URL: http://dx.doi.org/10.2312/eurova.20141140.

Shao, Lin, **Michael Behrisch**, Tobias Schreck, I. Sipiran, Bum Chul Kwon, and Daniel A. Keim (Sept. 2014). "Identifying Locally Interesting Motifs for Exploration of Scatter Plot Matrices". In: *Informatik 2014-Big Data: Komplexität meistern*, pp. 1–2.

2013 **Behrisch**, **Michael**, James Davey, Svenja Simon, Tobias Schreck, Daniel A. Keim, and Jörn Kohlhammer (2013). "Visual Comparison of Orderings and Rankings". In: *Eurographics Workshop on Visual Analytics (EuroVA)*. Ed. by M. Pohl and H. Schumann. The Eurographics Association. DOI: 10.2312/PE.EuroVAST.EuroVA13.007-011. URL: http://dx.doi.org/10.2312/PE.EuroVAST.EuroVA13.007-011.

2012 **Behrisch**, **Michael**, James Davey, Tobias Schreck, Jörn Kohlhammer, and Daniel A. Keim (Oct. 2012). "Matrix-Based Visual Correlation Analysis on Large Timeseries Data". In: *IEEE Conference on Visual Analytics Science and Technology (Poster Paper)*. Institute of Electrical & Electronics Engineers (IEEE), pp. 209–210. DOI: 10.1109/VAST.2012.6400549. URL: http://dx.doi.org/10.1109/VAST.2012.6400549.

Behrisch, **Michael**, Milos Krstajic, Tobias Schreck, and Daniel A. Keim (2012). "The News Auditor: Visual Exploration of Clusters of Stories". In: *Eurographics Workshop on Visual Analytics (EuroVA)*. The Eurographics Association, pp. 61–65. ISBN: 978-3-905673-89-0. DOI: 10.2312/PE/EuroVAST/EuroVA12/061-065. URL: http://dx.doi.org/10.2312/PE/EuroVAST/EuroVA12/061-065.

Zhang, Leishi, Andreas Stoffel, **Michael Behrisch**, Sebastian Mittelstädt, Tobias Schreck, R. Pompl, S. Weber, H. Last, and Daniel A. Keim (2012). "Visual analytics for the big data era - a comparative review of state-of-the-art commercial systems". In: *IEEE Symposium on Visual Analytics Science and Technology*, pp. 173–182. DOI: 10.1109/VAST.2012.6400554. URL: commercialtools.dbvis.de.

2011 **Behrisch**, **Michael** (Sept. 2011). "Explorative Analysis of Structure and Semantics in Topic-Coherent News Articles". Master Thesis - Computer Science. Universität Konstanz.

2009 **Behrisch**, **Michael** (May 2009). "Autonomic Computing in Peer-to-Peer Systems". Bachelor Thesis - Computer Science. Technische Universität Darmstadt. URL: https://hds.hebis.de/ulbda/Record/HEB332424030.

Invited Talks

Dagstuhl Seminar 22462 *11/2022 (Invited)*
Set Visualization and Uncertainty

Dagstuhl Seminar 20382 *08/2022 (Invited)*
Interactive Visualization for Fostering Trust in ML

Dutch Seminar on Data Systems Design (Eindhoven, NL) *08/2022 (Invited)*
The Power of Visual Analytics

Dagstuhl Seminar 22031 *2022*
Bringing Graph Databases and Network Visualization Together

Dagstuhl Seminar 20171 *2021*
Visualization of Biological Data - From Analysis to Communication

Dagstuhl Seminar 22351 *2020*
Interactive Visualization for Fostering Trust in AI

Utrecht University ICS Colloquium (Utrecht) *2019*
Visualizing the Invisible: Understanding Abstract Big Data and Explaining Machine Learning

IEEE VIS Full Paper Track (Vancouver, CA) *2019*
GUIRO: User-guided matrix reordering

Tufts University VALT group (Medford, USA) *2018*
Visual Pattern-Driven Exploration of Big Datasets

EuroVis STAR Track (Brno, CZ) *2018*
Quality Metrics for Information Visualization

IEEE VIS Full Paper Track (Berlin) *2018*
Commercial Visual Analytics Systems – Advances in the Big Data Analytics Field

IEEE VisInPractice Mini-Symposium (Berlin) *2018*
Commercial Visual Analytics Systems – Advances in the Big Data Analytics Field

