

Curriculum Vitae of Prof. Dr. Stefan Bruckner

– May 15, 2017 –

Date of Birth: June 2nd, 1980

Citizenship: Austrian

Languages: German (native), English (fluent), Norwegian (basic)

Department of Informatics

University of Bergen, Norway

<http://www.iu.uib.no/vis/team/bruckner>

I investigate methods for gaining insight into complex data to further scientific understanding and discovery, medical diagnosis and treatment, and engineering, as well as techniques for communicating these findings to the public. Building on these foundations, my current interests include the development of novel approaches for the scientific inquiry of large-scale heterogeneous data spaces with a particular focus on the visual analysis of spatial data.

■ CAREER ACHIEVEMENTS

- Several international awards and prizes including the prestigious *Eurographics Young Researcher Award* for young researchers who have already made a significant contribution
- Co-author of *70+ peer-reviewed publications* at premier publication venues for visualization and graphics research with a total citation count of over 2000
- Designer and development lead of the *VolumeShop* visualization framework, used as the basis for 60+ publications by multiple institutions as well as in commercial products
- Responsible for the scientific program (as paper co-chair) of *EuroVis 2012*, the largest European conference on visualization, over 70 program committee memberships at international events

■ WORK EXPERIENCE

Full Professor (since 2013) at the University of Bergen, Norway. Professor in visualization at the Department of Informatics.

Scientific Consultant (2015–2016) at GE HealthCare, Austria. Scientific and technical consultant on advanced visualization algorithms and systems development.

Co-founder (since 2012) of VISUAPPS GmbH, Austria. Co-founder and scientific advisor of a startup company focusing on web-based medical visualization.

Assistant Professor (2008–2013) at the TU Wien, Austria. Senior researcher and lecturer at the Institute of Computer Graphics and Algorithms.

Postdoctoral Research Fellow (2009–2010) at Simon Fraser University, Canada. Guest researcher at the Graphics, Usability, and Visualization lab.

Software Consultant (2005–2006) at Biotronics3D Ltd., London, United Kingdom. Design and implementation consulting for a high performance virtual endoscopy rendering system.

Research Assistant (2004–2008) at the TU Wien, Austria. Research and teaching at the Institute of Computer Graphics and Algorithms.

Teaching Assistant (2003–2004) at the TU Wien, Austria. Supervision of student courses at the Institute of Computer Graphics and Algorithms.

■ EDUCATION AND TRAINING

Habilitation (2008–2012) in Practical Computer Science (Praktische Informatik) at the TU Wien, Austria. Venia legendi as “Privatdozent”. Habilitation thesis: Visual Exploration and Analysis of Volumetric Data.

Doctoral Studies (2004–2008) in Computer Science (Informatik) at the TU Wien, Austria. Degree: Doctor technicae (Dr.techn.). Dissertation: Interactive Illustrative Volume Visualization. **Graduation with highest distinction.**

Master's Studies (1999–2004) in Computer Science (Informatik) at the TU Wien, Austria. Degree: Diplom-Ingenieur (Dipl.-Ing.). Master's Thesis: Efficient Volume Visualization of Large Medical Datasets. **Graduation with highest distinction.**

Technical Secondary School (1994–1999) for Computing and Organization at the HTBL Pinkafeld, Austria. Final Project: Hierarchical Data Interface for Geodesy-Software. **Graduation with highest distinction.**

■ PROFESSIONAL ACTIVITIES

Chairing & Editorial Work: Eurographics Medical Prize 2017 (Chair) • VCBM 2016 & 2017 (Program Chair) • Computers & Graphics (Associate Editor, since 2014) • Computers & Graphics, vol. 39 & 41, 2014 (Guest Editor, Special Section on Uncertainty and Parameter Space Exploration in Visualization) • EuroVis 2012 (Program Chair)

