

Curriculum Vitae

Personal Data

Name Dr. **Marc Streit**
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Address Institute of Computer Graphics,
Johannes Kepler University Linz,
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Born February 26, 1983 in Klagenfurt, Austria



Short Biography

Marc Streit is a tenured Associate Professor at the Institute of Computer Graphics at Johannes Kepler University Linz in Austria where he leads the Visual Data Science group. He finished his PhD at the Institute for Computer Graphics and Vision at the Graz University of Technology in early 2011 and moved to Linz later that year. In 2012 he was a visiting researcher at the Computational Genomics Research Group at Harvard Medical School. As part of a Fulbright scholarship for research and lecturing he was a visiting professor at the Visual Computing Group at Harvard Paulson School in 2014. Marc also teaches courses at the Imperial College Business School and Salzburg University of Applied Sciences.

His scientific areas of interest include visualization, visual analytics, and biological data visualization, where he is particularly interested in the integrated analysis of large heterogeneous data. Together with his team he develops novel visual analysis tools for cancer research, drug discovery, and other application domains. Parts of his research are embedded in the Caleydo open-source project (<http://caleydo.org>), where he is one of the project leaders and founding-members. Since 2016 he is a CEO of the JKU spin-off company datavisyn.

Marc won Best Paper Awards at InfoVis' 13, BioVis' 12, InfoVis' 11, GI' 10 and Honorable Mention Awards at EuroVis' 16, CHI' 14, InfoVis' 14 and EuroVis' 12. He is a co-author of the Nature Methods Points of View column. In 2013 he co-edited the Special Issue on Visual Analytics in the IEEE Computer journal. Additionally, he actively contributes to the scientific community by serving on the organizing and program committee of several scientific events as well as by acting as a reviewer for high-quality journals and conferences. He was program chair of the IEEE Visualization in Data Science Symposium and papers and later general chair of BioVis, the Symposium on Biological Data Visualization.

Research Interests

- Visualization
- Visual Data Analysis / Visual Analytics / Visual Knowledge Discovery
- Biological Data Visualization

Professional

since 11/2016 Associate Professor at the Institute of Computer Graphics, Johannes Kepler University Linz, Austria
since 11/2016 CEO of datavisyn (datavisyn.io)
since 02/2016 Guest Lecturer at Imperial College London, UK
since 12/2011 Deputy Head of the Institute of Computer Graphics, Johannes Kepler University Linz, Austria
since 03/2012 Lecturer at Salzburg University of Applied Sciences, Austria
11/2011 - 10/2016 Assistant Professor at the Inst. of Computer Graphics, Johannes Kepler University Linz, Austria
07/2014 - 10/2014 Visiting Professor (Fulbright Scholarship for Research and Lecturing) at the School of Engineering & Applied Sciences, Harvard University, Cambridge, MA, USA
07/2012 - 10/2012 Visiting Researcher at the Center for Biomedical Informatics, Harvard Medical School, Boston, MA, USA
05/2011 - 10/2011 Postdoctoral Researcher and Lecturer at Graz University of Technology
07/2009 - 08/2009 Visiting Researcher at the Visual Computing and Computer Graphics Department, University of Rostock, Germany
10/2008 - 06/2011 Faculty Member (Universitätsassistent) at Graz University of Technology
07/2007 - 04/2011 Research Assistant at the Institute for Computer Graphics and Vision, Graz University of Technology

Education

- 10/2016 Habilitation degree from the Johannes Kepler University Linz
Thesis: *Integrated Visual Analysis for Data-Driven Sciences*
- 05/2011 PhD degree (Dr.techn.) from the Graz University of Technology *with highest distinction*
Thesis: *Guided Visual Analysis of Heterogeneous Data*
Supervision: Prof. Dieter Schmalstieg
- 08/2009 - 04/2011 Associated PhD Student in the Research Training Group dIEM oSiRiS,
University of Rostock, Germany
- 07/2007 - 04/2011 Doctoral program in Computer Science at the Graz University of Technology
- 06/2007 Master's degree (Dipl.-Ing.) from Graz University of Technology *with highest distinction*
Thesis: *Metabolic Pathways Influencing Gene-Expression Analysis*
Supervision: Prof. Dieter Schmalstieg, Michael Kalkusch
- 07/2006 - 06/2007 Master's studies in Information Management at the Graz University of Technology
- 07/2006 Bachelor's degree (Bakk.rer.soc.oec) from the Graz University of Technology
Thesis: *Intuitive Data Visualization and Interactive Data Meta-Evaluation in Automated Multi-Parameter Tissue Cytometry*, Supervision: Prof. Horst Bischof
- 10/2002 - 07/2006 Bachelor's studies in Software Engineering and Management at the Graz University of Technology

