# Jan Gugenheimer

*(curriculum vitae)*

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20th June 1986, Jenisseisk, Russia

## Research Experience

**Jan 2020** — **Assistant Professor (MdC)**, *Télécom Paris/Institut Polytechnique de Paris*, Paris.
Teaching and researching at the intersection of Mixed Reality and Human-Computer Interaction

**05/2017-07/2017** — **Research Intern**, *Microsoft Research*, Redmond, Supervisor: Hvroje Benko.
I was working within the EPIC group at Microsoft Research in Redmond. My project focused on enabling true mobile virtual reality.

**10/2015-1/2016** — **Visiting Researcher**, *MIT*, Cambridge, Supervisor: Prof. Dr. Pattie Maes.
I was working at the Fluid Interfaces group at the MIT Media Lab. My research focused on new feedback concepts for mobile VR HMDs. The results were published at UIST'16 [5]

**10/2013-03/2014** — **Visiting Researcher**, *ETH*, Zurich, Supervisor: Prof. Dr. Elgar Fleisch.
Working on ProductKing, a mobile application for consumer-driven product loyalty in the context of the Internet of Things.

**04/2013-09/2013** — **Master Thesis**, *Mercedes-Benz Research North America*, Palo Alto.
I worked together with the Mercedes-Benz HCI Research team on my master thesis. The focus was on an in-car authentication system using the rotary control knob. The results were published at AutomotiveUI '14 [Conf20]

## Education

**2014 – 2019**

**Ph.D.**, *Ulm University*, Ulm, Supervisor: Prof. Dr. Enrico Rukzio.
*Nomadic VR: Overcoming Challenges for Mobile Virtual Reality Head-Mounted Displays*
Reviewer: *Prof. Dr. Albrecht Schmidt and Prof. Dr. Timo Ropinski*
Submitted: *1st April 2019*, Defense Date: *24th July 2019*

**2011 – 2013**

**Master of Science**, *Ulm University*, Ulm.
Studies of Media Informatics Grade: 1.0 / GPA: 4.0

**2011 – 2012**

**Exchange Student**, *Hawaii Pacific University*, Honolulu.
Information Systems Grade: 1.0 / GPA: 4.0

**2007 – 2011**

**Bachelor of Science**, *Ulm University*, Ulm.
Studies of Media Informatics Grade: 1.4 / GPA: 3.7

## Working Experience

**03/2012-04/2013** — **Research Assistant**, *Daimler AG*, Ulm.
I worked as a student in the Speech Dialogue Systems team at Daimler Research in Ulm Germany. My tasks consisted of programming web interfaces for the voice control of the new generation head units.

| 10/2010-07/2011 | **Research Assistant**, *Daimler AG*, Ulm. |
| | I worked as a student in the HMI team at Daimler Ulm. My tasks primarily focused on HMI specifications and automating HMI testing for navigation systems in the automobile. |
| 03/2010-09/2010 | **Bachelor Thesis**, *Daimler AG*, Boeblingen. |
| | My Bachelor Thesis was based on the visualization of AUTOSAR software components in the automobile. I wrote a software requirement specification, created a concept and implemented a prototype into an existing software tool. |
| 08/2009-02/2010 | **Internship**, *IBM Germany*, Boeblingen. |
| | I worked in the IBM Boeblingen laboratories in the IM DB2 Performance Expert MP development team. My work focused on the development of an automate build verification test with the IBM STAF/ STAX (XML, Python) framework. |
| 04/2009-07/2009 | **Tutor in software development**, *Ulm University*, Ulm. |
| | My responsibility was to correct the homework of students and to teach them the fundamentals of software engineering. The programming language we used was Java and our IDE was Eclipse. |

## Top 5 Selected Publications

[1] **Gugenheimer, Jan**, Evgeny Stemasov, Harpreet Sareen, and Enrico Rukzio. Facedisplay: Towards asymmetric multi-user interaction for nomadic virtual reality. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, pages 54:1–54:13, New York, NY, USA, 2018. **CHI '18 (13 Pages)**.

