Hanna Schraffenberger | Curriculum Vitæ

IJsvogelpassage 34 • 6541 RK Nijmegen • The Netherlands

📱 +31 (0)616311392 • ✉ hanna@creativecode.org

🌐 www.creativecode.org • 𝗶𝗻 schraffenberger

Personal Information

Date of birth	31st October 1983
Nationality	German

Education

Media Technology MSc program	2008–2011
Leiden University, NL	
Master of Science, cum laude	
Audiovisual Media BEng program	2005–2008
Stuttgart Media University, Germany	
Bachelor of Engineering	
High School	1994–2003
Theodor-Heuss-Gymnasium, Esslingen, Germany	2001–2003
Wirtemberg-Gymnasium, Stuttgart, Germany	1994–2001
German high-school diploma (Abitur)	

Employment & Positions

Current Position

Lecturer and researcher — Since October 2016

Tilburg University, NL

I work as a researcher and lecturer for the Master and Bachelor tracks "Cognitive Science and Artificial Intelligence" at the Department of Communication and Information Sciences at Tilburg University. I am currently responsible for courses about Augmented and Virtual Reality, interactive data visualization and programming. I also have been co-developing and co-teaching a course about Human-Computer Interaction. In addition, I conduct research about Augmented Reality and supervise thesis projects.

PhD student — Since 2011

Media Technology MSc program, Leiden University

Supervised by Edwin van der Heide and Bas Haring.

Expected end date: 31th December 2017.

My PhD research investigates the fundamental characteristics and possible manifestations of Augmented Reality (AR). More specifically, it explores those unique AR scenarios and experiences that have no equivalent in a purely physical world. For more information about my research and thesis please visit www.creativecode.org.

Past Positions

Lecturer	2015–2016
Communication & Multimedia Design, The Hague University of Applied Sciences, NL	
Researcher in residence	2011–2014
Augmented Reality Lab, Royal Academy of Art, The Hague, NL	
Editor/editor-in-chief	2011–2014
AR[t] magazine, Leiden University & Augmented Reality Lab, NL	
Student assistant	2009–2011
Media Technology MSc program, Leiden University, NL	
Programmer and educator	March–June 2011
Open_Music e.V., Stuttgart, Germany	
Technical instructor	December 2010–January 2011
Communication & Multimedia Design, The Hague University of Applied Sciences, NL	
Intern	March-October 2007
Institute for Music an Acoustics, ZKM	Center for Art and Media Karlsruhe, Karlsruhe, Germany	

Teaching Activities

Virtual and Augmented Reality   upcoming
Tilburg University, NL
Audience: Students of the Master's track "Cognitive Science and Artificial Intelligence" and students of the Master's program "Communication and Information Sciences"

Interactive Visualization   2017
Tilburg University, NL
Audience: Students of the Master's program "Communication and Information Sciences"

Basic Programming   2017
Tilburg University, NL
Audience: Students of the Bachelor's track "Cognitive Science and Artificial Intelligence" and students of the Bachelor's program "Communication and Information Sciences"

Human-Computer Interaction   2016
Tilburg University, NL
Audience: Students of the Bachelor's program "Communication and Information Sciences"

Introduction to programming: JavaScript   2015-2016
The Hague University of Applied Sciences, NL
Audience: Students of the Bachelor's program "Communication & Multimedia Design"

The User & The System   2015-2016
The Hague University of Applied Sciences, NL
Audience: Students of the Bachelor's program "Communication & Multimedia Design"

Project C: Design Details & Realise   2015-2016
The Hague University of Applied Sciences, NL
Audience: Students of the Bachelor's program "Communication & Multimedia Design"

Usability Measuring & Testing   2015
The Hague University of Applied Sciences, NL
Audience: Students of the Bachelor's program "Communication & Multimedia Design"

Patterns of Interaction   2015
The Hague University of Applied Sciences, NL
Audience: Students of the Bachelor's program "Communication & Multimedia Design"

Introduction to Programming: Pure Data   2014–2015
Leiden University, NL
Audience: Students of the Master's program "Media Technology"

Introduction to Programming: Max   2012–2014
Leiden University, NL
Audience: Students of the Master's program "Media Technology"

Project I: Autonomous project   2015-2016
The Hague University of Applied Sciences, NL
Audience: Students of the Bachelor's program "Communication & Multimedia Design"

Semester Project   2011–2015
Leiden University, NL
Audience: Students of the Master's program "Media Technology"

Human Computer Interaction   2009–2015
Leiden University, NL
Audience: Students of the Master's program "Media Technology" as well as 3rd year Computer Science BSc students, Computer Science Minor students, Computer Science and Economics BSc students

Sound, Space & Interaction   2010
Leiden University, NL
Audience: Students of the Master's program "Media Technology"

Professional Activities

Selected Talks, Presentations and Workshops

Sound and Technology   6th June 2017
Kennismakerij, Spoorzone Tilburg
Invited WYSIWYG337 (What You See Is What You Geek!) talk for the general public.