Awards and Scholarships

- 2016 **Honorable Mention Paper Award** (top 3 / 183 submissions),
Eurographics Conference on Visualization (EuroVis'16)
- 2015 **Human Technology Interface Award** granted by the State of Styria
- 2015 **Outstanding Achievements in Teaching Award** granted by the State of Upper Austria
- 2015 **Best Poster Award** (of 81 submissions),
IEEE Information Visualization Conference (InfoVis'15)
- 2015 **Honorable Mention Poster Award** (top 4 of 81 submissions),
IEEE Information Visualization Conference (InfoVis'15)
- 2014 **Fulbright Scholarship** for Research and Lecturing at Harvard University
- 2014 **Honorable Mention Paper Award** (top 3 / 196 submissions),
IEEE Information Visualization Conference (InfoVis'14)
- 2014 **Honorable Mention Paper Award** (top 5% / 3200 submissions),
ACM Conference on Human Factors in Comp. Systems (CHI'14)
- 2013 **Best Paper Award** (of 152 submissions),
IEEE Information Visualization Conference (InfoVis'13)
- 2012 **Best Paper Award** (of 32 submissions),
IEEE Symposium on Biological Data Visualization (BioVis'12)
- 2012 **3rd Best Paper Award** (of 202 submissions),
Eurographics Conference on Visualization (EuroVis'12)
- 2011 **Best Paper Award** (of 172 submissions),
IEEE Information Visualization Conference (InfoVis'11)
- 2010 **Best Student Paper Award**, ACM Graphics Interface (GI'10)
- 2009 **Scholarship for short time academic research and expert courses abroad** (KUWI) granted
by the Graz University of Technology
- 2006 **Award for excellent performance as a student** (Leistungsstipendium) granted by the Faculty
of Computer Science, Graz University of Technology
- 2006 **Research grant for students** (Förderstipendium) awarded by the Faculty of Computer Science,
Graz University of Technology

Grants

- 2017 - 2024 *Pro2Future – Products and Production Systems of the Future*, Austrian Research Promotion
Agency (FFG), COMET K1-Centre program, grant no. 854184, 19M EUR.
- 2015 - 2018 *TourGuide - Navigation System for Capturing and Analyzing Complex Clinical Data*, State of
Upper Austria, Innovatives OÖ2020 program, grant no. 851460, 400k EUR.
- 2015 - 2018 *VisOnFire - Visual Analysis of Large and Heterogeneous Scientific Workflows for Analytical
Provenance*, Austrian Science Fund (FWF), grant no. P27975-NBL, 348k EUR.
- 2015 - 2018 *Development of Multi-Dimensional Genomic Data Visualization and Data Mining Techniques*,
Boehringer Ingelheim Regional Center Vienna, 210k EUR.

- 2013 - 2016 *PIPES-VS-DAMS - Privacy Preserving Visual Dynamic Network Analysis for Advanced System Monitoring on Multiple Scales*, Austrian Research Promotion Agency (FFG), IKT der Zukunft program, grant no. 840232, 410k EUR.
- 2013 - 2016 *Austrian Teaching Cooperation in Visual Computing*, Federal Ministry of Science, Research and Economy, 96k EUR.
- 2010 - 2013 *CaleydoPLEX - Information Exploration in Teams*, Austrian Science Fund (FWF), grant no. P22902, 225k EUR.
- 2009 - 2012 *InGeneious - Visualization of Biomolecular and Clinical Data*, Austrian Research Promotion Agency (FFG), BRIDGE program, grant no. 385567, 180k EUR.

Editorial and Committee Functions

Editorial

- 2015 *Guest Editor* of the BMC Bioinformatics Special Issue on Highlights from the 5th Symposium on Biological Data Visualization
- 2013 *Guest Editor* of the IEEE Computer Special Issue on Visual Analytics

Organizing Committee

- 2016 *Paper Chair* at the IEEE Symposium on Biological Data Visualization (BioVis)
- 2015 - 2016 *Program Chair* at the IEEE Symposium on Visualization in Data Science (VDS)
- 2015 - 2016 *Meetups Chair* at the IEEE Conference on Information Visualization (InfoVis)
- 2015 - 2016 *Publication Chair* at the Symposium on Biological Data Visualization (BioVis)
- 2014 *Poster Chair* at the Symposium on Biological Data Visualization (BioVis)
- 2012 - 2013 *Website Chair* at the IEEE Symposium on Biological Data Visualization (BioVis)

Program Committee

- 2013 - 2015, 2017 IEEE Conference on Information Visualization (InfoVis)
- 2014 - 2016 Eurographics Conference on Visualization (EuroVis)
- 2014 - 2017 Eurographics Conference on Visualization Short Papers (EuroVis Short Papers)
- 2012 - 2014 IEEE Symposium on Biological Data Visualization (BioVis)
- 2014 - 2016 Conference on Information Visualization Theory and Applications (IVAPP)
- 2013 - 2015, 2017 EuroVis Workshop on Visual Analytics (EuroVA)
- 2014 - 2015 Conference on Cognitive Computing and Data-driven Business (i-KNOW)
- 2013 Conference on Intelligent Systems for Molecular Biology (ISMB)
- 2015, 2014, 2012 Eurographics Workshop on Visual Computing for Biology and Medicine (VCBM)
- 2010 - 2015 Central European Seminar on Computer Graphics (CESCG)
- 2010 - 2012 Conference on Information Visualisation (IV)
- 2012 - 2013 DATA 2012 ICETE, Special Session HCI-KDD in Computational Sciences