[2] **Gugenheimer, Jan**, Evgeny Stemasov, Julian Frommel, and Enrico Rukzio. Sharevr: Enabling co-located experiences for virtual reality between hmd and non-hmd users. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, pages 4021–4033, New York, NY, USA, 2017. **CHI '17 (13 Pages) Best Paper Award**.

[3] **Gugenheimer, Jan**, David Dobbelstein, Christian Winkler, Gabriel Haas, and Enrico Rukzio. Facetouch: Enabling touch interaction in display fixed uis for mobile virtual reality. In *Proceedings of the 29th Annual Symposium on User Interface Software and Technology*, pages 49–60, New York, NY, USA, 2016. **UIST '16 (12 Pages)**.

[4] **Gugenheimer, Jan**, Dennis Wolf, Eythor R. Eiriksson, Pattie Maes, and Enrico Rukzio. Gyrovr: Simulating inertia in virtual reality using head worn flywheels. In *Proceedings of the 29th Annual Symposium on User Interface Software and Technology*, pages 227–232, New York, NY, USA, 2016. **UIST '16 (6 Pages)**.

[5] **Gugenheimer, Jan**, Dennis Wolf, Gabriel Haas, Sebastian Krebs, and Enrico Rukzio. Swivrchair: A motorized swivel chair to nudge users' orientation for 360 degree storytelling in virtual reality. In *Proceedings of CHI '16*, pages 1996–2000, New York, NY, USA, 2016. **CHI '16 (5 Pages)**.
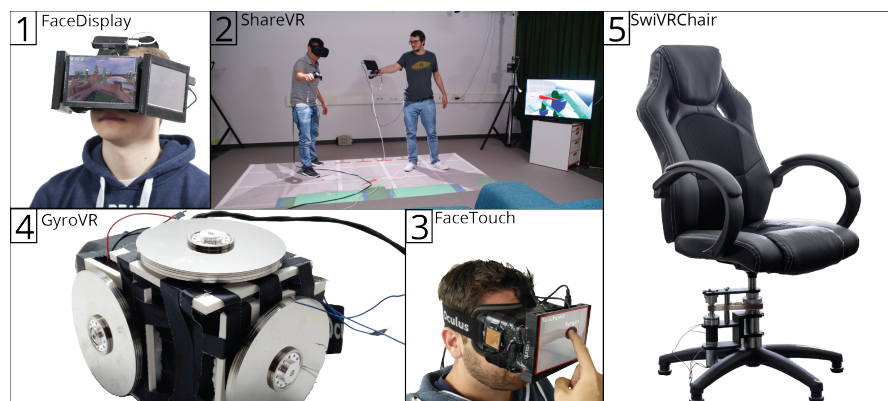
## Teaching

### Lectures, Seminars and Projects

2014-2019 **Lectures**, *Ulm University*, I was giving lectures for classes such as: User Interface Softwaretechnology, Digital Media and Mobile Human-Computer Interaction.

2014-2019 **Seminar**, *Ulm University*, WS '14, WS '16, WS '19, Research Trends in Media Informatics.

2019 **Proseminar**, *Ulm University*, SS '19, Human-Computer Interaction.

2014-2015 **Project**, *Ulm University*, WS '14 - SS '15, Project Human-Computer Interaction.

### Supervised Students

2018 **Master Thesis**, *Jan Rixen*, Fostering Identification Through Non-Visual Avatar Self-Similarity in Virtual Reality Games.

2017 **Master Thesis**, *Tobias Drey*, Investigation of the Applicability of Augmented Reality Head Mounted Displays for Geographic Information Systems.

2017 **Master Thesis**, *Thomas Dreja*, SwiVRChair 2.0 Creating motion feedback in virtual reality using a controllable rotating chair to increase immersion and decrease simulator sickness.

2016 **Master Thesis**, *Sebastian Benedikter*, Implementation and Evaluation of an In-Car Entertainment Application for Virtual Reality .

2016 **Master Thesis**, *Dennis Wolf*, OctiCam: An Immersive and Mobile Video Communication System for Parents and Children.

2015 **Master Thesis**, *Peter Lang*, Heartbond - Subtle Connection over Distance.