New Perspectives on Augmented Reality   18th May 2016
Tilburg University, NL
Invited talk at the colloquium of the Tilburg center for Cognition and Communication (TiCC).

Improving HCI – Supporting Excellent User Experiences   23rd November 2016
HERUG NL (Higher Education Research User Group, Netherlands)
Invited keynote at the "Excellente dienstverlening" meeting of HERUG NL.

Living with Algorithms   21th July 2016
EASA2016: Anthropological legacies and human futures conference in Milano.
Workshop about how can we understand algorithms within the broader socio-technical systems that
they are part of. Realized in collaboration with Zane Kripe.

The Virtual in Augmented Reality   12th March 2015
University of Technology Delft, NL
Invited talk at an event about virtual material by the 'MaterialDesign' foundation.

Introducing Sonically Tangible Objects   21st February 2015
TENT Gallery, Rotterdam, NL
Invited talk at the Media Technology MSc (Leiden University) exhibition.

Introducing Sonically Tangible Objects   17th October 2014
University of Technology Delft, NL
Invited talk at the mini-symposium "Enabling Interaction of Augmented Design".

On the Real in Augmented Reality   27th June 2014
Porto, Portugal
Paper presentation at the Second Conference on Computation, Communication, Aesthetics and X,
xCoAx 2014.

Relationships Between the Virtual and the Real in Augmented Reality   25th September 2013
Amsterdam, NL
Short presentation at Ignite Amsterdam 30 (organized by Mediamatic Foundation).

Modeling the Dialogue Between Artwork and Audience   17th June 2013
Sydney, Australia
Presentation at the Graduate Student Symposium of the 9th ACM Conference on Creativity & Cognition 2013.

From Coexistence to Interaction: Influences Between the Virtual and the Real in AR   11th June 2013
Sydney, Australia
Paper presentation at the 19th International Symposium on Electronic Art, ISEA2013.

Towards Novel Relationships Between the Virtual and the Real in AR   22nd March 2013
Milano, Italy
Paper presentation at the 3rd International Conference on Arts and Technology, ArtsIT 2013.

Audience-Artwork Interaction   21st December 2012
Royal Academy of Art, The Hague, NL
Invited talk at the ArtScience program of the Royal Academy of Art, The Hague.

Whether You Like Art or Not   17th September 2012
Amsterdam, NL
Short presentation at PICNIC festival as part of the 'Virtueel Platform HOT100 2012'.

Interaction Models for Audience-Artwork Interaction   10th December 2011
Esbjerg, Denmark
Paper presentation at the 2nd International Conference on Arts and Technology, ArtsIT 2011.

Whether You Like Art or Not   18th February 2011
Leiden, NL
Invited talk at the 'This week's discoveries' lunch lecture series of Leiden University.

On the Liking of Modern Art   28th January 2011
Leiden, NL
Invited talk at the Media Technology MSc (Leiden University) exhibition.

Editorial Work

Editor-in-chief/editor/editorial board member of AR[t] magazine 2011–2014
Augmented Reality Lab & Leiden University, NL

During my time as a researcher in residence at the former Augmented Reality Lab in The Hague, I acted as the member of the editorial board, editor and editor-in-chief of a semi-annual magazine about augmented reality, art and technology called AR[t]. The magazine was created as part of a collaboration between the former Augmented Reality Lab (Royal Academy of Art, The Hague), University of Technology Delft and Leiden University and quickly became one of the leading magazines about augmented reality.

Conference program Committee Member

Persuasive 2016 Conference	2016
Persuasive 2015 Conference	2015
Persuasive 2014 Conference	2014

Refereeing Experience

Persuasive 2017 Conference	2017
Etmaal 2017: Innovative Methods in Communication Research	2016
Persuasive 2016 Conference	2016
Persuasive 2015 Conference	2015
Persuasive 2014 Conference	2014
AR[t] magazine	2011-2014
International Symposium on Electronic Art, ISEA 2013	2013

Course Participation

International Cyber Security Summer School 2017 20th August–25th August 2017
The Hague, NL

A six-day course about cyber security with lectures and assignments covering both technological issues as well as legal and policy aspects.