IEEE BDVA Full Paper Track (Konstanz) *2018*
Pattern-Driven Exploration of Big Data

Life Science Informatics Group (Konstanz) *2017*
Visual Analytic Methods for Exploring Large Amounts of Relational Data with Matrix-based Representations

IEEE VAST Full Paper Track (Baltimore, USA) *2016*
Magnostics: Image-based search of interesting matrix views for guided network exploration

Lawrence Livermore National Laboratory (Livermore, USA) *2016*
Visual Analytic for the Analysis of Patterns in Matrix-based Representations

EuroVis STAR Track (Groningen, NL) *2016*
Matrix reordering methods for table and network visualization

Fraunhofer IGD (Darmstadt) *2016*
Visual Analytic for the Analysis of Patterns in Matrix-based Representations

IEEE VAST Full Paper Track (Paris, FR) *2014*
Feedback-driven interactive exploration of large multidimensional data supported by visual classifier

EuroVis Full Paper Track (Swansea, UK) *2014*
Visual Analysis of Sets of Heterogeneous Matrices Using Projection-Based Distance Functions and Semantic Zoom

INRIA Aviz Group (Paris, FR) *2014*
Visual Analytic Methods for Exploring Large Amounts of Relational and Time-Dependent Data

EuroVis Workshop on Visual Analtyics (Leipzig) *2013*
Visual Comparison of Orderings and Rankings

Grants and Grant Applications

GraphPolaris: Enabling Visual Knowledge Graph Analytics for the Masses *Collaboration in Innovative Tech*
NLeScience, 36 months, 3 Full-time Research Engineers *Under Revision 2022*

Open Science Graph Data Analytics *Open Science Fund*
Utrecht University, 12 months, 15.000 Euro *Under Revision 2022*

GraphPolaris: Visual Graph Data Analytics for the Masses *NWO Demonstrator*
Dutch Research Council (NWO), 18 months, 160.000 Euro *Under Revision 2022*

GraphPolaris: Visual Graph Data Analytics for the Masses *Google Cloud Startup*
Google, 12 months, 100.000 USD ***Successful 2022***

Democratization of Data Science for Sustainability Problems
Science for Sustainability Graduate Programme
Utrecht University, 48 months, 1 Ph.D.
2022

Fostering Energy-efficient Smart Buildings Adoption through Visual Analytics
AI & Sustainability Grant
Utrecht University, 4 years, 100.000 Euro
Successful 2021

Progressive Explainable Embeddings
NWO XS
Dutch Research Council (NWO), 50.000 Euro
2021

GraphPolaris: Visual Graph Data Analytics for the Masses
NWO Demonstrator
Dutch Research Council (NWO), 18 months, 150.000 Euro
2021

IDAFeLD: Intelligent Data Analytics for Forensic Linguistic Data
ERC ISFP
European Research Council (ERC), 36 months, 1 Ph.D.
2021

GraphPolaris: Visual Graph Data Analytics for the Masses
NWO Takeoff Feasibility 1
Dutch Research Council (NWO), 12 months, 40.000 Euro
Successful 2020

Raising Trust and Transparency in Deep Encoder-Decoder Models
NWO Veni
Dutch Research Council (NWO), 3 years, 350.000 Euro
2020

GraphPolaris: Visual Graph Data Analytics for the Masses
NWO Demonstrator
Dutch Research Council (NWO), 18 months, 150.000 Euro
2020

PROVEE: Progressive Explainable Embeddings
Research & Innovation Fund
Utrecht University, 25.000 Euro
Successful 2020

VQM: Visual Quality Metrics
ERC Starting Grant
European Research Council (ERC), 5 years, 2 Ph.D.
2019

Accelerating the Disc. of Electronic Materials through Human-Computer Active Search
NSF - HDR 19-543
National Science Foundation (NSF), Successful funding for 2 years, 1 Postdoc, 1 Ph.D.
Successful 2019

Converging Genomics, Phenomics, and Env. using Interpret. Machine Learning Models
NSF - HDR 19-543
National Science Foundation (NSF), Successful funding for 2 years, 1 Postdoc, 1 Ph.D.
Successful 2019

Visually Interactive Neural Probabilistic Models of Language
NSF - Medium
National Science Foundation (NSF), Successful funding $218,628.00
Successful 2019

