

# Curriculum Vitae – David Lindlbauer

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## Personal details

Birthday March 6<sup>th</sup> 1986  
Citizenship Austria

## Education

PhD candidate | Teaching and Research Assistant  
Technische Universität Berlin - Computer Graphics Group  
Berlin, Germany, since 11/2014  
Advisor: Prof. Marc Alexa

PhD candidate | Teaching and Research Assistant  
Technische Universität Berlin - Mobile and Physical Interaction Group  
Berlin, Germany, 01/2014 – 11/2014  
Advisor: Prof. Jörg Müller (now Aarhus University)

PhD candidate | Teaching and Research Assistant  
University of Applied Sciences Upper Austria Campus Hagenberg - Media Interaction Lab  
Hagenberg, Austria, 11/2012 – 12/2013  
Advisor: Prof. Michael Haller

University of Applied Sciences Upper Austria, Campus Hagenberg  
Program Interactive Media, Master of Science  
2010 – 2012, Graduated with high distinction.  
Master's thesis: *Perceptual Grouping of Digital Sketches*.  
Advisor: Prof. Michael Haller

University of Waterloo, Ontario, Canada  
Term abroad, 05/2012 – 10/2012  
Advisors: Prof. Mark Hancock, Prof. Stacey Scott

University of Applied Sciences Upper Austria, Campus Hagenberg  
Media Technology and Design, Bachelor of Science  
2006 – 2009, Graduated with distinction.  
Bachelor's thesis: *The OpenSocial API*.  
Advisor: FH-Prof. DI Rimbart Rudisch-Sommer

## Publications

### Conference papers (fully refereed)

- [C.13] *Remixed Reality: Manipulating Space and Time in Augmented Reality*.  
**D. Lindlbauer**, A. Wilson  
CHI 2018, Montreal, QC, Canada
- [C.12] *HeatSpace: Automatic Placement of Displays by Empirical Analysis of User Behavior*.  
A. Fender, **D. Lindlbauer**, P. Herholz, M. Alexa, J. Müller  
UIST 2017, Quebec, QC, Canada
- [C.11] *Changing the Appearance of Real-World Objects by Modifying Their Surroundings*  
**D. Lindlbauer**, J. Müller, M. Alexa  
CHI 2017, Denver, CO, USA.
- [C.10] *Changing the Appearance of Physical Interfaces Through Controlled Transparency*.  
**D. Lindlbauer**, J. Müller, M. Alexa  
UIST 2016, Tokyo, Japan.

- [C.9] *Combining Shape-Changing Interfaces and Spatial Augmented Reality Enables Extended Object Appearance.*  
**D. Lindlbauer**, J.E. Grønbaek, M. Birk, K. Halskov, M. Alexa, J. Müller  
 CHI 2016, San Jose, CA, USA.
- [C.8] *Influence of Display Transparency on Background Awareness and Task Performance.*  
**D. Lindlbauer**, K. Liliya, R. Walter, J. Müller  
 CHI 2016, San Jose, CA, USA. **Best Paper Honorable Mention Award**
- [C.7] *GelTouch: Localized Tactile Feedback Through Thin, Programmable Gel.*  
 V. Miruchna, R. Walter, **D. Lindlbauer**, M. Lehmann, R. von Klitzing, J. Müller  
 UIST 2015, Charlotte, North Carolina, USA. **Best Paper Honorable Mention Award**
- [C.6] *Creature Teacher: A Performance-Based Animation System for Creating Cyclic Movements.*  
 A. Fender, J. Müller, **D. Lindlbauer**  
 SUI 2015, Los Angeles, California, USA.
- [C.5] *Analyzing Visual Attention During Whole Body Interaction with Public Displays.*  
 R. Walter, A. Bulling, **D. Lindlbauer**, M. Schuessler, J. Müller  
 UBICOMP 2015, Osaka, Japan. Short paper.
- [C.4] *Tracs: Transparency Control for See-through Displays.*  
**D. Lindlbauer**, T. Aoki, R. Walter, A. Höchtl, Y. UEMA, M. Haller, M. Inami, J. Müller.  
 UIST 2014, Honolulu, Hawaii, USA.
- [C.3] *A Chair as Ubiquitous Input Device: Exploring Semaphoric Chair Gestures for Focused and Peripheral Interaction.*  
 K. Probst, **D. Lindlbauer**, M. Haller, B. Schwartz, A. Schrempf.  
 CHI 2014, Toronto, Canada.
- [C.2] *Perceptual Grouping: Selection Assistance for Digital Sketching.*  
**D. Lindlbauer**, M. Haller, M. Hancock, S. D. Scott, W. Stuerzlinger.  
 ITS 2013, St. Andrews, Scotland.
- [C.1] *Exploring the Use of Distributed Multiple Monitors Within an Activity-Promoting Sit-and-Stand Office Workspace.*  
 K. Probst, **D. Lindlbauer**, F. Perteneder, M. Haller, B. Schwartz, A. Schrempf.  
 Interact 2013, Cape Town, South Africa.