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2014/15 **Master Project**, *Dennis Wolf, Gabriel Haas, Sebastian Krebs*, SwiVRChair: A Motorized Swivel Chair to Nudge Users' Orientation for 360 Degree Storytelling in Virtual Reality.

2014/15 **Master Project**, *Patrizia San Vito, Saskia Duck, Melanie Rabus*, The Impact of Assistive Technology on Communication Quality Between Deaf and Hearing Individuals.

2014/15 **Master Project**, *Sebastian Benedikter, Thomas Dreja, Michael Olah*, PanoStoryVR: Storytelling in 360 Degree Panoramas with Contextual Multimedia Content.

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2019 **Bachelor Thesis**, *Ali Askari*, Creating Perceptional 6-DoF Controls for 3-DoF VR HMDs Leveraging Predefined Path-Matching.

2016 **Bachelor Thesis**, *Jan Rixen*, Exploring Pointing Interaction with Nomadic Virtual Reality HMDs Using An Ordinary Smartwatch.

2015 **Bachelor Thesis**, *Evgeny Stemasov*, Magnet-Based Interaction Concepts for Affordable, Mobile VR.

2015 **Bachelor Thesis**, *Jörn Hofschläger*, Development and Evaluation of a Text Entry Method for Mobile Head-Mounted Displays using FaceTouch.

2015    **Bachelor Thesis**, *Sebastian Schäf*, VR-Window: Interaktion zwischen Smartphone- und VR-Brillen-Nutzern.

2015    **Bachelor Thesis**, *David Klein*, CanTouchThis: Exploring the Effect of Physical Contact in a Multiplayer Game on a Single Mobile Device.

## Recent Academic Service & Voluntary Activities

### Organizational Member

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| PerDis 2020 | **Program Co-Chair**, *International Symposium on Pervasive Displays*, Manchester. |
| EthicalHMDs 2020 | **Organizer**, *Workshop at CHI 2020*, Honolulu. |
| SocialHMDs 2019 | **Organizer**, *Workshop at CHI 2019*, Glasgow. |
| UIST 2018 | **Web Chair**, *ACM User Interface Software and Technology Symposium*, Berlin. |
| ISCT 2015 | **Local Chair**, *International Symposium on Companion Technology*, Ulm. |

### Program Commitee Member

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| '20 | **CHI**, *ACM Conference on Human Factors in Computing Systems*. |
| '19 | **ISS**, *ACM Conference on Interactive Surfaces and Spaces*. |
| '17,'18,'19 | **LBW CHI**, *ACM Conference on Human Factors in Computing Systems*. |
| '18 | **PerDis**, *ACM International Symposium on Pervasive Displays*. |
| '17,'19 | **MUM**, *International Conference on Mobile and Ubiquitous Multimedia*. |
| '19,'20 | **MuC**, *Mensch und Computer*. |
| '19,'20 | **VARECo**, *Workshop on VR and AR in Everyday Context at Mensch und Computer*. |

### Reviewer

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|---|---|
| '15,'16,'17,'18,'19 | **CHI**, *ACM Conference on Human Factors in Computing Systems*. |
| '17,'18,'19 | **UIST**, *ACM User Interface Software and Technology Symposium*. |
| 20 | **IMWUT**, *Interactive, Mobile, Wearable and Ubiquitous Technologies*. |
| '18 | **ToCHI**, *ACM Transactions on Computer-Human Interaction*. |
| '17,'18 | **IEEE VR**, *IEEE Conference on Virtual Reality and 3D User Interfaces*. |
| '17,'20 | **SIGGRAPH**, *ACM Special Interest Group on Computer Graphics*. |
| '17 | **DIS**, *ACM International Conference on Designing Interactive Systems*. |
| '16, '19 | **CHI Play**, *ACM Annual Symposium on Computer-Human Interaction in Play*. |
| '15 | **MobileHCI**, *ACM International Conference on Human-Computer Interaction with Mobile Devices and Services*. |
| '14,'15 | **ITS/ISS**, *ACM International Conference on Interactive Surfaces and Spaces*. |
| '18 | **NordiCHI**, *Nordic forum for Human-Computer Interaction*. |
| '16 | **TEI**, *ACM International Conference on Tangible, Embedded, and Embodied Interactions*. |
| '15,'16 | **AH**, *ACM Augmented Human International Conference*. |
| '14,'15 | **AutoUI**, *ACM Conference on Automotive User Interfaces and Interactive Vehicular Applications*. |