Program Committees: ACM SIGGRAPH Asia Symposium on Visualization (2016, 2017) • ACM SIGGRAPH Asia Technical Briefs & Posters (2016) • CAD/Graphics (2015, 2017) • Computational Aesthetics (2010, 2011, 2012) • Computer Graphics International (2013, 2014, 2015, 2016, 2017) • Digital Heritage (2013, 2015) • Eurographics (2012, 2013, 2015, 2016) • Eurographics Workshop on Visual Computing for Biology and Medicine (2012, 2014, 2015) • EuroVis (2009, 2010, 2011, 2015, 2016, 2017) • Expressive (2013, 2014, 2015, 2016, 2017) • IEEE Pacific Visualization (2011, 2012, 2013, 2015, 2016, 2017) • IEEE Symposium on Biological Data Visualization (2012, 2014, 2015, 2016) • IEEE Visualization (2009, 2011, 2012, 2013) • International Conference on Advances in Computer Entertainment Technology (2011, 2012, 2013, 2014) • International Conference on Computer Graphics Theory and Applications (2012, 2013, 2014, 2015) • International Symposium on Visual Computing (2011, 2012, 2013, 2014, 2015) • Karl-Heinz Höhne Award for Medical Visualization (2014, 2015, 2016) • Knowledge-Assisted Visualization (2008) • Pacific Graphics (2014, 2015, 2016, 2017) • SIGRAD (2013, 2014) • Spring Conference on Computer Graphics (2015, 2017)

Journal Referee: Computer • Computer Graphics Forum • Computers & Graphics • IEEE Computer Graphics and Applications • IEEE Transactions on Applied Perception • IEEE Transactions on Biomedical Engineering • IEEE Transactions on Visualization and Computer Graphics • Informatik-Spektrum • International Journal of Computer Assisted Radiology and Surgery • International Journal of Creative Interfaces and Computer Graphics • The Visual Computer

Conference Reviewer: ACM SIGGRAPH • ACM SIGGRAPH Asia • Computational Aesthetics • Computer Graphics International • Computer Graphics, Imaging and Visualization • Eurographics • EuroVis • Graphics Interface • IEEE Pacific Visualization • IEEE Virtual Reality • IEEE Visualization • Pacific Graphics • Simulation und Visualisierung • Vision, Modeling, and Visualization • Visualization in Medicine and Life Sciences • Volume Graphics • Winter School of Computer Graphics

Grant Proposal Reviewer: French National Research Agency • Netherlands Organisation for Scientific Research

Appointment Committees: Associate Professor in Programming Languages (Head of Appointment Committee, University of Bergen, 2015)

Thesis Committees: *Adam Jurčik* (PhD Committee Member, Masaryk University, 2017) • *Alexey Karimov* (PhD Committee Member, TU Wien, 2016) • *Johanna Schmidt* (PhD Committee Member, TU Wien, 2016) • *Thomas Kroes* (PhD Committee Member, University of Delft, 2015) • *Rasmus Barringer* (PhD Committee Member, Lund University, 2015) • *Peter Mindek* (PhD Committee Member, TU Wien, 2015) • *Kai Lawonn* (PhD Committee Member, University of Magdeburg, 2014) • *Çağatay Turkyay* (Head of PhD Committee, University of Bergen, 2013) • *Endre Lidal* (Head of PhD Committee, University of Bergen, 2013)

Workshop Organizer: IEEE VIS 2015 Workshop on Visualization for Decision Making Under Uncertainty (Chicago, United States, 2015) • VisBio – Visualization & Biology: Challenges and Perspectives (Bergen, Norway, 2013)

