

Andrii Matviienko

Curriculum Vitae



Technical University of Darmstadt
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Academic Positions

Since 02/2020	Postdoctoral Researcher – Technical University of Darmstadt, Telecooperation Lab by Prof. Dr. Max Mühlhäuser
10/2022–01/2023	Visiting Researcher (planned) – Monash University, Australia, Exertion Games Lab by Prof. Florian 'Floyd' Mueller
01/2017–12/2019	Research Associate – OFFIS – Institute for Computer Science, Interactive Systems Group (Department Health) by Prof. Dr. Susanne Boll
04/2018–06/2018	Visiting Researcher – University of Glasgow, United Kingdom, Multimodal Interaction Group by Prof. Dr. Stephen Brewster
02/2015–12/2016	Research Associate – Carl von Ossietzky University of Oldenburg, Human-Computer Interaction Group by Prof. Dr. Susanne Boll
02/2014–01/2015	Research Assistant – RWTH Aachen Univeristy, Institute for cybernetics by Prof. Dr. Sabina Jeschke
10/2011–05/2012	Research Assistant – Space Resarch Institute Kyiv, by Prof. Dr. Natalia Kussul

Education

02/2015–12/2019	Ph.D. – Carl von Ossietzky University of Oldenburg, Doctor of Computer Science in Media Informatics. Thesis title: “Designing Multimodal Assistance Systems for Child Cyclists”, Supervisor: Prof. Dr. Susanne Boll, External Supervisor: Prof. Dr. Stephen Brewster
10/2012–12/2014	Master studies – RWTH Aachen University, Master of Science in Media Informatics. Thesis title: “GazeTouch: Using Gaze Tracking to Select Indirect Touch Targets”, Supervisors: Prof. Dr. Jan Borchers, Prof. Dr. Johannes Schöning & Dr. Simon Voelker
09/2008–05/2012	Bachelor studies – Technical University of Kyiv, Bachelor of Science in Applied Mathematics. Thesis title: “Methods of clustering and statistic procession of numerical series and satellite data for agriculture tests”, Supervisors: Prof. Dr. Natalia Kussul, Dr. Sergii Skakun & Dr. Oleksii Kravchenko

Awards & Scholarships

2021	Ernst Ludwig Mobility Grant , <i>For 4-months long research visit to Monash University, Australia, Technical University of Darmstadt, Germany</i>
2019	SIGCHI Development Fund , <i>For 3-months long Cycling Event, Virtual Event</i>
2016	Distinguished project award , <i>International UBI Summer School, Oulu, Finland</i>
2015	Full Paper Honorable Mention , <i>“Combining direct and indirect touch input for interactive workspaces using gaze input”, Symposium Spatial User Interaction (SUI)</i>
10/2012–09/2013	Scholarship from the Educational fund of RWTH Aachen University , supported by a donation from Dr. Carl-Arthur Pastor-Stiftung for master students , for the academic year 2012/2013
2012	First Class Honors , <i>Bachelor studies at Technical University of Kyiv, Ukraine</i>

Teaching and Supervision Experience

My main interests in teaching are Human-Computer Interaction, HCI methods, mixed reality, urban interaction, and multimodal interfaces. By being involved in research projects with academic and industrial partners, I can convey current research priorities and fundamentals in a practical way in teaching. In teaching, my personal focus is on giving students the opportunity to discuss topics between people and technology. This means that not only technical topics are in the foreground of my teaching, but also the personal development of the students. In my doctoral times, I have co-taught fundamental classes of HCI for bachelor and master studies and a specialized class for fundamentals in experiments and studies together with Prof. Susanne Boll and Dr. Swamy Ananthanarayan at the University of Oldenburg. During my postdoctoral time, I co-teach the classes in Human-Computer Interaction and Ubiquitous Computing for bachelor and master studies with Prof. Dr. Max Mühlhäuser at the Technical University of Darmstadt. Additionally, I am the primary instructor for the “Hands-On HCI” class that focuses on research literacy. I have developed, prepared, and integrated this class into the University’s program.