Effective Communication 26th January 2015
Leiden University, NL

Generic skills course for PhD students.

Communication in Science September/October 2013
Leiden University, NL

Generic skills course for PhD students.

Time Management, Self-Management 13th March and 10th April 2012
Leiden University, NL

Generic skills course for PhD students.

Multimodal Interaction in Virtual Environments May/June 2011
Aalborg University Copenhagen, Denmark

PhD course about multimodal interaction techniques for virtual environments.

STEIM Orientation Workshop #106 24th October–2nd November 2010
Amsterdam, NL

Workshop at the Studio for Electro-Instrumental Music (STEIM) in Amsterdam.

'Future Media Vision' Workshop November 2010
Pforzheim, Germany

Young European Talents Summit 2010 — Workshop around the question: "How should the city of tomorrow look like?"

Contests

One-Press Control @ UIST Student Innovation Contest October 2009
Leiden University, NL & Victoria, Canada

One-Press Control is a tactile input method for pressure-sensitive keyboards that I developed together with Staas de Jong, Jeroen Jillissen, Dünya Kirkali, Alwin de Rooij and Arnout Terpstra. The poster and prototype were presented by Jeroen Jillissen at the ACM Symposium on User Interface Software and Technology (UIST 2009) Student Innovation Contest, 5-6th October 2009 in Victoria, Canada.

Research Projects

AR VIP Raak-Pro Research program   July 2011–June 2014
Leiden University & Augmented Reality Lab, The Netherland
I have been researching augmented reality as part of the Raak-Pro Research program 'AR-VIP: Augmented Reality-Visualisation, Interaction and Perception'. The Raak-Pro research program was a collaboration between the former Augmented Reality Lab (Royal Academy of Art, The Hague), University of Technology Delft, Leiden University and several small companies.

Publications

🖹 Conference and Workshop Proceedings

▸ Schraffenberger, H., & van der Heide, E. (forthcoming). Reconsidering Registration: New Perspectives on Augmented Reality. Accepted for publication at *6th EAI International Conference: ArtsIT, Interactivity & Game Creation*, 30-31 October 2017, Heraklion, Greece.

▸ de Rooij, A., van Dartel, M., Ruhl, A., Schraffenberger, H., van Melick, B., Bontje, M., Daams, M., & Witter, M. (forthcoming). Sensory Augmentation: Toward a Dialogue between the Arts and Sciences. Accepted for publication at *6th EAI International Conference: ArtsIT, Interactivity & Game Creation*, 30-31 October 2017, Heraklion, Greece.

▸ de Rooij, A., Schraffenberger, H., & Bontje, M., (submitted). Augmented metacognition: Exploring the potential of pupil dilation sonification to elicit metacognitive awareness and guide metacognitive control. Submitted to: *TEI 2018 – Twelfth International Conference on Tangible, Embedded and Embodied Interactions*, 18-21 March 2018, Stockholm, Sweden.

▸ Schraffenberger, H., & van der Heide, E. (2016). Multimodal augmented reality: the norm rather than the exception. In Proceedings of the 2016 workshop on Multimodal Virtual and Augmented Reality. ACM.

▸ Schraffenberger, H. & van der Heide, E. (2015). Sonically Tangible Objects. In: *xCoAx 2015: Proceedings of the Third Conferenc on Computation, Communication, Aesthetics and X*, 25-26 June 2015, Glasgow, UK.

▸ Schraffenberger, H. & van der Heide, E. (2014). The Real in Augmented Reality. In M. Carvalhais & M. Verdicchio (Eds.), *xCoAx 2014: Proceedings of the Second Conference on Computation, Communication, Aesthetics and X* (pp. 64–74). Porto, Portugal.

▸ Gómez-Maureira, M. A., Teunisse, C., Schraffenberger, H., & Verbeek, F. (2014). Illuminating Shadows: Introducing Shadow Interaction in Spatial Augmented Reality. In J. P. van Leeuwen, P. J. Stappers, M. H. Lamers, M. J. M. R. Thissen (Eds.), *Creating the Difference, Proceedings of the Chi Sparks 2014 Conference* (pp. 11-18).

▸ Schraffenberger, H. & van der Heide, E. (2013b). Towards Novel Relationships Between the Virtual and the Real in Augmented Reality. In G. De Michelis, F. Tisato, A. Bene, & D. Bernini (Eds.), *Arts and Technology* (LNICST 116, pp. 73–80). Springer Berlin Heidelberg.

▸ Schraffenberger, H. & van der Heide, E. (2013a). From Coexistence to Interaction: Influences Between the Virtual and the Real in Augmented Reality. In K. Cleland, L. Fisher, & R. Harley (Eds.), *Proceedings of the 19th International Symposium on Electronic Art, ISEA2013* (pp. 1–3). Sydney.