Organizational Memberships: ACM SIGGRAPH, Eurographics, IEEE Computer Society

■ PRIZES AND AWARDS

1. **IEEE TVCG Best Reviewer Award 2015.** In recognitions of my contributions to the journal by providing detailed and constructive comments for a large number of submissions.
2. **SCCG Best Paper Award 2015.** Smolenice, Slovakia, April 2015. Best paper at the Spring Conference on Computer Graphics for a novel automated method to create visual summaries of multiplayer gameplays.
3. **VCBM Best Paper Award 2014.** Vienna, Austria, Sep. 2014. Best paper at the Eurographics Workshop on Visual Computing for Biology and Medicine for a new method which enables fast visibility-driven processing of 4D ultrasound data streams.
4. **VCBM Best Paper Honorable Mention 2014.** Vienna, Austria, Sep. 2014. Best paper honorable mention for a system for the interactive quantitative visual analysis of neuronal circuits.
5. **SCCG Best Paper Award 2013.** Smolenice, Slovakia, May 2013. Best paper at the Spring Conference on Computer Graphics for introducing the concept of contextual snapshots to manage selections in spatial visualizations.
6. **Eurographics Young Researcher Award 2011.** Llandudno, United Kingdom, Apr. 2011. Prestigious international award by the European Association for Computer Graphics for my significant contributions to the field of visualization.
7. **EuroVis Best Paper Award 2010.** Bordeaux, France, Jun. 2010. Best paper at the largest European conference in visualization where I introduced the novel concept of isosurface similarity for identifying features in volume data.
8. **Eurographics 3rd Best Paper Award 2007.** Prague, Czech Republic, Sep. 2007. For developing style transfer functions, a new technique which enables volume rendering with flexible artistic styles.
9. **Karl-Heinz Höhne Award for Medical Visualization 2006.** Magdeburg, Germany, Mar. 2006. For my innovative work on illustrative visualization of medical volume data.
10. **CESCG Best Paper & Best Presentation Award 2004.** Budmerice, Slovakia, Apr. 2004. For my work on acceleration techniques for efficient volume rendering of large medical datasets.

■ RESEARCH PROJECTS

1. **MetaVis – Visual Exploration in Visualization Space** (2016–2019). Research Council of Norway (RCN) FRIPRO “Young Talented Researcher” project no. 229352/F20, NOK 7M ≈ EUR 790K. **Project leader.**
2. **In-Situ Adaptive Filtering of 3D Ultrasound Datasets** (2013–2015). Research Council of Norway (RCN) project no. 229352/070, NOK 1M ≈ EUR 110K. **Project leader.**
3. **ViMaL – The Visualization Mapping Language** (2010–2014). Austrian Science Fund (FWF) project no. P21695-N23, EUR 350K. **Project manager.**
4. **Natural Fetoscopic Rendering** (2009–2015). Company-funded research project with GE Healthcare, EUR 80K per year. **Project manager.**
5. **DiagVis – Diagnostic Visualization for Medical Applications** (2006–2008). Company-funded research project with AGFA HealthCare, EUR 180K. **Project manager.**
6. **ExVisitation – Expressive Visualization of Volumetric Data** (2005–2009). Austrian Science Fund (FWF) project no. P18322-N04, EUR 285K. **Project manager** (from 2006).

■ PATENTS

1. **Method and Apparatus for Rendering an Ultrasound Image.** G. Schroecker, M. E. Gröller, A. Karimov, S. Bruckner, D. J. Buckton. International Patent Application PCT/US2015/061570 (filed 2015-11-19).
2. **Method and Apparatus for Animate Visualization of Static 3-D Data.** G. Schroecker, M. E. Gröller, A. Karimov, S. Bruckner. United States Patent Application US20160174940 (filed 2014-12-19).
3. **Methods and System for Removing Occlusions in 3D Ultrasound Images.** D. J. Buckton, G. Schroecker, A. Varchola, S. Bruckner, M. E. Gröller, J. Novotny. International Patent Application PCT/US2014/051114 (filed 2014-08-14).
4. **Visual Queries in Data Exploration.** S. Bruckner, V. Šoltészová, K. Bühler, J. Hladůvka. European Patent EP2483804 (filed 2009-10-02, **granted 2016-09-12**).
5. **Method and Apparatus for Determining Medical Image Position.** A. Kanitsar, P. Kohlmann, S. Bruckner, M. E. Gröller, R. Wegenkittl, L. Mroz. European Patent EP2192553 (filed 2008-11-28, **granted 2011-11-28**), United States Patent US8471846 (filed 2009-11-25, **granted 2013-05-25**).
6. **Method and Apparatus for Multimodal Visualization of Volume Data Sets.** A. Kanitsar, M. Haidacher, S. Bruckner, M. E. Gröller. United States Patent US8705821 (filed 2009-06-19, **granted 2014-04-22**).
7. **Method and Apparatus for Volume Rendering of Medical Data Sets.** A. Kanitsar, P. Kohlmann, S. Bruckner, M. E. Göller, R. Wegenkittl, L. Mroz. European Patent EP2048621 (filed 2007-10-09, **granted 2010-03-04**).