Analyzing Synapses, Motifs and Neural Networks for Large-scale Connectomics
NSF - Medium
National Science Foundation (NSF), Successful funding $999,568.00
Successful 2018

Visually Interactive Neural Probabilistic Models of Language
NSF - Medium
National Science Foundation (NSF), 3 years, 1 Postdoc, 2 Ph.D.
2018

Visual Analysis of Recurrent Neural Networks
NSF - Medium
National Science Foundation (NSF), 3 years, 1 Postdoc, 2 Ph.D.
2017

Knowledge Generation in Visual Analytics
DFG - Research Grant
Deutsche Forschungsgesellschaft (DFG), Successful funding for 3 years, 1 Postdoc, 1 Ph.D.
Successful 2017

Hydrate: Human-inspired, yet data-driven real-time exploration at scale
Seed funding for EU projects
University of Konstanz, Successful seed funding
Successful 2016

Insvght: INformation Sharing and Visual analytics for solvinG new crimes and metHods in criminal inTelligence analysis
Seed funding for EU projects
University of Konstanz, Successful seed funding
Successful 2016

Victoria: Video analysis for Investigation of Criminal and TerrORIst Activities — *Seed funding for EU projects*
University of Konstanz, Successful seed funding — ***Successful 2016***

VIPER: VIsual Performance data analytics, Exploration, and Representation — *EU - FETHPC*
European Extreme Data and Computing Initiative, 6 Participants, 3 years, 97PM — *2014*

VIScales: Visualization Integrated with Scalable Algorithms Empowering European Industries — *EU - FP7 Integrated Project*
European Framework Program, 10 Participants, 4 years, 125 Person Month; 12.50/15 Points — *2013*

Quantitative Methods for Visual Computing | A2: Quantification of Visual Analytics Transformations and Mappings | B3: Quantitative Methods for Image-Based Visual Search — *DFG - Transregional Collaborative Research Center*
Deutsche Forschungsgesellschaft (DFG), 18 Participants, Successful funding 4 years, 2x 1 Ph.D. — ***Successful 2013***

VICIT: Visual Insights for Complex Information Tasks — *EU - FP7 Integrated Project*
European Framework Program, 9 Participants, 4 years, 138 Person Month; 11/15 Points — *2013*

Outreach and Service Activity

GraphPolaris | Valorization/Startup Effort | CEO
GraphPolaris is a no-code visual analytics platform for graph analysis. I have initiated the GraphPolaris startup idea with the goal to showcase how interactive visual data analysis can change the world for the better on societal challenging application cases (idea and commercialization effort, i.e., startup, `https://www.graphpolaris.com`). — *2020- PRESENT*

Open Science | Data, Models, and Software
Our group as a whole group is devoted to Open-Science efforts and unhindered access to scientific articles, access to data and code from public research. All my papers and most of my code and experiment data is openly available at freely accessible repositories and storage services, e.g. gitlab, github, osf, or arvix. I advocate the open science principle and its advantages to all my students independent of their scientific seniority. — *2013- PRESENT*

Industry Collaboration and Outreach | Public-Private Partnerships
Fraunhofer and IAV have developed into strong collaboration partners with research-wise challenging topics. Their topics relate to sustainable energy transition, smart environments (homes/cities/micro-grids), and complex and interrelated, time-dependent root-cause analyses complex systems. — *2020- PRESENT*

BostonVIS | Boston Visualization Community
Founder; The BostonVIS community channels all academic research efforts in the greater Boston area, coordinates invited talks, fosters collaboration and brainstorming, `http://bostonvis.org` — *2018 - PRESENT*

Organizing Committee
IEEE VIS Panels Chair (2020, 2021) | IEEE VIS Publicity Chair (2018, 2019) | Eurographics Workshop EuroVA Organization (2016 - 2021) | Associate Editor Computer Graphics and Visualization section of Frontiers Journal (2022) — *2016 - PRESENT*

Program Committee
Eurographics EuroVis Short Papers and Full Papers IPC (2011, 2018 - 2022), EuroVis STARs IPC Member (2019 - 2021) | IEEE VIS (2020 - 2022) | BigVIS (2021, 2022) | IEEE Workshop VisReg PC Member (2018), ISVC (2018 - 2019, 2022) — *2011 - PRESENT*