Other

- 2016 *Best Poster Committee* at the IEEE Conference on Information Visualization (InfoVis)
- 2015 *External Thesis Reviewer* at the Bauhaus University Weimar
- 2014 *Habilitation Committee* at the Johannes Kepler University Linz
- 2013 *Best Poster Judge* at the IEEE Symposium on Biological Data Visualization (BioVis)

Reviewing for Scientific Conferences and Journals

- 2016 European Research Council (ERC) Consolidator Grant
- 2015 German Research Foundation (DFG)
- 2012 - 2017 IEEE Transactions on Visualization and Computer Graphics (TVCG)
- 2010 - 2017 IEEE Conference on Information Visualization (InfoVis)
- 2010 - 2017 Eurographics Conference on Visualization (EuroVis)
- 2014 ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)
- 2010 - 2012 IEEE Conference on Visual Analytics Science and Technology (VAST)
- 2012 - 2013 IEEE Pacific Visualization Symposium (PacificVis)
- 2009 - 2013, 2017 Bioinformatics Journal, Oxford University Press
- 2016 IEEE Transactions on Multimedia
- 2014 BMC Bioinformatics
- 2014 Computer Graphics & Applications (CG&A)

2013 - 2015, 2017	EuroVis Workshop on Visual Analytics (EuroVA)
2012 - 2014	IEEE Symposium on Biological Data Visualization (BioVis)
2013, 2015	Eurographics Computer Graphics Forum (CGF)
2013	Elsevier Journal of Computers & Graphics (C&G)
2013	IEEE Computer Journal
2013 - 2014	Conference on Information Visualization Theory and Applications (IVAPP)
2013	Conference on Human Factors in Computing & Informatics (SouthCHI)
2012	Research Foundation Flanders (FWO)
2014, 2012	Eurographics Workshop on Visual Computing for Biology and Medicine (VCBM)
2012, 2009	Conference on Information Visualisation (IV)
2010 - 2014	Central European Seminar on Computer Graphics (CESCG)
2011	Sage Information Visualization Journal
2011	IEEE VisWeek Posters
2010	IEEE Virtual Reality Conference (VR)
2010	IEEE Visual Analytics (VAST) Challenge
2014, 2010	Austrian Academy of Sciences (Österreichische Akademie der Wissenschaften)
2014	Austrian Computer Society (Österreichische Computer Gesellschaft)

Memberships in Professional Societies and Interest Groups

- IEEE Computer Society
- IEEE Technical Committee on Visualization and Graphics (VGTC)
- Austrian Computer Society (Österreichische Computer Gesellschaft)

Talks

2017-04-20	<i>From Visual Exploration of Biomedical Data to Storytelling and Back Again</i> , Keynote address at the 3rd BiVi (Biological Visualisation Community) Annual Meeting, Edinburgh, UK.
2017-02-27	<i>From Visual Exploration to Storytelling and Back Again</i> , Invited talk at the Visual Computing Center, King Abdullah University of Science & Technology (KAUST), Thuwal, Saudi Arabia.
2017-02-23	<i>Daten sehen - Krebs verstehen. Mit Big Data-Analyse und Visualisierung dem Krebs auf der Spur</i> , Keynote address at the JKU Next Generation Talk Series, Ars Electronica Center, Linz, Austria.
2016-10-20	<i>Searching for a Needle in a Data Stack: How Visualization Helps to Understand Biomedical Data</i> , Keynote address at the Austrian Computer Science Day, Linz, Austria.
2016-10-17	<i>Interactive Data Exploration: Going (Far) Beyond Static Plots</i> , Invited talk at the Boehringer Ingelheim, Regional Center Vienna, Vienna, Austria.
2016-10-13	<i>TourGuide - Navigation System for Capturing and Analyzing Complex Clinical Data</i> , Invited talk at the DIGITAL MEDTECH, Linz, Austria.
2016-10-07	<i>From Visual Exploration to Storytelling and Back Again</i> , Invited Talk at the Institute of Computer Graphics and Algorithms, TU Wien, Vienna, Austria.
2016-10-04	<i>Integrated Visual Analysis for Data-Driven Sciences</i> , Habilitation Colloquium (habilitation defense), Linz, Austria.
2016-06-14	<i>How Visualization Helps to Understand Biomedical Data</i> , Keynote address at the Boehringer Ingelheim Global Computational Biology Retreat, Mainz, Germany.
2016-06-07	<i>Leveraging Provenance for Storytelling and Reproducibility</i> , Invited talk at the EuroRV3 Workshop, Groningen, Netherlands.
2016-03-24	<i>Searching for a Needle in a Data Stack: How Visualization Helps to Understand Biomedical Data</i> , Keynote address at the Meetup: Vitamin D3 (.js) – Injecting Life into Visualizations for Biomedical Research, Berlin, Germany.
2015-03-10	<i>Integrated Visual Analysis for Data-Driven Sciences</i> , Invited talk at IST Austria, Klosterneuburg, Austria.
2016-02-03	<i>TourGuide - Personalisierte Medizin durch Navigationssystem für die Erfassung und Analyse großer, komplexer Daten</i> , Kepler University Clinic Tumor Center Conference, Linz, Austria.
2015-11-24	<i>Visual Analysis of Large and Heterogeneous Biological Data</i> , Keynote address at the Data Visualization for Biology Workshop, Leuven, Belgium.
2015-07-07	<i>Extracting, Comparing, and Manipulating Subsets Across Tabular Data</i> , Invited talk at the Bauhaus University Weimar, Virtual Reality and Visualization Research Group, Weimar, Germany.