(Co-)Taught Classes

Since 04/2021	Lecture “Hands-On HCI” (English) , <i>Together with Dr. Florian Müller we developed, prepared and integrated a new class at Technical University of Darmstadt</i>
Since 04/2020	Lecture “Human-Computer Interaction” (Bachelor/Master) (English) , <i>Together with Prof. Dr. Max Mühlhäuser</i>
Since 04/2020	Lecture “Ubiquitous (& Mobile) Computing” (Bachelor/Master) (English) , <i>Together with Prof. Dr. Max Mühlhäuser</i>
01/2019–12/2019	Lecture “Fundamental Competences in Psychology Experiments and Studies” (Master) (English) , <i>Together with Prof. Dr. Susanne Boll and Dr. Swamy Ananthanarayan</i>
04/2015–12/2019	Lecture “Interactive Systems” (Bachelor) (English) , <i>Together with Prof. Dr. Susanne Boll</i>
04/2015–12/2019	Lecture “Human-Computer Interaction” (Master) (English) , <i>Together with Prof. Dr. Susanne Boll</i>

Mentoring PhD Students

- Karola Marky** (2020) Privacy-Sovereign Interaction Enabling Privacy-Sovereignty for End-Users in the Digital Era. Technical University of Darmstadt.
- Sebastian Günther** (expected graduation 2022) Replicating haptic stimuli realistically within the somatosensory system. Technical University of Darmstadt.
- Achref Doula** (expected graduation 2024) Holistic latent representations of large scale dynamic scenes. Technical University of Darmstadt.
- Julius von Willich** (expected graduation 2024) Assisting Vulnerable Road Users in Urban Environments. Technical University of Darmstadt.
- Dominik Schön** (expected graduation 2025) Exploring tangible Augmented Reality user input for general and specialised interactions. Technical University of Darmstadt.

Supervised Bachelor/Master Theses and Projects

To graduate in 2022

- Jonas Wackerbarth** Investigating Warnings for Cyclists about Cars Approaching from Behind. Bachelor thesis, Technical University of Darmstadt.
- Hajris Hoxha** Exploring Levels of Cycling Realism in Virtual Reality. Bachelor thesis, Technical University of Darmstadt.
- Manuel Lehe** Investigating Head Movements as Indicators of Hazardous Situations for Cyclists. Bachelor thesis, Technical University of Darmstadt.
- Umme Jobira Ahmad** Investigating Gestures and Tangible Proxies to Assist Children in Paper Crafting in VR. Master thesis, Technical University of Darmstadt.

2022

- Damir Mehmedovic** Exploring Unimodal Signals for Manuever Indications of Self-Driving Bicycles using a Tandem Simulator. Master thesis, Technical University of Darmstadt.

2021

- Sebastian Ritzenhofer** An Exploration of Interaction Concepts for Cultural Heritage Sites and Sightseeing. Master thesis, Technical University of Darmstadt.
- Marcel Zickler** VRCyberBike: Investigating Cybersickness Countermeasures for Different Types of Routes in a Virtual Reality Bicycle Simulator. Master thesis, Technical University of Darmstadt.
- Marco Fendrich** SkyPort: Investigating 3D Teleportation Methods in Virtual Environments. Bachelor thesis, Technical University of Darmstadt.
- Juila Abels, Lisa Gasche & Till Steinert** Investigating Steering Mechanisms for Bicycle Simulators. Group project, Technical University of Darmstadt.
- Salar Abaspor, Yi Li & Regis Fayard** Exploring Unimodal Warnings for e-Scooter Riders in Augmented Reality. Group project, Technical University of Darmstadt.
- Julian Fischer** Investigating page turning methods and display layouts on a digital music stand. Bachelor thesis, Technical University of Darmstadt.
- Manuel Lehe, Adrian Kühn, Jessica Bersch & Miriam Wildner** Investigating Gestures and Tangible Proxies to Assist Children for Handcrafting in VR. Group project, Technical University of Darmstadt.

2020

- Dominik Schön** Supporting Cyclist Crossing Decision-making at Uncontrolled Intersections using Augmented Reality. Master thesis, Technical University of Darmstadt.
- Marcel Langer** Assisting Children in Creating Virtual Scenes using Physical Objects. Bachelor thesis, Technical University of Darmstadt.