Reviewing

Conference/Short Papers/STARs: IEEE InfoVis and IEEE VAST (2013, 2014, 2016 - 2018, 2020 - 2022) | EuroGraphics EuroVis FP, SP, STARs (2013, 2016 - 2022) | PacificVIS (2018, 2019)| ACM SIGCHI Conference on Human Factors in Computing Systems (2014, 2015, 2017) | ISVC Conference (2018, 2019) | SISAP (2014, 2015) | IEEE BDVA (2019) | SIBGRAPI Conference (2018) | User Interface Software and Technology UIST (2019) | TVCG STAR reports (2018)

Journal Papers: InfoVis (2018) | TVCG (2019, 2020) | Computer Graphics Forum (2018, 2021) | IEEE Computer Graphics & Applications (2018, 2022) | ACM Transactions on Interactive Intelligent Systems TiiS (2022) | Information Systems Journal (2015) | GENP Journal (2018)

Workshops: IEEE VisReg (2018) | VisXVision (2019)

Grant Proposals: ERC Advanced (2016) | Mathematics of Information Technology and Complex Systems MITACS (2020, 2021)

2013 - PRESENT

Teaching Experience

Lecture Information Visualization — *Lecturer*
Utrecht University, Period 3, MSc, 100 students — *2022*

Lecture Data Analytics — *Lecturer*
Utrecht University, Period 1, BSc, 150 students — *2022*

Supervisor Software Project — *Teaching Fellow*
Utrecht University, Period 3, BSc, 10 students — *2022*

Lecture Data Analytics — *Lecturer*
Utrecht University, Period 1, BSc, 100 students — *2021*

Lecture Data Analytics — *Lecturer*
Utrecht University, Period 2, BSc, 175 students — *2020*

Lecture Computer Graphics — *Lecturer*
Utrecht University, Period 4, BSc, 250 students — *2020*

Supervisor Software Project — *Teaching Fellow*
Utrecht University, Period 3, BSc, 9 students — *2020*

Lecture 150VA Visual Analytics — *Teaching Fellow*
Tufts University, Graduate Level, 40 students — *2019*

Lecture CS271 Topics in Data Visualization — *Teaching Fellow*
Harvard University, Cambridge, Graduate Level, 20 students — *2019*

Lecture CS171 Information Visualization and Design — *Teaching Fellow*
Harvard University, Cambridge, Graduate Level, 80 students — *2018*

Lecture CS171 Information Visualization and Design — *Teaching Fellow*
Harvard University, Cambridge, Graduate Level, 80 students — *2017*

Lecture Information Visualization — *Lecturer*
University of Konstanz, Germany, BSc, 50 students — *2016*

Seminar Visual Data Analysis — *Teaching Assistant*
University of Konstanz, Germany, MSc, 10 students — *2016*

Lecture Multimedia Databases — *Co-Lecturer*
University of Konstanz, Germany, MSc, 60 students — *2016*

Lecture Multimedia Databases — *Teaching Assistant*
University of Konstanz, Germany, MSc, 60 students — *2015*

Seminar Powerwall Seminar — *Teaching Assistant*
University of Konstanz, Germany, MSc, 10 students — *2014*

Lecture Multimedia Databases — *Teaching Assistant*
University of Konstanz, Germany, MSc, 60 students — *2014*

Lecture Database Systems — *Teaching Assistant*
University of Konstanz, Germany, BSc, 100 students — *2013*

Lecture Analysis & Visualization — *Teaching Assistant*
University of Konstanz, Germany, BSc, 80 students — *2012*

Lecture Multimedia Databases — *Teaching Assistant*
University of Konstanz, Germany, MSc, 60 students — *2012*

Supervision Experience

Alister Machado dos Reis — *Ph.D., Daily Supervisor*

Visual Quality Metrics, *Measuring the task and domain effectiveness of visualizations, i.e., is a visualization useful? Core research topic with continuous applications in research and BSc/MSc theses.* — *2021–now*

Jiao Jiao — *Ph.D., Daily Supervisor*

Energy Efficient Smart Buildings in the Transformation of the Energy System, *Supporting a sustainable and effective transition to clean energy sources. The energy transition research is being conducted with the research collaborator Fraunhofer ISI (Institut fuer System Innovation) in Germany.* — *2020–now*

Yuncong Yu — *Ph.D., Daily Supervisor*

VA Methods for an Effective and User-guided Exploration of Multivariate Time Series, *Enabling localized pattern retrieval in multi-track timeseries with temporal constraints and retrieval invariances. Research topic introduced by the external collaboration partner IAV (automobile industry)* — *2020–now*