## Scholarships & Awards

### Paper Awards

**Honorable Mention**, *IEEE VR 2018*, Reutlingen, Honorable Mention Best Demo Award for ShareVR [2] .

**Honorable Mention**, *CHI 2020*, Honolulu, Honorable Mention Best Demo Award for [Conf1] .

**Best Paper**, *CHI 2017*, Denver, Best Paper Award for ShareVR.

**Best Student Paper**, *ITS 2014*, Dresden, Best Student Paper Award for P.I.A.N.O.

### Deutschland Stipendium

2013
2011

**Scholarship**, *Ulm University*, Ulm, A financial scholarship from the German Government given to the top 1.5 % students of the University.

### Daimler Student Partnership Programme

2012

**Fellow**, *Daimler AG*, Stuttgart.

Support for students who have achieved excellent results in their studies by individual coaching and mentoring

## All Publications

### Conference Proceedings (Full and Short Paper)

[Conf1] Mark Colley, Marcel Walch, **Gugenheimer, Jan**, Ali Askari, and Enrico Rukzio. Towards inclusive external communication of autonomous vehicles for pedestrians with vision impairments. In *Proceedings of the 2020 Conference on Human Factors in Computing Systems* **(CHI 2020, 10 Pages \*Best Paper Honorable Mention\*)**. ACM, 2020.

[Conf2] Evgeny Stemasov, Tobias Wagner, **Gugenheimer, Jan**, and Enrico Rukzio. Mixmatch: Towards omitting modelling through in-situ alteration and remixing of model repository artifacts in mixed reality. In *Proceedings of the 2020 Conference on Human Factors in Computing Systems* **(CHI 2020, 8.5 Pages)**. ACM, 2020.

[Conf3] Dennis Wolf, **Gugenheimer, Jan**, Marco Combosch, and Enrico Rukzio. Understanding the heisenberg effect of spatial interaction: A selection induced error for spatially tracked input devices. In *Proceedings of the 2020 Conference on Human Factors in Computing Systems* **(CHI 2020, 8.5 Pages)**. ACM, 2020.

[Conf4] Tobias Drey, **Gugenheimer, Jan**, Julian Karlbauer, Maximilian Milo, and Enrico Rukzio. Vrsketchin: Exploring the design space of pen and tablet interaction for 3d sketching in virtual reality. In *Proceedings of the 2020 Conference on Human Factors in Computing Systems* **(CHI 2020, 10 Pages)**. ACM, 2020.

[Conf5] Teresa Hirzle, **Gugenheimer, Jan**, Florian Geiselhart, Andreas Bulling, and Enrico Rukzio. A design space for gaze interaction on head-mounted displays. In *Proceedings of the 2019 Conference on Human Factors in Computing Systems* **(CHI 2019, 12 Pages)**. ACM, 2019.

[Conf6] Michael Rietzler, **Gugenheimer, Jan**, Teresa Hirzle, Martin Deubzer, Eike Langbehn, and Enrico Rukzio. Rethinking redirected walking: On the use of curvature gains beyond perceptual limitations and revisiting bending gains. In *Proceedings of the IEEE International Symposium for Mixed and Augmented Reality* **(ISMAR 2018, 8 Pages)**. ACM, 2018.

[Conf7]    Michael Rietzler, Teresa Hirzle, **Gugenheimer, Jan**, Julian Frommel, Thomas Dreja, and Enrico Rukzio. Vrspinning: Exploring the design space of a 1d rotation platform to increase the perception of self-motion in vr. In *Proceedings of the Conference on Designing Interactive Systems* **(DIS 2018, 10 Pages)**. ACM, 2018.

[Conf8]    Michael Rietzler, Florian Geiselhart, **Gugenheimer, Jan**, and Enrico Rukzio. Breaking the tracking: Enabling weight perception using perceivable tracking offsets. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* **(CHI 2018, 12 Pages)**, page 128. ACM, 2018.