- 2015-06-19 *Visual Analysis of Heterogeneous Biomolecular Data*, Invited talk at the Medical University of Vienna, Dept. of Vascular Biology and Thrombosis Research, Vienna, Austria.
- 2015-06-10 *Searching for a Needle in a Data Stack: How Visualization Helps to Understand Data*, Invited talk at the 40th Anniversary Celebration of the Austrian Computer Society, Vienna, Austria.
- 2015-05-13 *Extracting, Comparing, and Manipulating Subsets Across Tabular Data*, Invited talk at the giCentre, City University London, London, UK.
- 2015-05-12 *Visual Analysis of Heterogeneous Biomolecular Data*, Invited talk at the Biomedical Image Analysis Group, Imperial College London, London, UK.
- 2015-02-12 *Extracting, Comparing, and Manipulating Subsets Across Tabular Data*, Invited talk at the VDA Colloquium, University of Vienna, Vienna, Austria.
- 2014-11-25 *Visual Analysis of Heterogeneous Molecular Data with Caleydo*, Keynote address at the VIB Training Course on Biological Data Visualization - the art of presenting data, Ghent, Belgium.
- 2014-11-18 *Visual Data Science*, Invited talk at the Pro2Future Workshop: Towards a Competence Center on Products and Production of the Future in Upper Austria, Linz, Austria.
- 2014-09-14 *Visualizing Heterogeneous, Multi-Dimensional Data*, Invited talk at the Computer Science and Artificial Intelligence Laboratory (CSAIL), MIT, Cambridge, MA, USA.
- 2014-07-12 *Fundamentals of Visualizing Biological Data*, Invited talk at the Symposium on Biological Data Visualization (BioVis), Boston, MA, USA.
- 2014-07-08 *Visual Analysis of Tabular Data Subsets*, Invited talk at the Visual Computing Group, School of Engineering and Applied Sciences (SEAS), Harvard University, Cambridge, MA, USA.
- 2014-05-23 *Visual Analysis of Heterogeneous Data for Molecular Biology*, Invited talk at the MedViz Seminar, Bergen, Norway.
- 2014-03-09 *What comes first? Visual Analysis of Multi-Attribute Rankings*, Invited talk at the VRVis Forum, Vienna, Austria.
- 2014-02-18 *Suche nach der Nadel im Genhaufen: Wie Visualisierung hilft, Krebs zu verstehen*, Invited talk at the JKU Zukunft der Forschung event, Linz, Austria.
- 2013-09-11 *Visualizing Biomolecular Data*, Invited talk at the Summer School on Bioinformatics, Biomedicine, and Cloud Computing, Malaga, Spain.
- 2013-02-22 *Visual Cancer Subtype Analysis*, Invited talk at the Symposium on Understanding Cancer Genomics through Information Visualization at Tokyo University, Tokyo, Japan.
- 2012-09-14 *Visual Cancer Subtype Analysis*, Invited talk at the Harvard Medical School, Center for Biomedical Informatics, Park Lab, Boston, MA, USA.
- 2012-06-25 *Caleydo - Visualization for Molecular Biology*, Invited talk at the Media Interaction Lab, University of Applied Sciences Upper Austria, Hagenberg, Austria.
- 2012-04-08 *Caleydo - Visualization for Molecular Biology*, Invited talk at the CHIPS Network organized by Johnson & Johnson, remote.
- 2012-01-24 *Visual Analysis of Heterogeneous Data*, Invited talk at the Image and Signal Processing Group, University of Leipzig, Leipzig, Germany.
- 2012-01-13 *Visual Analysis of Heterogeneous Data*, Invited talk at the Institute of Computer Graphics and Algorithms, Vienna University of Technology, Vienna, Austria.
- 2011-11-24 *Visualization of Biomolecular Data*, Invited talk at the Institute of Bioinformatics, Johannes Kepler University Linz, Linz, Austria.
- 2011-10-27 *Model-Driven Design for the Visual Analysis of Heterogeneous Data*, IEEE VisWeek, Special TVCG Session, Providence, RI, USA.
- 2011-05-19 *Visual Support for Heterogeneous Analysis Scenarios*, Panelist at the Workshop on Trends in Visual Computing and Visual Analytics, Kühlungsborn, Germany.
- 2011-04-13 *Guided Visual Analysis of Heterogeneous Data*, PhD Defense, Graz, Austria.
- 2011-03-03 *Collaborative Information Linking: Bridging Knowledge Gaps Between Users by Linking Across Applications*, IEEE Pacific Visualization Symp. (PacificVis 2011), Hong Kong, China.
- 2010-09-21 *Caleydo: Visual Analysis of Biomolecular Data*, Invited talk at the MRC Laboratory of Molecular Biology (LMB), Cambridge, UK.
- 2010-09-20 *Caleydo: Visual Analysis of Biomolecular Data*, Invited talk at the European Bioinformatics Institute (EBI), Cambridge, UK.
- 2010-07-01 *Caleydo: Visual Analysis of Biomolecular Data*, Invited talk at the Eurographics Workshop on Visual Computing for Biology and Medicine (VCBM), Leipzig, Germany.
- 2010-03-11 *Caleydo and Visual Links*, Invited talk at the VRVis Research Company, Vienna, Austria.
- 2009-10-11 *Towards Multi-User Multi-Level Interaction*, CoVIS Workshop on Collaborative Visualization on Interactive Surfaces (IEEE VisWeek), Atlantic City, NJ, USA.