2017

Ole Felber & Jannes Dirksen Introduction into prototyping and hardware programming. Group project for schoolchildren, University of Oldenburg.

2015

Sebastian Horwege, Lennart Frick & Christoph Ressel Design of a Tangible Interactive Event Awareness Cube. Group project, University of Oldenburg.

Conference talks

2020

Reminding child cyclists about safety gestures, *ACM International Symposium on Pervasive Displays (PerDis)*

2019

Comparing unimodal lane keeping cues for child cyclists, *International Conference on Mobile and Ubiquitous Multimedia (MUM)*

2019

NaviBike: Comparing Unimodal Navigation Cues for Child Cyclists, *ACM Conference on Human Factors in Computing Systems (CHI)*

2018

Augmenting bicycles and helmets with multimodal warnings for children, *Conference on Human-Computer Interaction with Mobile Devices (MobileHCI)*

2016

NaviLight: investigating ambient light displays for turn-by-turn navigation in cars, *Conference on Human-Computer Interaction with Mobile Devices (MobileHCI)*

2015

Deriving design guidelines for ambient light systems, *International Conference on Mobile and Ubiquitous Multimedia (MUM)*

Invited talks

2022

Ulm University (Ulm), *Invited talk*, Cycling in HCI

2018

CycleHack (Berlin), *Invited talk*, Designing Multimodal User Interfaces for Child Cyclists

2018

University of Eindhoven (Eindhoven), *Invited talk*, Designing Multimodal User Interfaces for Child Cyclists

2018

University of Lancaster (Lancaster), *Invited talk*, Designing Multimodal User Interfaces for Child Cyclists

2018

University of Glasgow (Glasgow), *Invited talk*, Designing Multimodal User Interfaces for Child Cyclists

2016

UX Meetup Innovation with Systems (Oldenburg), *Invited talk*, Applying Data Gathering Techniques

2015

Proseminar Future Vision AR/VR and Eyetracking (Oldenburg), *Invited talk*, Combining Direct and Indirect Touch for Interactive Workspaces using Gaze Input

Research Projects

**OFFIS - Institute for
Computer Science**

Safety4Bikes – Assistance systems for child cyclists (BMBF Project)

University of Oldenburg

SOCIAL – Enabling spontaneous social communication in spatially distributed groups through the use of intelligent environments (DFG Project)

University of Oldenburg

LUMICONS – systematic investigation of the use of ambient light interaction in everyday life of older people who have slight sensory and cognitive impairments (BMBF Project)

Academic Organisational Activities

2023	Assistant for Technical Program Chairs at The ACM CHI Conference on Human Factors in Computing Systems, CHI
2022	Co-Organisator and assistant for general chairs of the conference „Mensch und Computer 2022“, Mensch und Computer (MuC)
2022	Short Paper Chair, Mensch und Computer (MuC)
2022	Web-Chair, Conference on Human-Computer Interaction with Mobile Devices (MobileHCI)
2022	Editor, Special Issue “User Interfaces for Cyclists” (Multimodal Technologies and Interaction)
2021	Co-Organisator of „ACM SIGCHI Cycling Event“, SIGCHI Sponsored Event
2021	Demo and Video Chair, International Conference on Mobile and Ubiquitous Multimedia (MUM)
2021	Student Volunteer Chair, ACM Conference on Automotive User Interfaces and Interactive Vehicular Applications (AutoUI)
2021	Special Sessions Chair, International Conference on Artificial Intelligence & Virtual Reality (AIVR)
2021	Associate Chair for full papers track, ACM Conference on Human Factors in Computing Systems (CHI)
2021	Co-Organisator of the Workshop „Cycling@CHI: Towards a Research Agenda for HCI in the Bike Lane“, Conference on Human Factors in Computing Systems (CHI)
2020	Co-Organisator of the Workshop „WeCare: Workshop on Inclusive Communication between Automated Vehicles and Vulnerable Road Users“, Conference on Human-Computer Interaction with Mobile Devices (MobileHCI)
2020	Associate Chair for full papers track, International Conference on Mobile and Ubiquitous Multimedia (MUM)
2020	Poster Chair, International Conference on Mobile and Ubiquitous Multimedia (MUM)
2020	Poster and Work-in-Progress Chair, International Conference on Artificial Intelligence & Virtual Reality (AIVR)
2020	Virtual Setup Chair, International Conference on Artificial Intelligence & Virtual Reality (AIVR)
2020	Co-Organisator of Virtual GermanCHI Week, The 2020 Virtual German CHI Week
2019	Co-Organisator of pre-CHI Events, pre-CHI Event, Oldenburg
2019–2021	Co-Organisator of German CHI Social Events, CHI
2016	Co-Organisator of Inventor’s Workshop, Inventor’s Workshops, Oldenburg