■ TEACHING

University of Bergen: *Visualization*. Lecture with Exercises (10 ECTS), since Spring Semester 2016 • *Computer Graphics*. Lecture with Exercises (10 ECTS), since Fall Semester 2015 • *Seminar in Visualization*. Lecture with Seminar Project (10 ECTS), Fall Semester 2013, 2014 • *Selected Topics in Visualization*. Lecture with Exercises (10 ECTS), Spring Semester 2013, 2014, 2015.

TU Wien: *Visualization 2*. Lecture with Exercises (4.5 ECTS), Summer Semester 2012 • *Real-Time Visualization*. Lecture with Exercises (3.0 ECTS), Summer Semester 2011 • *Computational Aesthetics*. Lecture with Exercises (3.0 ECTS), Winter Semester 2005, 2006, 2007, 2008, 2010 • *Research Seminar on Computer Graphics and Digital Image Processing*. Seminar (4.0 ECTS), Winter Semester 2005 • *Computer Graphics 2*. Lecture (3.0 ECTS), Oral exams (multiple dates per semester), 2004 – 2012.

External Teaching: *Image Synthesis*. Guest Lectures, Simon Fraser University, Burnaby, Canada, Nov. 2009 • *Introduction to Scientific Visualization*. Guest Lecture, University of British Columbia, Vancouver, Canada, Nov. 2009 • *VolumeShop 101*. Guest Lecture, University of Bergen, Bergen, Norway, Feb. 2009 • *Introduction to Volume Rendering*. Guest Lecture, University of Girona, Girona, Spain, Sep. 2008

■ MENTORSHIP AND SUPERVISION

Current: *Fabian Bolte* (PhD Candidate, University of Bergen, since 2016) • *Marius Tenderland Horne* (MSc Candidate, University of Bergen, since 2015) • *Jens Gåsemyr Magnus* (MSc Candidate, University of Bergen, since 2015) • *Åsmund Birkeland* (Research Engineer, University of Bergen, since 2014) • *Sergej Stoppel* (PhD Candidate, University of Bergen, since 2014) • *Andreas Johnsen Lind* (PhD Candidate, University of Bergen, since 2013) • *Veronika Šoltészová* (Postdoctoral Researcher, University of Bergen/Christian Michelsen Research, since 2013)

Previous: *Alexey Karimov* (PhD Thesis: Guided Interactive Volume Editing in Medicine, 2016 – now researcher at TU Wien) • *Johanna Schmidt* (PhD Thesis: Scalable Comparative Visualization - Visual Analysis of Local Features in Different Dataset Ensembles, 2016 – now researcher at AIT Austria) • *Peter Mindek* (PhD Thesis: Interactive Integrated Exploration and Management of Visualization Parameters, 2015 – now researcher at TU Wien) • *Andrej Varchola* (PhD Thesis: Live Fetoscopic Visualization of 4D Ultrasound Data, 2012 – now software developer at Siemens) • *Martin Haidacher* (PhD Thesis: Information-based Feature Enhancement in Scientific Visualization, 2011 – now project manager at Miracor Medical Systems) • *Peter Kohlmann* (PhD Thesis: LiveSync: Smart Linking of 2D and 3D Views in Medical Applications, 2009 – now researcher at Fraunhofer MEVIS) • *Peter Rautek* (PhD Thesis: Semantic Visualization Mapping

for Volume Illustration, 2009 – now researcher at KAUST) • *Veronika Šoltészová* (MSc Thesis: Visual Queries in Neuronal Data Exploration, 2009 – now researcher at Christian Michelsen Research) • *Nicolas Pühringer* (MSc Thesis: Sketch-based Modeling for Volume Visualization, 2009 – now self-employed) • *Gerlinde Emsenhuber* (MSc Thesis: Visibility Histograms in Direct Volume Rendering, 2008 – now researcher at Salzburg University of Applied Sciences) • *Moritz Gerl* (MSc Thesis: Volume Hatching for Illustrative Visualization, 2006 – now senior software engineer at Elektrobot) • *Leopold Kühschelm* (MSc Thesis: Advanced Image-based Transfer Function Design, 2005 – now software architect at IVU Traffic Technologies)