- 2009-07-08 *Connecting Genes With Diseases - A Holistic Approach*, Invited talk at the Research Training Group dIEM oSiRiS, Rostock, Germany.
- 2009-07-07 *Caleydo Project Overview*, Invited talk at the Visual Computing and Computer Graphics Department at the University of Rostock, Rostock, Germany.
- 2009-06-20 *Gaze-Based Focus Adaption in an Information Visualization System*, Computer Graphics and Visualization and Image Processing 2009 Conference (CGVCVIP), Algarve, Portugal.
- 2009-02-26 *Caleydo: Visualization of Gene Expression Data in the Context of Biological Processes*, Invited talk at the AUVA Research Center for Traumatology, Vienna, Austria.
- 2008-10-01 Welcome Day at the Graz University of Technology, Graz, Austria.
Experiences of a Graduate
- 2008-07-10 *Novel InfoVis Techniques Applied to Pathways and Gene Expression Data*, Invited talk at the Institute for Genomics and Bioinformatics, Graz University of Technology, Austria.
- 2008-05-27 *Navigation and Exploration of Interconnected Pathways*, EuroVis Conference, Eindhoven, Netherlands.
- 2008-03-27 Open House at the Graz University of Technology, Graz, Austria.
Experiences of a Graduate
- 2007-20-11 Welcome Day at the Graz University of Technology, Graz, Austria.
Experiences of a Graduate
- 2007-04-23 *Interactive Visualization of Complex Graphs*, Central European Seminar on Computer Graphics (CESCG), Budmerice, Slovakia.

Publications

Editorial

- [1] Jan Aerts, G. E. Marai, Kay Nieselt, Cydney Nielsen, Marc Streit, and Daniel Weiskopf. Highlights from the 5th Symposium on Biological Data Visualization: Part 1. *BMC Bioinformatics*, 16(Suppl 11):S1, 2015.
- [2] Jan Aerts, G. E. Marai, Kay Nieselt, Cydney Nielsen, Marc Streit, and Daniel Weiskopf. Highlights from the 5th Symposium on Biological Data Visualization: Part 2. *BMC Proceedings*, 9(Suppl 6):S1, 2015.
- [3] Marc Streit and Oliver Bimber. Visual Analytics: Seeking the Unknown. *Computer*, 46(7):20–21, 2013. Guest Editors' Introduction.

Peer-Reviewed and Invited Journal Publications

- [4] Davide Ceneda, Theresia Gschwandtner, Thorsten May, Silvia Miksch, Hans-Jörg Schulz, Marc Streit, and Christian Tominski. Characterizing Guidance in Visual Analytics. *IEEE Transactions on Visualization and Computer Graphics (VAST'16)*, 23(1):111–120, 2017.
- [5] Stephan Pajer, Marc Streit, Thomas Torsney-Weir, Florian Spechtenhauser, Torsten Möller, and Harald Piringer. WeightLifter: Visual Weight Space Exploration for Multi-Criteria Decision Making. *IEEE Transactions on Visualization and Computer Graphics (InfoVis'16)*, 23(1):611–620, 2017.
- [6] H. Stitz, S. Luger, M. Streit, and N. Gehlenborg. AVOCADO: Visualization of Workflow-Derived Data Provenance for Reproducible Biomedical Research. *Computer Graphics Forum*, 35(3):481–490, 2016.
- [7] Samuel Gratzl, Alexander Lex, Nils Gehlenborg, Nicola Cosgrove, and Marc Streit. From Visual Exploration to Storytelling and Back Again. *Computer Graphics Forum*, 35(3):491–500, June 2016.
- [8] Christian Partl, Samuel Gratzl, Marc Streit, Anne Mai Wassermann, Hanspeter Pfister, Dieter Schmalstieg, and Alexander Lex. Pathfinder: Visual Analysis of Paths in Graphs. *Computer Graphics Forum (EuroVis'16)*, 35(3):71–80, June 2016.
- [9] Holger Stitz, Samuel Gratzl, Wolfgang Aigner, and Marc Streit. ThermalPlot: Visualizing Multi-Attribute Time-Series Data Using a Thermal Metaphor. *IEEE Transactions on Visualization and Computer Graphics*, 22(12):2594–2607, 2016.
- [10] Marc Streit and Nils Gehlenborg. Points of View: Temporal data. *Nature Methods*, 12(2):97, 2015.
- [11] Marc Streit, Alexander Lex, Samuel Gratzl, Christian Partl, Dieter Schmalstieg, Hanspeter Pfister, Peter J. Park, and Nils Gehlenborg. Guided visual exploration of genomic stratifications in cancer. *Nature Methods*, 11(9):884–885, 2014.