Reviewing Activities

Conferences

2021–2022	Conference on Human Factors in Computing Systems, CHI , Associate Chair for Full-Paper Track
2021–2022	Conference on Human Factors in Computing Systems, CHI , Associate Chair for Late-Breaking Work Track
2020–2022	Conference on Human-Computer Interaction with Mobile Devices, MobileHCI , Associate Chair for Full-Paper Track
2016–2022	Conference on Human Factors in Computing Systems, CHI , External reviewer for Full-Paper and Late-breaking work Tracks
2018–2021	Conference on Human-Computer Interaction with Mobile Devices, MobileHCI , External reviewer for Full-Paper Track
2016–2021	ACM Designing Interactive Systems, DIS , External reviewer for Full-Paper Track
2018–2021	ACM Conference on Automotive User Interfaces and Interactive Vehicular Applications, AutoUI , External reviewer for Full-Paper Track
2019–2020	ACM User Interface Software and Technology Symposium, UIST , External reviewer for Full-Paper Track
2018–2020	Nordic forum for Human-Computer Interaction, NordiCHI , External reviewer for Full-Paper Track
2017–2021	Conference on Mobile and Ubiquitous Multimedia, MUM , Associate Chair for Full-Paper Track
2017–2019	Conference on Computer-Supported Cooperative Work and Social Computing, CSCW , External reviewer for Full-Paper Track
2017–2019	Conference on Interactive Surfaces and Spaces, ISS , External reviewer for Full-Paper Track
2021	Mensch und Computer, MuC , External reviewer for Full-Paper Track
2021	Augmented Humans, AH , External reviewer for Full-Paper Track
2021	Mindtrek Technology Conference, Mindtrek , External reviewer for Full-Paper Track
2020	International Conference on Artificial Intelligence & Virtual Reality, AIVR , External reviewer for Full-Paper Track
2019	2021, 2019–2021, Interaction Design and Children Conference, IDC External reviewer for Full-Paper Track
2019	2021, 2019–2021, International Conference on Human-Computer Interaction, INTERACT External reviewer for Full-Paper Track
2018	Conference on Tangible, Embedded, and Embodied Interaction, TEL , External reviewer for Full-Paper Track

Journals

2020	International Journal of Human-Computer Studies, IJHCS , External reviewer for Full-Paper Track
2020	Information Journal, Information , External reviewer for Full-Paper Track

Technical Skills

- Mixed Reality: Unity development, Hololens, HTC Vive, Oculus Quest
- Programming languages: Java, Python, Swift, JavaScript, C++, C#
- Hardware development: Arduino/ESP boards, EAGLE
- Fabrication & Design: Lasercutting und 3D printing (Inkscape, openSCAD)
- User research: Usability testing, focus groups, co-design sessions, lab and field evaluation, interviews, questionnaires

Media Coverage

2021	3sat Nano Spezial , “ <i>Mehr Platz fürs Rad</i> ”
2021	Buten und Binnen , “ <i>So warnen Fahrräder mit Oldenburger Technik vor Gefahren im Verkehr</i> ”
2016	VapeTracker Project in the press “ New Technology: A cessation tool for vapers ”

Languages

- English (fluent)
- German (fluent)
- Ukrainian (native)
- Russian (fluent)
- Polish (beginner)