[Conf9]    **Gugenheimer, Jan**, Evgeny Stemasov, Harpreet Sareen, and Enrico Rukzio. Facedisplay: Towards asymmetric multi-user interaction for nomadic virtual reality. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* **(CHI 2018, 13 Pages)**, page 54. ACM, 2018.

[Conf10]   Philipp Hock, Sebastian Benedikter, **Gugenheimer, Jan**, and Enrico Rukzio. Carvr: Enabling in-car virtual reality entertainment. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems* **(CHI 2017, 11 Pages)**, pages 4034–4044. ACM, 2017.

[Conf11]   **Gugenheimer, Jan**, Evgeny Stemasov, Julian Frommel, and Enrico Rukzio. Sharevr: Enabling co-located experiences for virtual reality between hmd and non-hmd users. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems* **(CHI 2017, 13 Pages *Best Paper Award*)**, pages 4021–4033. ACM, 2017.

[Conf12]   **Gugenheimer, Jan**, Katrin Plaumann, Florian Schaub, Patrizia Di Campli San Vito, Saskia Duck, Melanie Rabus, and Enrico Rukzio. The impact of assistive technology on communication quality between deaf and hearing individuals. In *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing* **(CSCW 2017, 14 Pages)**, pages 669–682. ACM, 2017.

[Conf13]   **Gugenheimer, Jan**, Dennis Wolf, Eythor R Eiriksson, Pattie Maes, and Enrico Rukzio. Gyrovr: Simulating inertia in virtual reality using head worn flywheels. In *Proceedings of the 29th Annual Symposium on User Interface Software and Technology* **(UIST 2016, 6 Pages)**, pages 227–232. ACM, 2016.

[Conf14]   **Gugenheimer, Jan**, David Dobbelstein, Christian Winkler, Gabriel Haas, and Enrico Rukzio. Facetouch: Enabling touch interaction in display fixed uis for mobile virtual reality. In *Proceedings of the 29th Annual Symposium on User Interface Software and Technology* **(UIST 2016, 12 Pages)**, pages 49–60. ACM, 2016.

[Conf15]   **Gugenheimer, Jan**, Dennis Wolf, Gabriel Haas, Sebastian Krebs, and Enrico Rukzio. Swivrchair: A motorized swivel chair to nudge users' orientation for 360 degree storytelling in virtual reality. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* **(CHI 2016, 5 Pages)**, pages 1996–2000. ACM, 2016.

[Conf16]   **Gugenheimer, Jan**, Alexander De Luca, Hayato Hess, Stefan Karg, Dennis Wolf, and Enrico Rukzio. Colorsnakes: Using colored decoys to secure authentication in sensitive contexts. In *Proceedings of the 17th International Conference on Human-Computer Interaction with Mobile Devices and Services* **(MobileHCI 2015, 10 Pages)**, pages 274–283. ACM, 2015.

[Conf17]   **Gugenheimer, Jan**, Pascal Knierim, Christian Winkler, Julian Seifert, and Enrico Rukzio. Ubibeam: exploring the interaction space for home deployed projector-camera systems. In *Human-Computer Interaction* **(INTERACT 2015, 17 Pages)**, pages 350–366. Springer, Cham, 2015.

[Conf18]   Christian Winkler, **Gugenheimer, Jan**, Alexander De Luca, Gabriel Haas, Philipp Speidel, David Dobbelstein, and Enrico Rukzio. Glass unlock: Enhancing security of smartphone unlocking through leveraging a private near-eye display. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* **(CHI 2015, 4 Pages)**, pages 1407–1410. ACM, 2015.

[Conf19] Katja Rogers, Amrei Röhlig, Matthias Weing, **Gugenheimer, Jan**, Bastian Könings, Melina Klepsch, Florian Schaub, Enrico Rukzio, Tina Seufert, and Michael Weber. Piano: Faster piano learning with interactive projection. In *Proceedings of the Ninth ACM International Conference on Interactive Tabletops and Surfaces* **(ITS 2014, 10 Pages, \*Best Student Paper Award\*)**, pages 149–158. ACM, 2014.