- [12] Samuel Gratzl, Nils Gehlenborg, Alexander Lex, Hanspeter Pfister, and Marc Streit. Domino: Extracting, Comparing, and Manipulating Subsets across Multiple Tabular Datasets. *IEEE Transactions on Visualization and Computer Graphics (InfoVis '14)*, 20(12):2023–2032, 2014.
- [13] Thomas Mühlbacher, Harald Piringer, Samuel Gratzl, Michael Sedlmair, and Marc Streit. Opening the Black Box: Strategies for Increased User Involvement in Existing Algorithm Implementations. *IEEE Transactions on Visualization and Computer Graphics (VAST '14)*, 20(12):1643–1652, 2014.
- [14] Christian Partl, Alexander Lex, Marc Streit, Hendrik Strobelt, Anne Mai Wassermann, Hanspeter Pfister, and Dieter Schmalstieg. ConTour: Data-Driven Exploration of Multi-Relational Datasets for Drug Discovery. In *Poster Compendium of the Symposium on Biological Data Visualization (BioVis '14)*, 2014.
- [15] Marc Streit and Nils Gehlenborg. Points of View: Bar charts and box plots. *Nature Methods*, 11(2):117–117, 2014.
- [16] Marc Streit, Samuel Gratzl, Michael Gillhofer, Andreas Mayr, Andreas Mitterecker, and Sepp Hochreiter. Furby: Fuzzy Force-Directed Bicluster Visualization. *BMC Bioinformatics*, 15(Suppl 6):S4, 2014.
- [17] Cagatay Turkay, Alexander Lex, Marc Streit, Hanspeter Pfister, and Helwig Hauser. Characterizing Cancer Subtypes Using Dual Analysis in Caleydo StratomeX. *IEEE Computer Graphics and Applications*, 34(2):38–47, 2014.
- [18] Marc Streit and Oliver Bimber. Visual Analytics: Seeking the Unknown. *Computer*, 46(7):20–21, 2013. Guest Editors' Introduction.
- [19] Samuel Gratzl, Alexander Lex, Nils Gehlenborg, Hanspeter Pfister, and Marc Streit. LineUp: Visual Analysis of Multi-Attribute Rankings. *IEEE Transactions on Visualization and Computer Graphics (InfoVis '13)*, 19(12):2277–2286, 2013.
- [20] Alexander Lex, Christian Partl, Denis Kalkofen, Marc Streit, Samuel Gratzl, Anne Mai Wassermann, Dieter Schmalstieg, and Hanspeter Pfister. Entourage: Visualizing Relationships between Biological Pathways using Contextual Subsets. *IEEE Transactions on Visualization and Computer Graphics (InfoVis '13)*, 19(12):2536–2545, 2013.
- [21] Christian Partl, Alexander Lex, Marc Streit, Denis Kalkofen, Karl Kashofer, and Dieter Schmalstieg. en-Route: Dynamic Path Extraction from Biological Pathway Maps for Exploring Heterogeneous Experimental Datasets. *BMC Bioinformatics*, 14(Suppl 19):S3, 2013.
- [22] Marc Streit, Hans-Jörg Schulz, Alexander Lex, Dieter Schmalstieg, and Heidrun Schumann. Model-Driven Design for the Visual Analysis of Heterogeneous Data. *IEEE Transactions on Visualization and Computer Graphics*, 18(6):998–1010, 2012.
- [23] Alexander Lex, Marc Streit, Hans-Jörg Schulz, Christian Partl, Dieter Schmalstieg, Peter J. Park, and Nils Gehlenborg. StratomeX: Visual Analysis of Large-Scale Heterogeneous Genomics Data for Cancer Subtype Characterization. *Computer Graphics Forum (EuroVis '12)*, 31(3):1175–1184, 2012.
- [24] Rostislav Klebnikov, Bernhard Kainz, Markus Steinberger, Marc Streit, and Dieter Schmalstieg. Procedural Texture Synthesis for Zoom-Independent Visualization of Multivariate Data. *Computer Graphics Forum (EuroVis '12)*, 31(3):1355–1364, 2012.
- [25] Markus Steinberger, Manuela Waldner, Alexander Lex, Marc Streit, and Dieter Schmalstieg. Context-Preserving Visual Links. *IEEE Transactions on Visualization and Computer Graphics (InfoVis '11)*, 17(12):2249–2258, 2011.
- [26] Alexander Lex, Hans-Jörg Schulz, Marc Streit, Christian Partl, and Dieter Schmalstieg. VisBricks: Multiform Visualization of Large, Inhomogeneous Data. *IEEE Transactions on Visualization and Computer Graphics (InfoVis '11)*, 17(12):2291–2300, 2011.
- [27] Alexander Lex, Marc Streit, Christian Partl, Karl Kashofer, and Dieter Schmalstieg. Comparative Analysis of Multidimensional, Quantitative Data. *IEEE Transactions on Visualization and Computer Graphics (InfoVis '10)*, 16(6):1027–1035, 2010.
- [28] Marc Streit, Alexander Lex, Michael Kalkusch, Kurt Zatloukal, and Dieter Schmalstieg. Caleydo: Connecting Pathways and Gene Expression. *Bioinformatics*, 25(20):2760–2761, 2009.
- [29] Marc Streit, Michael Kalkusch, Karl Kashofer, and Dieter Schmalstieg. Navigation and Exploration of Interconnected Pathways. *Computer Graphics Forum (EuroVis '08)*, 27(3):951–958, 2008.