■ INVITED TALKS

1. **Visualization in Life Science Research.** Technologies for Digital Life, Bergen, Norway, Oct. 2016.
2. **Towards a Responsive Visualization Pipeline.** VieVisDays, TU Wien, Austria, Jun. 2016.
3. **Smart Visual Interfaces in Data Exploration and Analysis.** OICG Lab Talks, Johannes Kepler University Linz, Austria, Oct. 2015.
4. **Smart Visualization and Interaction in Medicine.** Otto-von-Guericke-University, Magdeburg, Germany, Jun. 2015.
5. **Towards Visual Parameter Space Analysis in Visualization Space.** Technische Universität München, Germany, Jan. 2015.
6. **Smart Visualization in Medicine.** Linköping University, Sweden, Aug. 2014.
7. **Visual Knowledge Discovery in Spatial Data.** Technische Universität München, Germany, Mar. 2014.
8. **3D Visualization of Multimodal Volume Data.** MedViz Seminar, Haukeland University Hospital, Bergen, Norway, Apr. 2013.
9. **Interactive Visual Exploration and Analysis of Volumetric Data.** International Conference on Computer Graphics and Imaging, Innsbruck, Austria, Feb. 2013.
10. **Visual Analysis and Exploration of Volumetric Data – Challenges and Perspectives.** Department Seminar, University of Bergen, Bergen, Norway, Apr. 2012.
11. **Visual Knowledge Discovery in Neurobiology.** Dagstuhl Seminar on Scientific Visualization, Dagstuhl, Germany, Jun. 2011.
12. **Navigating in Volumetric Data Spaces.** Joint National Ph.D. Conference in Medical Imaging, Bergen, Norway, Jan. 2011.
13. **Visualization of Volumetric Data Spaces.** Berlin Colloquium for Scientific Visualization, Zuse-Institute Berlin, Berlin, Germany, Sep. 2010.
14. **Interactive Volume Visualization for Illustration, Medicine, and Biology.** Simon Fraser University, Burnaby, Canada, Jul. 2009.
15. **Interactive Visualization Techniques for Illustrative Depiction.** IllustraVis Workshop, Bergen, Norway, Jun. 2009.
16. **Introduction to VolumeShop.** Christian-Michelson Research, Bergen, Norway, Feb. 2009.
17. **Interactive Illustrative Volume Visualization.** University of Bergen, Norway, Feb. 2009.
18. **Interactive Illustrative Volume Visualization.** University of Münster, Germany, Oct. 2008.
19. **Abstraction in Illustrative Visualization.** University of Girona, Spain, Sep. 2008.
20. **Interactive Illustrative Volume Visualization Techniques for Exploration and Communication.** Purdue University, West Lafayette, United States, Nov. 2006.
21. **VolumeShop: Interactive Direct Volume Illustration.** CT-Day Workshop, Wels, Austria, Sep. 2006.
22. **A System for Illustrative Volume Visualization.** Dagsuhl Seminar on Computational Aesthetics in Graphics, Visualization and Imaging, Dagstuhl, Germany, May 2006.
23. **Applications of Illustrative Volume Visualization Techniques.** Otto-von-Guericke-University, Magdeburg, Germany, Nov. 2005.
24. **Abstraction Techniques for Interactive Illustration.** Dagstuhl Seminar on Scientific Visualization: Challenges for the Future, Dagstuhl, Germany, May 2005.