## Journal articles

- [J.1] *Measuring Visual Saliency of 3D Printed Objects.*  
 X. Wang, **D. Lindlbauer**, C. Lessig, M. Maertens, M. Alexa  
 IEEE Computer Graphics and Applications 36/4. Special Issue on Quality Assessment and Perception in Computer Graphics, 2016.

## Book chapters

- [B.2] *Accuracy of Monocular Gaze Tracking on 3D Geometry.*  
 X. Wang, **D. Lindlbauer**, C. Lessig, M. Alexa  
 In *Eye Tracking and Visualization. Foundations, Techniques, and Applications*. ETVIS 2015  
 Springer International Publishing 2017. M. Burch, L. Chuang, B. Fisher, A. Schmidt and D.  
 Weiskopf (Eds.), ISBN 978-3-319-47023-8
- [B.1] *Beyond Prototyping.*  
 J. Ängeslevä, I. Nicenboim, J. Wunderling, **D. Lindlbauer**  
 In *Rethink! Prototyping*. Springer International Publishing 2016.  
 C. Gengnagel, E. Nagy, R. Stark (Eds.), ISBN 978-3-319-24439-6

## Other publications

- [EA.3] *Optically Dynamic Interfaces.*  
**D. Lindlbauer**  
 UIST 2017 Adjunct (Doctoral Symposium). Quebec City, QC, Canada.
- [EA.2] *A Collaborative See-through Display Supporting On-demand Privacy.*  
**D. Lindlbauer**, T. Aoki, A. Höchtl, Y. UEMA, M. Haller, M. Inami, J. Müller  
 Siggraph 2014 Emerging Technologies, Vancouver, BC, Canada.

- [EA.1] *Rotating, Tilting, Bouncing: Using an Interactive Chair to Promote Activity in Office Environments.*  
K. Probst, **D. Lindlbauer**, P. Greindl, M. Trapp, M. Haller, B. Schwartz, A. Schrempf  
CHI 2013 Extended Abstracts, Paris, France.
- [W.2] *Accuracy of Monocular Gaze Tracking on 3D Geometry.*  
X. Wang, **D. Lindlbauer**, C. Lessig, M. Alexa  
Workshop on Eye Tracking and Visualization (ETVIS) co-located with IEEE VIS 2015.
- [W.1] *Exploring the Potential of Peripheral Interaction through Smart Furniture.*  
K. Probst, **D. Lindlbauer**, M. Haller, B. Schwartz, A. Schrempf  
Workshop on Peripheral Interaction at CHI 2014, Toronto, Canada.
- [TR.1] *Understanding Mid-Air Hand Gestures: A Study of Human Preferences in Usage of Gesture Types for HCI.* R. Aigner, D. Wigdor, H. Benko, M. Haller, **D. Lindlbauer**, A. Ion, S. Zhao, and J.T.K.V. Koh  
Microsoft Tech Report MSR-TR-2012-11, Redmond, WA, USA.

## Demonstrations & exhibits

- [D.7] *ad infinitum: a parasite that lives off human energy.* Ars Electronica 2017.
- [D.6] *Changing the Appearance of Real-World Objects by Modifying Their Surroundings,* CHI 2017.
- [D.5] *Changing the Appearance of Physical Interfaces Through Controlled Transparency,* CeBit 2017.
- [D.4] *ad infinitum: a parasite that lives off human energy.* Science Gallery Dublin 2017.
- [D.3] *Changing the Appearance of Physical Interfaces Through Controlled Transparency,* UIST 2016.
- [D.2] *Tracs: Transparency Control for See-through Displays,* UIST 2014.
- [D.1] *A Collaborative See-through Display Supporting On-demand Privacy,* SIGGRAPH 2014.

## Theses

*Perceptual Grouping of Digital Sketches.*

2012, Master's thesis University of Applied Sciences Upper Austria, Hagenberg.

*The OpenSocial API.*

2009, Bachelor's thesis, University of Applied Sciences Upper Austria, Hagenberg

## Research internships

Microsoft Research

Perception and Interaction Group. Supervised by Andy Wilson.

Redmond, WA, USA, 06/2017 – 09/2017

## Professional experience

iOS developer [part time]

Interactive Pioneers (former Powerflasher)

Aachen, Germany, 09/2010 – 02/2012

Software / iOS developer [full time]

Interactive Pioneers (formerly Powerflasher)

Aachen, Germany, 10/2009 – 09/2010

Software developer [internship]

Interactive Pioneers (formerly Powerflasher)

Aachen, Germany, 03/2009 – 09/2009

Developer for WPF and Silverlight. Involved in concept & technical planning.