- [30] Marc Streit, Rupert C. Ecker, Katja Österreicher, Georg E. Steiner, Horst Bischof, Christine Bangert, Tamara Kopp, and Radu Rogojanu. 3d parallel coordinate systems - A new data visualization method in the context of microscopy-based multicolor tissue cytometry. *Cytometry Part A*, 69A(7):601–611, 2006.
- [31] Rupert C. Ecker, Radu Rogojanu, Marc Streit, Katja Österreicher, and Georg E. Steiner. An improved method for discrimination of cell populations in tissue sections using microscopy-based multicolor tissue cytometry. *Cytometry Part A*, 69A(3):119–123, 2006.

Peer-Reviewed Conference and Workshop Publications

- [32] Holger Stitz, Samuel Gratzl, Michael Krieger, and Marc Streit. CloudGazer: A Divide-and-Conquer Approach for Monitoring and Optimizing Cloud-Based Networks. In *Proceedings of the IEEE Pacific Visualization Symposium (PacificVis '15)*, pages 175–182. IEEE, 2015.
- [33] Thomas Geymayer, Markus Steinberger, Alexander Lex, Marc Streit, and Dieter Schmalstieg. Show me the Invisible: Visualizing Hidden Content. In *Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems, CHI '14*, pages 3705–3714. ACM, 2014.
- [34] Christian Partl, Alexander Lex, Marc Streit, Denis Kalkofen, Karl Kashofer, and Dieter Schmalstieg. en-Route: Dynamic Path Extraction from Biological Pathway Maps for In-Depth Experimental Data Analysis. In *Proceedings of the IEEE Symposium on Biological Data Visualization (BioVis '12)*, pages 107–114, 2012.
- [35] Clemens Holzhüter, Alexander Lex, Dieter Schmalstieg, Hans-Jörg Schulz, Heidrun Schumann, and Marc Streit. Visualizing Uncertainty in Biological Expression Data. In *Proceedings of the SPIE Conference on Visualization and Data Analysis (VDA '12)*, volume 8294, page 82940O. IS&T/SPIE, 2012.
- [36] Thomas Geymayer, Alexander Lex, Marc Streit, and Dieter Schmalstieg. Visualizing the Effects of Logically Combined Filters. In *Proceedings of the Conference on Information Visualisation (IV' 11)*, pages 47–52. IEEE, 2011.
- [37] Alexander Lex, Marc Streit, Ernst Kruijff, and Dieter Schmalstieg. Caleydo: Design and Evaluation of a Visual Analysis Framework for Gene Expression Data in its Biological Context. In *Proceedings of the IEEE Symposium on Pacific Visualization (PacificVis '10)*, pages 57–64. IEEE, 2010.
- [38] Manuela Waldner, Werner Puff, Alexander Lex, Marc Streit, and Dieter Schmalstieg. Visual Links Across Applications. In *Proceedings of the Conference on Graphics Interface (GI '10)*, pages 129–136. Canadian Human-Computer Communications Society, 2010.
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Teaching Experience

Courses at Johannes Kepler University Linz

Since 2015	Visual Analytics (Lab)
Since 2012	Information Visualization (Lecture and lab)
Since 2012	Computer Graphics (Lab)
Since 2012	Visual Analytics (Lecture)
Since 2012	Accompanying Courses for PhD, Master and Bachelor Students (Seminar)
2013	Visual Computing for Virtual Anatomy (Lecture)

Courses at Imperial College London

since 2016	BS1807 - Data Visualization (Lecture and lab)
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Courses at Harvard University

2014	CS 109 / AC 209 / Stat 121 / E-109 - Data Science (Lecture: Visualization part)
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Courses at Salzburg University of Applied Science

2016	Web-Based Information Visualization (Lecture and lab)
2013, 2015	Visual Analytics (Lecture and lab)
2012 - 2014	Computer Graphics (Lecture and lab)