■ INTERNATIONAL COURSES AND TUTORIALS

1. **Rejuvenated Medical Visualization – Large-scale, whole-body visualization, visualizing physiology, non-standard imaging and simulations, and cohort studies.** IEEE VIS 2015 Tutorial, Chicago, United States, Oct. 2015.
2. **Direct Volume Interaction for Visual Data Analysis.** IEEE VIS 2015 Tutorial, Chicago, United States, Oct. 2015.
3. **Advanced Medical Visualization – Techniques and Applications.** MICCAI 2015 Tutorial, Munich, Germany, Oct. 2015.
4. **Tools and Techniques for Direct Volume Interaction.** Eurographics 2015 Tutorial, Zurich, Switzerland, May 2015.
5. **GPU-Based Large-Scale Visualization.** ACM SIGGRAPH Asia 2013 Course, Hong Kong, Nov. 2013.

6. **Uncertainty and Parameter Space Analysis in Visualization.** IEEE Visualization 2012 Tutorial, Seattle, United States, Oct. 2012.
7. **Interactive Tools for Scientific and Medical Illustration Composition.** Eurographics 2008 Tutorial, Crete, Greece, Apr. 2008
8. **Illustrative Display and Interaction in Visualization.** IEEE Visualization 2007 Tutorial, Sacramento, United States, Oct. 2007.
9. **Illustrative Visualization for Science and Medicine.** IEEE Visualization 2006 Tutorial, Baltimore, United States, Oct. 2006.
10. **Illustrative Visualization for Medicine and Science.** ACM SIGGRAPH 2006 Course, Boston, United States, Aug. 2006.

■ PUBLICATIONS [Google Scholar – Citations: 2157 • h-Index: 24 • i10-Index: 39]

The premier publication venues in the field of visualization are the journals *IEEE Transactions on Visualization and Computer Graphics* and *Computer Graphics Forum*, as well as the *IEEE VIS (VAST, InfoVis, SciVis)* and *EuroVis* conferences (published as special issues of these two journals since 2006 and 2008, respectively). **More than 50% of my papers were published at these venues.**