Frederik Dennig — *Ph.D., Co-Supervisor*

Visual Analytics Methods for Exploring High-Dimensional Data — *2019–now*

Shannon Robins — *Ph.D. Mentoring*

Cognitive Sciences & VA — *2019*

Ashley Suh — *Ph.D. Mentoring*

Graph Data Analysis — *2019*

Abigail Mosca (later Ass. Prof. Northeastern University) — *Ph.D. Mentoring*

Cognitive Sciences & VA — *2019*

Nam Wook Kim (later Ass. Prof. Boston College) — *Ph.D. Mentoring*

Biomedical Data Analysis — *2017–19*

Fritz Lekschas — *Ph.D. Mentoring*

Visual Storytelling — *2017–19*

Michael Blumenschein — *Ph.D. Mentoring*

Visual Analytics for Subspace Analysis — *2015–17*

Alexander Jaeger — *Ph.D. Mentoring*

High-dimensional time-dependent data with geospatial contexts — *2015–17*

Daniel Seebacher — *Ph.D. Mentoring*

Visual Analysis of time-series data; Sports Analytics — *2015–17*

Bruno Schneider — *Ph.D. Mentoring*

Model Visualization and Comparative Model Analysis — *2015–17*

Koray Poyraz — *MSc.*

Incremental RDF Schema Retrieval — *2022*

Irma Mastenbroek — *MSc.*

RDF Schema Visualization — *2022*

Bram Dijkers — *MSc.*

Learning Visual Quality Metrics with auto-encoders — *2022*

Job Heuvelmans — *MSc.*

Multivariate Matrix reordering with GraphEmbeddings — *2022*

Oscar Hsieh — *MSc.*
E-sports Moneyball: Clustering League of Legends players using node2vec — *2021*

Rik Koenis — *MSc.*
Visual analysis of (Variational) Graph Data Encoders — *2021*

Dylan Kryff — *MSc.*
Interac. Visual Pattern Search on Multivariate Time Series Using Sub-linear Algo. — *2021*

Bruno Dubota — *MSc.*
Measuring differential privacy for users records: A visualization approach — *2020*

Tayyebeh Zad Abedini Masouleh — *MSc.*
Exploration of Subspaces in Hierarchical Categorical Data — *2016*

Laura von Rueden (later Ph.D. TU Darmstadt) — *MSc.*
Visual Analytics of Parallel-Performance Data: Automatic Identification of Relevant and Similar Data Subsets — *2016*

Nayeem Khan — *MSc.*
Interactive Evaluation of Feature Vectors for Matrix Patterns — *2015*

Michael Hund/Blumenschein (later Ph.D. Konstanz) — *MSc.*
Subspace Nearest Neighbor Search in High-Dimensional Data: Detecting Relevant Subspaces for Similar Object Retrieval — *2015*

Fatih Korkmaz — *MSc.*
Feedback-Driven Inter. Expl. of Large HD Data Supported by Visual Classifier — *2014*

Lin Shao (later Ph.D. DBVIS and Graz) — *MSc.*
Sketch-based retrieval for Bivariate Data using Image-based Descriptors — *2012*

Jürgen Schniertshauer — *MSc.*
Improved similarity computation methods for heterogeneous text corpora, exemplified by the comment to news paragraph assignment problem — *2012*

Matthias Ziecker — *MSc.*
Design and Evaluation of a Focus+Context Visualization for Relational Text — *2012*

Casper Stiekema — *BSc.*
Multivariate NodeTrix Visualization — *2022*

Boris de Graaf — *BSc.*
NodeLink Hybrids Layout Algorithm — *2022*

Joep Robben — *BSc.*
Deep learning multidimensional projections using feed-forward networks — *2022*

Roan Bijleveld — *BSc.*
Innovation Accounting in GraphPolaris — *2022*

Willem Hulst — *BSc.*
Evaluating Graphical Perception of Treemaps with CapsuleNets — *2020*

Frederik Dennig (later Ph.D. Konstanz) — *BSc.*
Feedback-Driven Interactive Exploration of Large Multidimensional Data Supported by Self-Organizing Maps — *2016*

Michael Hundt — *BSc.*
User-Guided Matrix Sorting based on 2D Projections — *2013*