Courses at Graz University of Technology

2009 - 2011	Selected Topics Computer Graphics: Visualization (Lecture and lab)
2009 - 2011	Computer Graphics 1 & 2 (Lab)
2009 - 2011	Computer Graphics 2 (Lab)
2009 - 2011	Distributed Systems (Lab)
2009 - 2011	Accompanying Courses for Project Students: Introduction to Scientific Work, Presentation Techniques (Lecture & lab)
2008 - 2010	Real-time Graphics (Lab)
2007 - 2010	Virtual Reality (Lab)

Tutorials, Workshops and Guest Lectures

2017-04-21	<i>Creating Data Visualisations</i> , 3rd BiVi (Biological Visualisation Community) Annual Meeting, held together with Jan Aerts, Edinburgh, UK.
2015-10-09	<i>Data Visualization and Analysis</i> , Smart Production Qualification Network funded by the Austrian Research Promotion Agency (FFG), Hagenberg, Austria.
2015-08-21	<i>Visualization & Visual Analytics</i> , International Summer School on Visual Computing organized by Fraunhofer IGD, Rostock, Germany.
2015-05-19	<i>Biological Data Visualization</i> , Guest Lecture at Visualization Course, University of Vienna, Vienna, Austria.
2013-02-21	<i>Cancer Data Analysis with Caleydo StratomeX and enRoute</i> , Symposium on Understanding Cancer Genomics through Information Visualization at Tokyo University, held together with Alexander Lex, Tokyo, Japan.
2012-10-15	<i>Connecting the Dots - Showing Relationships in Data and Beyond</i> , VisWeek'12, held together with Hans-Jörg Schulz and Alexander Lex, Seattle, WA, USA.
2012-01-23	<i>Visual Linking in Information Visualization and Beyond</i> , Guest Lecture at Visualization Course, University of Rostock, held together with Hans-Jörg Schulz, Rostock, Germany.

Student Supervision

Since 04/2017	PhD Thesis by Martin Ennemoser <i>Topic TBD</i>
Since 02/2017	Master's Thesis by Klaus Eckelt <i>Intelligent User Guidance - From Clinical Data to Personalized Medicine</i>
Since 09/2016	PhD Thesis by Bikram Kawan <i>Topic TBD</i>

Since 10/2015	Master's Thesis by Michael Gillhofer <i>Provenance Graph Based Steering</i>
Since 03/2014	Master's Thesis by Reem Hourieh <i>Comparative Visualization of Large Tabular Data</i>
Since 11/2013	PhD Thesis by Holger Stütz <i>Visual Analysis of Large, Heterogeneous, Multi-Scale IT-Infrastructure Data</i>
Since 11/2012	PhD Thesis by Samuel Gratzl <i>Guided Visual Analysis of Heterogeneous Data</i>
Since 06/2012	PhD Thesis by Christian Partl <i>Visual Integration of Heterogeneous Data and Its Representations</i>
01/2014 - 02/2016	Master's Thesis by Stefan Luger <i>Interactive Visualization of Provenance Graphs for Reproducible Biomedical Research</i>
03/2014 - 02/2015	Master's Project by Reem Hourieh <i>Enhanced Edge Bundling</i>
07/2013 - 01/2014	Master's Project by Stefan Luger <i>Workflow Visualization for the Refinery Platform</i>
11/2012 - 11/2013	Bachelor's Thesis by Michael Gillhofer <i>Bi-Cluster Visualization</i>
10/2011 - 03/2013	Master's Thesis by Thomas Geymayer <i>Context Preserving Visual Links Across Applications</i>
03/2011 - 07/2012	Master's Thesis by Christian Partl <i>Multiform Visualization of Heterogeneous Data</i>
10/2010 - 09/2011	Bachelor's Thesis by Thomas Geymayer <i>Filter Pipeline Visualization</i>
02/2010 - 01/2011	Bachelor's Thesis by Michael Kerber <i>Eye-Controlled Game</i>
02/2010 - 12/2010	Bachelor's Thesis by Hannes Plank <i>Eye-Controlled View Management</i>
04/2010 - 10/2010	Bachelor's Thesis by Michael Lafer <i>Cluster Visualization using Treemaps</i>
10/2009 - 09/2010	Master's Thesis by Jürgen Pillhofer <i>Caleydo: Integrating a Scatter Plot Visualization</i>
04/2009 - 09/2009	Bachelor's Thesis by Oliver Pimas <i>Visual Links in a 2D/3D Information Visualization System</i>
10/2009 - 10/2010	Master's Project by Christian Partl <i>Comparative Analysis</i>
06/2009 - 04/2010	Bachelor's Thesis by Stefan Sauer <i>Visualization of Patient Data using Glyphs</i>
03/2009 - 01/2010	Bachelor's Thesis by Helmut Pichlhöfer <i>Visualizing Dependencies between Pathway Graphs</i>
02/2009 - 01/2010	Master's Thesis by Bernhard Schlegl <i>Visual Analytics for Gene Expression Data</i>
02/2009 - 12/2009	Master's Thesis by Werner Puff <i>Collaborative Information Visualization in a Multi-Desktop Environment</i>
03/2009 - 11/2009	Bachelor's Thesis by Christian Partl <i>Visualizing a Cluster Hierarchy using a Radial Layout</i>