1. S. Stoppel and **S. Bruckner**, “Vol²velle: Printable Interactive Volume Visualization,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 22, no. 1, pp. 861–870, 2017.
2. A. J. Lind and **S. Bruckner**, “Comparing Cross-Sections and 3D Renderings for Surface Matching Tasks using Physical Ground Truths,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 22, no. 1, pp. 781–790, 2017.
3. I. Kolesar, **S. Bruckner**, I. Viola, and H. Hauser, “A Fractional Cartesian Composition Model for Semi-Spatial Comparative Visualization,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 22, no. 1, pp. 851–860, 2017.
4. N. Smit, K. Lawonn, A. Kraima, M. DeRuiter, H. Sokooti, **S. Bruckner**, E. Eisemann, and A. Vilanova, “PelVis: Atlas-based Surgical Planning for Oncological Pelvic Surgery,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 22, no. 1, pp. 741–750, 2017.
5. V. Šoltészová, Å. Birkeland, S. Stoppel, I. Viola, and **S. Bruckner**, “Output-Sensitive Filtering of Streaming Volume Data,” *Computer Graphics Forum*, vol. 36, no. 1, pp. 249–262, 2017.
6. N. Swoboda, J. Moosburner, **S. Bruckner**, J. Y. Yu, B. J. Dickson, and K. Bühler, “Visualization and Quantification for Interactive Analysis of Neural Connectivity in Drosophila,” *Computer Graphics Forum*, vol. 36, no. 1, pp. 160–171, 2017.
7. S. Stoppel, H. Hauser, E. Hodneland, and **S. Bruckner**, “Graxels: Information Rich Primitives for the Visualization of Time-Dependent Spatial Data,” in *Proceedings of VCBM 2016*, pp. 183–192, 2016.
8. T. Klein, **S. Bruckner**, M. E. Gröller, M. Hadwiger, and P. Rautek, “Towards Interactive Visual Exploration of Parallel Programs using a Domain-Specific Language,” *Proceedings of the International Workshop on OpenGL 2016*, 2016.
9. M. Labschütz, **S. Bruckner**, M. E. Gröller, M. Hadwiger, and P. Rautek, “JiTTree: A Just-in-Time Compiled Sparse GPU Volume Data Structure,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 22, no. 1, pp. 1025–1034, 2016.
10. A. Karimov, G. Mistelbauer, T. Auzinger, and **S. Bruckner**, “Guided Volume Editing based on Histogram Dissimilarity,” *Computer Graphics Forum*, vol. 34, no. 3, pp. 381–390, 2015.
11. A. Diehl, L. Pelorosso, C. Delrieux, C. Saulo, J. Ruiz, M. E. Gröller, and **S. Bruckner**, “Visual Analysis of Spatio-Temporal Data: Applications in Weather Forecasting,” *Computer Graphics Forum*, vol. 34, no. 3, pp. 91–100, 2015.
12. P. Angelelli and **S. Bruckner**, “Performance and Quality Analysis of Convolution-Based Volume Illumination,” *Journal of WSCG*, vol. 23, no. 2, pp. 131–138, 2015.
13. P. Mindek, L. Čmolík, I. Viola, M. E. Gröller, and **S. Bruckner**, “Automatized Summarization of Multiplayer Games,” in *Proceedings of the Spring Conference on Computer Graphics 2015*, 2015. **SCCG 2015 BEST PAPER AWARD.**
14. I. Kolesár, J. Parulek, I. Viola, **S. Bruckner**, A.-K. Stavrum, and H. Hauser, “Interactively Illustrating Polymerization using Three-level Model Fusion,” *BMC Bioinformatics*, 2014, vol. 15, no. 345, 2014.
15. M. Sedlmair, C. Heinzl, **S. Bruckner**, H. Piringer, and T. Möller, “Visual Parameter Space Analysis: A Conceptual Framework,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 20, no. 12, pp. 1077–2626, 2014.
16. P. Rautek, **S. Bruckner**, M. E. Gröller, M. Hadwiger, “ViSlang: A System for Interpreted Domain-Specific Languages for Scientific Visualization,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 20, no. 12, pp. 2388–2396, 2014.
17. J. Schmidt, R. Preiner, T. Auzinger, M. Wimmer, M. E. Gröller, and **S. Bruckner**, “YMCA – Your Mesh Comparison Application,” in *Proceedings of IEEE VAST 2014*, 2014.
18. M. Waldner, **S. Bruckner**, and I. Viola, “Graphical Histories of Information Foraging,” in *Proceedings of NordiCHI 2014*, pp. 295–304, 2014.
19. V. Šoltészová, Å. Birkeland, I. Viola, and **S. Bruckner**, “Visibility-Driven Processing of Streaming Volume Data,” in *Proceedings of VCBM 2014*, pp. 127–136, 2014. **VCBM 2014 BEST PAPER AWARD.**
20. N. Swoboda, J. Moosburner, **S. Bruckner**, J. Y. Yu, B. J. Dickson, and K. Bühler, “Visual and Quantitative Analysis of Higher Order Arborization Overlaps for Neural Circuit Research,” in *Proceedings of VCBM 2014*, pp. 107–116, 2014. **VCBM 2014 BEST PAPER HONORABLE MENTION.**
21. H. Pfister, V. Kaynig, C. P. Botha, **S. Bruckner**, V. J. Dercksen, H.-C. Hege, and J. B. T. M. Roerdink, “Visualization in Connectomics,” in *Scientific Visualization: Uncertainty, Multifield, Biomedical, and Scalable Visualization*, ch. 21, ed. M. Chen, H. Hagen, C. Hansen, C. Johnson, and A. Kaufmann, Springer, pp. 221–246, 2014.