▸ Schraffenberger, H. & van der Heide, E. (2012) Interaction Models for Audience-Artwork Interaction: Current State and Future Directions. In A. L. Brooks (Ed.), *Arts and Technology* (LNICST 101, pp. 127-135). Springer Berlin Heidelberg.

▸ de Jong, S., Kirkali, D., Schraffenberger, H., Jillissen, J., de Rooij, A., & Terpstra, A. (2010, April). One-Press Control: A Tactile Input Method for Pressure-Sensitive Computer Keyboards. In *CHI'10 Extended Abstracts on Human Factors in Computing Systems* (pp. 4261-4266). ACM.

🖹 Journals

▸ Schraffenberger, H., & van der Heide, E. (2014). Everything Augmented: On the Real in Augmented Reality. *Journal of Science and Technology of the Arts (CITARJournal), 6*(1), 17-29.

▸ Schraffenberger, H. K., & Heide, E. V. D. (2015). Audience-artwork interaction. *International Journal of Arts and Technology, 8*(2), 91-114.

✎ Editorial Work

▸ Schraffenberger, H., Kniveton, M., Kolstee, L., Kolstee, Y., Verlinden, J., & Wesdorp, R. (Eds.) (2014, May). *AR[t], Augmented Reality, Art and Technology*, issue 5.

▸ Schraffenberger, H., Kniveton, M., Kolstee, Y., Verlinden, J., & Wesdorp, R. (Eds.) (2013, November). *AR[t], Augmented Reality, Art and Technology*, issue 4.

▸ Schraffenberger, H., Kniveton, M., Kolstee, Y., & Verlinden, J. (Eds.) (2013, May). *AR[t], Augmented Reality, Art and Technology*, issue 3.

▶ Kolstee, Y., Schraffenberger, H., Vahrmeijer E., & Verlinden, J. (Eds.) (2012, November). *AR[t], Augmented Reality, Art and Technology*, issue 2.

▶ Kolstee, Y., Schraffenberger, H., Vahrmeijer E., & Verlinden, J. (Eds). (2012, April). *AR[t], Augmented Reality, Art and Technology*, issue 1.

📄 AR[t] Magazine Articles

▶ Schraffenberger, H. (2014, May). Hitting imaginary walls, pulling virtual strings. In *AR[t], Augmented Reality, Art* and Technology, 5, 66–71.

▶ Schraffenberger, H. & Verlinden, J. (2014, May). The great pig in the sky. In *AR[t], Augmented Reality, Art and Technology,* 5, 12–19.

▶ Schraffenberger, H. (2013, November). Geegee! Or why I prefer rubbing glass over wearing it. In *AR[t], Augmented Reality, Art and Technology,* 4, 44–47.

▶ Schraffenberger, H. (2013, November). Talescape – Interview with Michiel Helvensteij In *AR[t], Augmented Reality, Art and Technology,* 4, 62–67.

▶ Schraffenberger, H. (2013, May). Subject: Interview | From: Hanna Schraffenberger | To: Lev Manovich. In *AR[t], Augmented Reality, Art and Technology,* 3, 18–23.

▶ Schraffenberger, H. (2012, November). Chasing virtual spooks, losing real weight. In *AR[t], ▶Augmented Reality, Art and Technology, 2,* 48–51.

▶ Schraffenberger, H. (2012, November). Unspecialize! The more you know the less you see. A portrait of Daniel Disselkoen. In *AR[t], Augmented Reality, Art and Technology,* 2, 54–61.

▶ Schraffenberger, H. (2012, April). Interview with Helen Papagiannis. In *AR[t], Augmented Reality, Art and Technology,* 1, 12–19.

▶ Schraffenberger, H. (2012, April). Lieven van Velthoven — the racing star. *In AR[t], Augmented Reality, Art and Technology,* 1, 30–35.

▶ Schraffenberger, H. (2012, April). Like riding a bike. Like partiking a car. Portrait of the artist in residence: Marina de Haas. In *AR[t], Augmented Reality, Art and Technology,* 1, 60–65.

📕 Books

▶ Schraffenberger, H. (2011). *Whether you like art or not. Short essays on the liking of modern art.* Supervised by Edwin van der Heide. Self-published.

📄 Posters

▶ Kripe, Z., Schraffenberger H., & Terpstra, A. (2010). Interactive Art and Persuasive Technology: The Case Study of the Formamat, Poster presented at the *5th International Conference on Persuasive Technology (Persuasive 2010)*, June 2010, Copenhagen.