Web developer [internship]

Lomographic Society Vienna

Vienna, Austria, 08/2008 – 09/2008

Screen designer [internship]

Monte Video & Point advertising agency

Linz, Austria, 08/2001 – 09/2001

# Service

## **Committees & management**

Program committee for ISS 2017  
SIGCHI Operations committee (since 02/2016)  
Student volunteers chair for UIST 2016  
Poster chair for PerDis 2016  
CHI Video liaison 2016, 2017, 2018 & 2019  
Documentarian chair for UIST 2015

## **Reviewing**

2018 CHI, TEI, IEEE VR  
2017 CHI, UIST, ICMI, IMWUT (UbiComp), MobileHCI, DIS, DESFORM  
2016 CHI, UIST, ISS, ICMI, SUI, AH, IJHCI  
2015 CHI, ICMI, ITS, SUI, PerDis, PERCOMP Journal  
2014 CHI, UIST, ICMI, NordiCHI, SUI

## **Student volunteering**

ITS 2014, UIST 2014, CHI 2015

# Teaching

## **Teaching assistant**

Winter term 2016 / 2017, Computer Graphics 1, TU Berlin  
Winter and summer term 2015 / 2016 / 2017, Computer Graphics project & seminar, TU Berlin  
Winter term 2013, Computer Graphics 2, University of Applied Sciences Hagenberg  
Winter term 2011, Digital Imaging, University of Applied Sciences Hagenberg  
Summer term 2011, Hypermedia programming, University of Applied Sciences Hagenberg  
Summer term 2010, Computer Graphics (OpenGL), University of Applied Sciences Hagenberg

## **Co-supervised Bachelor's theses and Master's theses**

Tobias Bernhard, 2017, *Design and Evaluation of Spatial Interfaces in Virtual Reality*.  
Leonardo Hahn, 2017, *Hiding Objects by Creating Camouflage Surroundings*.  
Patrick Engelhard, 2016. *3D Modeling using Sparse Sensor Data*.  
Klemen Lilija, 2015. *Interaction with Transparent Displays*.  
Viktor Miruchna, 2015. *Exploring the Potential Usage of Hydrogels for Tactile Feedback Systems*.  
Andreas Fender, 2014. *Design and Implementation of a Performance Based Animation System for Prototyping Non-Humanoid Character Movements*.  
Eva-Maria Grossauer, 2013. *Supporting Seamless Integration of Handwritten Casual Notes in Digital Tools Through Semantic Classification*.

## Awards & recognitions

Best Paper Honorable Mention Award CHI 2016

*Influence of Display Transparency on Background Awareness and Task Performance.*

Best Paper Honorable Mention Award UIST 2015

*GelTouch: Localized Tactile Feedback Through Thin, Programmable Gel.*

Special recognitions for reviewing:

UIST 2014, 2 x CHI 2016, UIST 2016, CHI 2017, UIST 2017, CHI 2018

## Invited Talks

2018/03/02 IST Austria. Hosted by Bernd Bickel. *Optically Dynamic Interfaces.*

2018/02/21 DGP – University of Toronto. Hosted by Seongkook Heo. *Optically Dynamic Interfaces.*

2017/12/15 ETH Zurich. Hosted by Otmar Hilliges. *Optically Dynamic Interfaces.*

2017/12/14 Disney Research Zurich. Hosted by Anselm Grundhöfer. *Optically Dynamic Interfaces.*

2017/12/12 INRIA Bordeaux. Hosted by Martin Hachet. *Optically Dynamic Interfaces.*

2017/10/05 Aarhus University. *Optically Dynamic Interfaces.*

## Selected press

Fast Co.Design. *It's Alarmingly Easy For Machines To Control Us.* 2017.

Fast Co.Design. *An Invisibility Cloak for Distracting Gadgets.* 2016.

Vice Motherboard. *Origami-Like' Objects Can Instantly Change Their Transparency.* 2016.

Futurism. *Controlled Transparency Is The Chameleon of Technology.* 2016.

MIT Technology Review. *Make Your Own Buttons with a Gel Touch Screen.* 2015.

Wired Germany. *Berliner Forscher haben einen Weg gefunden, Touchscreens temporäre Tasten zu verpassen.* 2015.

El País. *Teclas en relieve que aparecen y desaparecen de la pantalla del móvil.* 2015.

Engadget. *Gel-filled touchscreen creates real buttons on demand.* 2015.

Gizmodo. *7 Experimental Interfaces That Show the Future of UI Design.* 2014.