22. A. Amirkhanov, **S. Bruckner**, C. Heinzl, M. E. Gröller, "The Haunted Swamps of Heuristics: Uncertainty in Problem Solving," in *Scientific Visualization: Uncertainty, Multifield, Biomedical, and Scalable Visualization*, ch. 5, ed. M. Chen, H. Hagen, C. Hansen, C. Johnson, and A. Kaufmann, Springer, pp. 51–60, 2014.
23. I. Kolesár, J. Parulek, I. Viola, **S. Bruckner**, A.-K. Stavrum, and H. Hauser, "Illustrating Polymerization using Three-level Model Fusion," in *Proceedings of IEEE BioVis 2014*, 2014.
24. P. Mindek, M. E. Gröller, and **S. Bruckner**, "Managing Spatial Selections with Contextual Snapshots," *Computer Graphics Forum*, vol. 33, no. 8, pp. 132–144, 2014.
25. J. Parulek, D. Jönsson, T. Ropinski, **S. Bruckner**, A. Ynnerman, and I. Viola, "Continuous Levels-of-Detail and Visual Abstraction for Seamless Molecular Visualization," *Computer Graphics Forum*, vol. 33, no. 6, pp. 276–287, 2014.
26. P. Angelelli, S. R. Snare, S. A. Nyrrnes, **S. Bruckner**, H. Hauser, and L. Løvstakken, "Live Ultrasound-based Particle Visualization of Blood Flow in the Heart," in *Proceedings of the Spring Conference on Computer Graphics 2014*, pp. 42–49, 2014.
27. T. Auzinger, G. Mistelbauer, I. Baclija, R. Schernthaner, A. Köchl, M. Wimmer, M. E. Gröller, and **S. Bruckner**, "Vessel Visualization using Curved Surface Reformation," *IEEE Transactions on Visualization and Computer Graphics*, vol. 19, no. 12, pp. 2858–2867, 2013.
28. J. Schmidt, M. E. Gröller, and **S. Bruckner**, "VAICo: Visual Analysis for Image Comparison," *IEEE Transactions on Visualization and Computer Graphics*, vol. 19, no. 12, pp. 2090–2099, 2013.
29. D. Patel, V. Šoltészová, J. M. Nordbotten, and **S. Bruckner**, "Instant Convolution Shadows for Volumetric Detail Mapping," *ACM Transactions on Graphics*, vol. 32, no. 5, pp. 154:1–154:18, 2013.
30. P. Mindek, **S. Bruckner**, P. Rautek, and M. E. Gröller, "Visual Parameter Exploration in GPU Shader Space," *Journal of WSCG*, vol. 21, no. 3, pp. 225–234, 2013.
31. G. Mistelbauer, A. Morar, A. Varchola, R. Schernthaner, I. Baclija, A. Köchl, A. Kanitsar, **S. Bruckner**, M. E. Gröller, "Vessel Visualization using Curvicircular Feature Aggregation," *Computer Graphics Forum*, vol. 32, no. 3, pp. 231–240, 2013.
32. A. Karimov, G. Mistelbauer, J. Schmidt, P. Mindek, E. Schmidt, T. Sharipov, **S. Bruckner**, and M. E. Gröller, "ViviSection: Skeleton-based Volume Editing," *Computer Graphics Forum*, vol. 32, no. 3, pp. 461–470, 2013.
33. P. Mindek, **S. Bruckner**, M. E. Gröller, "Contextual Snapshots: Enriched Visualization with Interactive Spatial Annotations," in *Proceedings of the Spring Conference on Computer Graphics 2013*, pp. 59–66, 2013. **SCCG 2013 BEST PAPER AWARD.**
34. S. Ford, I. Viola, **S. Bruckner**, H. Torp, G. Kiss "HeartPad: Real-Time Visual Guidance for Cardiac Ultrasound," in *Proceedings of the Workshop at SIGGRAPH Asia 2012*, pp. 169–176, 2012.
35. B. Csebfalvi, B. Tóth, **S. Bruckner**, M. E. Gröller, "Illumination-Driven Opacity Modulation for Expressive Volume Rendering," in *Proceedings of Vision, Modeling, and Visualization 2012*, pp. 103–109, 2012.
36. G. Mistelbauer, H. Bouzari, R. Schernthaner, I. Baclija, A. Köchl, **S. Bruckner**, M. Sramek, M. E. Gröller, "Smart Super Views – A Knowledge-Assisted Interface for Medical Visualization," in *Proceedings of IEEE VAST 2012*, pp. 163–172, 2012.
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