📹 Video Publications

▶ Kripe, Z., Schraffenberger H., & Terpstra, A. (2010). The Formamat: Investigating the Dispensability of Pervasive Data. Video presented at the *8th International Conference on Pervasive Computing (Pervasive 2010)*, May 2010, Helsinki. Video published on the USB-proceedings.

📰 Newspaper Articles

▶ Schraffenberger, H. (21 April 2011). Kunst? Welke kunst? In Mare – Leids Universitair Weekblad, no. 27.

🖥 Online Columns

▶ Schraffenberger, H. (17th May 2012). What matter does! Blog of the DEAF festival 2012, see `http://v2.nl/archive/articles/what-matter-does`.

▶ Schraffenberger, H. (18th May 2012). The beauty of a flower. Blog of the DEAF festival 2012, see `http://v2.nl/archive/articles/the-beauty-of-a-flower`.

Skills & Expertise

Languages: German (mother tongue), English (fluent), Dutch (fluent), Latin (reading)

Professional: research skills, educational skills, organizational and editorial skills

Fields of expertise: human-computer interaction, augmented reality, prototyping, interaction design, data visualization, programming (Max, Pure Data, Java, Processing, JavaScript), media technology, sound engineering

Personal: curious, creative, motivated, focused, enthusiastic, open minded but critical, perfectionistic but pragmatic, communicative, able to pick up new skills quickly

Hobbies: creative coding, writing columns, running, making sound, music & noise

Miscellaneous Activities & Personal Projects

The Hot Stream Machine September–October 2013
Desktop application
'The Hot Stream Machine' is an application and interactive installation that allows users to compose with and listen to mathematical streams. The project was part of an exhibition that explained streams to children at the open day of CWI (National Research Institute for Mathematics and Computer Science, NL) and was realized in collaboration with Joost Winter and Jurriaan Rot.

Concerts & Performances 2004–2012
Saxophone & laptop music
Concerts and performances in the field of contemporary music and free improvised music. Among others, with the ensemble 'Open_Sounds' at the Klangraum festival at Kunstraum34 (Stuttgart, Germany, 2012), as part of 'Jetzt!' (Theaterhaus Stuttgart, Germany, 2011), with Structet2 at TodaysArt (The Hague, NL, 2010) and with RecPlay at Epicentrum (The Hague, NL, 2010). Founding member of the 'Ensemble for experimental chamber music' (2003–2007).

The Formamat 2010
Interactive installation
The Formamat is an interactive installation about the value and (in)dispensability of digital data. The project was realized together with Zane Kripe and Arnout Terpstra in the context of the Media Technology MSc program. The Formamat was exhibited, among other, at the V2_Institute for the Unstable Media (Rotterdam, NL) and in the Van Gogh Museum (Amsterdam, NL).

P!NK SCIENCE 2009
Communicating science through T-Shirts
The P!NK SCIENCE project comprises a series of T-shirts that explain scientific topics such as evolution, emergence and chaos to a broad audience. They and were created in collaboration with Alwin de Rooij and Arnout Terpstra in the 'Cool Science' course of the Media Technology MSc program. The T-shirts were exhibited, among other, at the Key of Life Festival (Leiden, NL) and at the Discovery festival 2009 in the Science Center NEMO (Amsterdam, NL). They are still being sold on www.pinkscience.nl.

Further information and additional projects can be found at www.creativecode.org.

Selected Honors & Awards

International Cyber Security Summer School 2017 25th August 2017
The Hague Security Delta
Our group presentation was voted the best presentation. The presentation addressed an assignment about "Usable Security" by Thales.

HOT100 2012 September 2012
Virtueel Platform
Selected as one of the 'Virtueel Platform HOT100 2012' — a selection of the best graduates of Dutch art academies, universities and universities of applied sciences in the fields of art, design, theory, communication and e-culture.

Creative Class 2012 September 2012
Bright.nl
Selected by bright.nl as part of the Creative Class — a series that portraits the 'brightest' graduates from technical and creative educational programs in the Netherlands.

Vers 1.6 April 2010
Popbüro Region Stuttgart
Subsidy award for electronic music in churches.

Karl-Steinbuch-Stipendium November 2007–August 2008
MFG Stiftung Baden-Württemberg
Karl-Steinbuch-Stipendium (scholarship) for my project 'Interactive real-time applications for free improvised music'.

References

References upon request, please contact me at hanna@creativecode.org.

Further Information

If you have further questions, please do not hesitate to contact me. Visit www.creativecode.org for additional information and updates.