[Conf20] **Gugenheimer, Jan**, Florian Schaub, Gregory M Neiswander, Eromi Guneratne, and Michael Weber. User authentication for rotary knob controlled in-car applications. In *Proceedings of the 6th International Conference on Automotive User Interfaces and Interactive Vehicular Applications* **(AutoUI 2014, 8 Pages)**, pages 1–8. ACM, 2014.

## Journals and Book Chapters

[Jour1] **Gugenheimer, Jan**, Christian Winkler, Dennis Wolf, and Enrico Rukzio. Interaction with adaptive and ubiquitous user interfaces. In *Companion Technology*, pages 209–229. Springer, Cham, 2017.

[Jour2] **Gugenheimer, Jan**, Frank Honold, Dennis Wolf, Felix Schüssel, Julian Seifert, Michael Weber, and Enrico Rukzio. How companion-technology can enhance a multi-screen television experience: a test bed for adaptive multimodal interaction in domestic environments. *KI-Künstliche Intelligenz*, 30(1):37–44, 2016.

## Demos, Posters and Workshops (Adjunct Proceedings)

[Adj1] **Gugenheimer, Jan**, Mark McGill, Samuel Huron, Christian Mai, Julie Williamson, and Michael Nebeling. Exploring potentially abusive ethical, social and political implications of mixed reality research in hci. In *Workshop at the 2020 Conference on Human Factors in Computing Systems* **(CHI 2020)**. ACM, 2020.

[Adj2] Mark Colley, Marcel Walch, **Gugenheimer, Jan**, and Enrico Rukzio. Including people with impairments from the start: External communication of autonomous vehicles. In *Proceedings of the 11th International Conference on Automotive User Interfaces and Interactive Vehicular Applications: Adjunct Proceedings* **AutomotiveUI '19**, 2019.

[Adj3] **Gugenheimer, Jan**, Christian Mai, Mark McGill, Julie Williamson, Frank Steinicke, and Ken Perlin. Challenges using head-mounted displays in shared and social spaces. In *Workshop at the 2019 Conference on Human Factors in Computing Systems* **(CHI 2019)**. ACM, 2019.

[Adj4] Thomas Dreja, Michael Rietzler, Teresa Hirzle, Jan Gugenheimer, Julian Frommel, and Enrico Rukzio. A demonstration of vrspinning: Exploring the design space of a 1d rotation platform to increase the perception of self-motion in vr. In *Extended Abstracts of the Symposium on User Interface Software and Technologyof* **(UIST 2018)**. ACM, 2018.

[Adj5] Teresa Hirzle, **Gugenheimer, Jan**, Florian Geiselhart, Andreas Bulling, and Enrico Rukzio. Towards a symbiotic human-machine depth sensor: Exploring 3d gaze for object reconstruction. In *Extended Abstracts of the Symposium on User Interface Software and Technologyof* **(UIST 2018)**. ACM, 2018.

[Adj6] Teresa Hirzle, Jan Rixen, **Gugenheimer, Jan**, and Enrico Rukzio. Watchvr: Exploring the usage of a smartwatch for interaction in mobile virtual reality. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems* **(CHI 2018)**, page LBW634. ACM, 2018.

[Adj7] **Gugenheimer, Jan**, Evgeny Stemasov, Julian Frommel, and Enrico Rukzio. A demonstration of sharevr: Co-located experiences for virtual reality between hmd and non-hmd users. In *2018 IEEE Conference on Virtual Reality and 3D User Interfaces (VR)* **(IEEE VR 2018 \*Honorable Mention Best Demo\*)**, pages 755–756. IEEE, 2018.

[Adj8]   **Gugenheimer, Jan**, Evgeny Stemasov, Harpreet Sareen, and Enrico Rukzio. A demonstration of facedisplay: Asymetric multi-user interaction for mobile vr. In *2018 IEEE Conference on Virtual Reality and 3D User Interfaces (VR)* **(IEEE VR 2018)**, pages 753–754. IEEE, 2018.

[Adj9]   **Gugenheimer, Jan**, Evgeny Stemasov, Harpreet Sareen, and Enrico Rukzio. Facedisplay: Enabling multi-user interaction for mobile virtual reality. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems* **(CHI 2017)**, pages 369–372. ACM, 2017.

