

## Bernd Froehlich

### Personal Data

Title	Prof. Dr.
First name	Bernd
Name	Froehlich
Current position	Professor of Virtual Reality and Visualization
Current institution/site, country	Bauhaus-Universität Weimar, Germany
Identifiers/ORCID	<a href="https://orcid.org/0000-0002-9439-1959">https://orcid.org/0000-0002-9439-1959</a>

### Qualifications and Career

Stages	Periods and Details
Degree programme	1982–1988 Computer Science, TU Braunschweig, Germany
Doctorate	1992 Ray Tracing with Ray Bundles. Supervisor: Wolfgang Boehm, TU Braunschweig, Germany

Stages of academic/professional career	
2001–	Professor (C4) (Virtual Reality and Visualization), Bauhaus-Universität Weimar, Germany
1998–2001	Senior Researcher, GMD, St Augustin, Germany
1995–1997	Research Associate in Computer Science, Computer Graphics group, Prof. Pat Hanrahan, U Stanford, USA
1994	Visiting Researcher, U Waterloo, Canada
1993–1995	Postdoc, GMD, St Augustin, Germany
1989–1992	Ph.D. student, CAGD group, Prof. Dr.-Ing. Wolfgang Boehm, TU Braunschweig, Germany
1988–1992	Ph.D. student, Computer Graphics group, Prof. Dr. Hans Hagen, TU Kaiserslautern, Germany

### Activities in the Research System

2022–2023	IEEE VGTC VR Lifetime and Technical Achievement awards committee
2022–2023	Member of the Supercommittee and programme committee of the IEEE Conference on Virtual Reality and 3D User Interfaces
2021	Member of the programme committee of the IEEE Conference on Virtual Reality and 3D User Interfaces
2019–	Associate Editor of <i>Frontiers in Virtual Reality</i>
2015	General Co-Chair, IEEE Virtual Reality Conference, Arles (France)
2012–2015	Associate Editor, <i>IEEE Computer Graphics and Applications</i> , Founding Co-Editor of the Department on Spatial Interfaces
2008–2018	Member, steering committee of the IEEE Virtual Reality Conference (Chair 2014–2018)
2008	Program Co-Chair of the ACM VRST Conference
2007–2009	Member of the EU Network of Excellence INTUITION
2007	General Co-Chair, Eurographics Virtual Environments Symposium, Weimar

- 2006– Member, steering committee of Germany's special interest group for virtual and augmented reality of the German Computer Science Society (GI)
- 2006 Program Co-Chair of the IEEE Virtual Reality Conference
- 2005–2018 Member, steering committee of the IEEE 3D User Interfaces Symposium (chair 2010–2012)
- 2005 Program Co-Chair of the IEEE Virtual Reality Conference
- 2005 Co-Founder, 3D User Interfaces Symposium
- 2003 Program Co-Chair of the IEEE Virtual Reality Conference

## Scientific Results

### Category A

- Weissker, Tim, Pauline Bimberg, et int, **Bernd Froehlich**. 'Gaining the High Ground: Teleportation to Mid-Air Targets in Immersive Virtual Environments'. *IEEE Transactions on Visualization and Computer Graphics* 29(5), 2023, 2467–2477. – <https://doi.org/10.1109/TVCG.2023.3247114>.
- Kreskowski, Adrian, Stephan Beck and **Bernd Froehlich**. 'Output-Sensitive Avatar Representations for Immersive Telepresence'. *IEEE Transactions on Visualization and Computer Graphics* 28(7), 2022, 2697–2709. – <https://doi.org/10.1109/TVCG.2020.3037360>.
- Weissker, Tim, and **Bernd Froehlich**. 'Group Navigation for Guided Tours in Distributed Virtual Environments'. *IEEE Transactions on Visualization and Computer Graphics* 27(5), 2021, 2524–2534. – <https://doi.org/10.1109/TVCG.2021.3067756>.
- Kiesel, Dora, Patrick Riehm, et int, **Bernd Froehlich**. 'Visual Analysis of Argumentation in Essays'. *IEEE Transactions on Visualization and Computer Graphics* 27(2), 2021, 1139–1148. – <https://doi.org/10.1109/TVCG.2020.3030425>.
- Kunert, André, Tim Weissker, **Bernd Froehlich** and Alexander Kulik. 'Multi-Window 3D Interaction for Collaborative Virtual Reality'. *IEEE Transactions on Visualization and Computer Graphics* 26(11), 2020, 3271–3284. – <https://doi.org/10.1109/TVCG.2019.2914677>.
- Kulik, Alexander, André Kunert and **Bernd Froehlich**. 'On Motor Performance in Virtual 3D Object Manipulation'. *IEEE Transactions on Visualization and Computer Graphics* 26(5), 2020, 2041–2050. – <https://doi.org/10.1109/TVCG.2020.2973034>.
- Weissker, Tim, Pauline Bimberg and **Bernd Froehlich**. 'Getting There Together: Group Navigation in Distributed Virtual Environments'. *IEEE Transactions on Visualization and Computer Graphics* 26(5), 2020, 1860–1870. – <https://doi.org/10.1109/TVCG.2020.2973474>.
- Schollmeyer, Andre, Simon Schneegans, et int, **Bernd Froehlich**. 'Efficient Hybrid Image Warping for High Frame-Rate Stereoscopic Rendering'. *IEEE Transactions on Visualization and Computer Graphics* 23(4), 2017, 1332–1341. – <https://doi.org/10.1109/TVCG.2017.2657078>.
- Beck, Stephan, André Kunert, Alexander Kulik and **Bernd Froehlich**. 'Immersive Group-to-Group Telepresence'. *IEEE Transactions on Visualization and Computer Graphics* 19(4), 2013, 616–625. – <https://doi.org/10.1109/TVCG.2013.33>.
- Kulik, Alexander, André Kunert, et int, **Bernd Froehlich**. 'C1x6: A Stereoscopic Six-User Display for Co-Located Collaboration in Shared Virtual Environments'. *ACM Transactions on Graphics (TOG)* 30(6), 2011, 1–12. – <https://doi.org/10.1145/2070781.2024222>.

## Academic Distinctions

- 2023 Honorable Mention Award at the IEEE Conference on Virtual Reality and 3D User Interfaces
- 2022– Inaugural member of the IEEE VGTC Virtual Reality Academy
- 2022 Fellowship in programme 'Innovations in Digital Teaching', Stifterverband

2022	Teaching Award of the Faculty of Media at Bauhaus-Universität Weimar
2020	IEEE VR Best VR-in-VR Presentation Award
2013	Best Paper Award IEEE Virtual Reality
2012	Best Paper Award IEEE Symposium on 3D User Interfaces
2011	Best Paper Award IEEE Pacific Visualization
2008	The IEEE VGTC Virtual Reality Technical Achievement Award