[Adj10]  Julian Frommel, **Gugenheimer, Jan**, David Klein, Enrico Rukzio, and Michael Weber. Cantouchthis: Examining the effect of physical contact in a mobile multiplayer game. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems* **(CHI 2017)**, pages 1609–1616. ACM, 2017.

[Adj11]  **Gugenheimer, Jan**. Nomadic virtual reality: Exploring new interaction concepts for mobile virtual reality head-mounted displays. In *Proceedings of the 29th Annual Symposium on User Interface Software and Technology* **(UIST 2016)**, pages 9–12. ACM, 2016.

[Adj12]  **Gugenheimer, Jan**, Dennis Wolf, Gabriel Haas, Sebastian Krebs, and Enrico Rukzio. A demonstration of swivrchair: a motorized swivel chair to nudge users' orientation for 360 degree storytelling in virtual reality. In *Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Adjunct* **(UbiComp 2016)**, pages 281–284. ACM, 2016.

[Adj13]  **Gugenheimer, Jan**, David Dobbelstein, Christian Winkler, Gabriel Haas, and Enrico Rukzio. Facetouch: Touch interaction for mobile virtual reality. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems* **(CHI 2016)**, pages 3679–3682. ACM, 2016.

[Adj14]  **Gugenheimer, Jan**, Pascal Knierim, Julian Seifert, and Enrico Rukzio. Ubibeam: An interactive projector-camera system for domestic deployment. In *Proceedings of the Ninth ACM International Conference on Interactive Tabletops and Surfaces* **(ITS 2014)**, pages 305–310. ACM, 2014.

[Adj15]  Matthias Weing, Amrei Röhlig, Katja Rogers, **Gugenheimer, Jan**, Florian Schaub, Bastian Könings, Enrico Rukzio, and Michael Weber. Piano: enhancing instrument learning via interactive projected augmentation. In *Proceedings of the 2013 ACM conference on Pervasive and ubiquitous computing adjunct publication* **(UbiComp 2013)**, pages 75–78. ACM, 2013.

## Selected Media Coverage

2018   **The Register**, *We won't need to go outside if these haptic tricksters have their way*.

2017   **VRFocus**, *FaceDisplay Aims To Combat The Isolation Of VR Experiences*.

2017   **Digital Journal**, *FaceDisplay VR headset adds a social touch to virtual worlds*.

2017   **ITech Post**, *FaceDisplay And Other Absurd VR Projects To Unveil At CHI 2017*.

2017   **Hackster.io**, *FaceDisplay: VR for You, Entertainment for Everyone Else!*.

2017   **VRNerds**, *FaceDisplay soll die Isolation der VR-Erfahrungen beenden*.

2017   **VRS**, *FaceDisplay VR Proves that we Haven't Reached Peak Weird Yet*.

2017   **UploadVR**, *FaceDisplay Is A Ridiculous Looking VR Headset With Outward Facing Screens*.

2017   **IEEE Spectrum**, *FaceDisplay and Other Bizarre Virtual Reality Projects from CHI 2017*.

2017   **Hackster.io**, *CarVR Enables a Completely New Passenger Experience*.

2016   **PFSK**, *Virtual Reality Theaters, We May Have Found Your Cinematic Seating*.

2016    **VRDO**, *SwiVRChair: Drehstuhl für Virtual Reality.*

2015    **BBC Channel 4**, *P.I.A.N.O. featured in Gadgetman Season 4 Episode 3 "Date Night".*

2013    **BBC**, *Trying a Guitar Hero-inspired piano.*

2013    **Ubergizmo**, *Piano Projector Makes Learning How To Play As Easy As Rock Band.*

2013    **Gizmodo**, *This Piano Projector Makes Playing Keyboards as Easy as Rock Band.*

2013    **Huffington Post**, *Projection Piano Trainer Merges 'Rock Band' With Real Life.*

2013    **Engadget**, *Facebook science, hands-on search and real 'piano hero'.*

2013    **TechCrunch**, *"Piano Hero" Concept Video Makes Me Want To Try To Learn The Piano For The 500th Time.*

2013    **NewScientist**, *Real Rock Band: Play piano like a pro with light keys.*