

# MAX PASCHER

HUMAN-ROBOT INTERACTION RESEARCHER



## CONTACT

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max-pascher

@maxpascher

## QUALIFICATIONS & EXPERTISE

### | Languages

German - native

English - C2

Spanish - A2

### | Professional

Python, C/C++, C#, obj-C, Java

Unity, Unreal Engine, ROS

App Development Android/iOS

Server Administration

MATLAB, Simulink

SPSS, R

### | Personal

Int. Coastal Boat Licence

SSI AOW Scuba Instructor

## EDUCATION

10 / 2018 – 07 / 2024

### Ph.D (Dr. rer. nat.) Human-Robot Interaction

University of Duisburg-Essen  
Germany

Grade: magna cum laude (very good)

An interaction design for AI-enhanced assistive Human-Robot Collaboration

09 / 2013 – 08 / 2015

### MSc Distributed Information Systems

Westphalian University of Applied  
Sciences | Germany

Grade: 1.1 (very good) with Distinction

Conception and prototypical realisation of a software architecture for a distributed system for recording, processing and analysis of energy consumption data

09 / 2008 – 08 / 2011

### BSc Information Technology

University of Applied Sciences  
Gelsenkirchen | Germany

Grade: 2.2 (good)

Process optimisation of a changing system for coffee roasting plants under a continuous analysis of the weighing process

## WORK EXPERIENCE

08 / 2024 – Ongoing

### Postdoctoral Researcher

TU Dortmund University | Germany

Lead and contribute to research projects on inclusive HRI, support Ph.D and Master students, and manage the XR Simulation and Robotics & Physical Prototyping labs

# MAX PASCHER

10 / 2017 – 07 / 2024

## Research Assistant

Westphalian University of Applied Sciences & Technical University Dortmund | Gelsenkirchen & Dortmund | Germany

Working in two BMBF funded research projects (MobilLe and DoF-Adaptiv) in the field of Human-Computer Interaction and Human-Robot Interaction

02 / 2015 – 10 / 2017

## Research Assistant

Westphalian University of Applied Sciences | Bocholt | Germany

Working in a BMBF-funded research project (ZELIA) and conducting several projects in the scope of Mobile and Ubiquitous Computing

02 / 2011 – 02 / 2016

## Development Engineer

PROBAT-Werke, Gimborn Maschinenfabrik GmbH | Germany

PLC programmer and engineer for industrial coffee roasting machines. Application programmer for production data and exchange with resource planning software

08 / 2005 – 06 / 2008

## Fast-trek Apprentice Electronics Technician

Siemens Home and Office Communication Devices GmbH & Co. KG | Germany

Fundamentals of electrical engineering and precision mechanics, circuit board design and construction, programming of programmable logic controllers, prototype construction

## VOLUNTEERING

03 / 2009 – Ongoing

## International Rescue Expert

Bundesanstalt Technisches Hilfswerk, SEEBA | Germany

Rescue expert and SAR commander for the German Emergency Quick Response Unit for World-wide Disasters (SEEBA)

03 / 2003 – Ongoing

## Rescue Expert

Bundesanstalt Technisches Hilfswerk Bocholt/Borken | Germany

Several roles within the Quick Response Unit of the THW, including youth group leader, infrastructure & rescue expert and general group leader

# MAX PASCHER

## SCIENTIFIC SERVICES

Proceedings Chair

MuC 2024

Web Chair

CHI PLAY 2023

Student Volunteer

MUM 2017 | MuC 2022 | CHI 2023 | MobileHCI 2023

## PROGRAM COMMITTEE

ACM International Conference on Human Factors in Computing Systems  
(LBW-Track) | 2023 | 24

ACM International Conference on Tangible, Embedded and Embodied Interaction  
(WiP Track) | 2023

Mensch und Computer (ACM In-Cooperation)  
(Full Paper) | 2024

## EXTERNAL REVIEW

ACM International Conference on Human Factors in Computing Systems  
CHI 2018 | 19 | 20 | 21 | 22 | 23 | 24

IFIP TC.13 International Conference on Human-Computer Interaction  
INTERACT 2019 | 21

ACM User Interface Software and Technology Symposium  
UIST 2022 | 24

Nordic Conference on Human-Computer Interaction  
NordiCHI 2022 | 24

ACM / IEEE Conference on Human-Robot Interaction  
HRI 2023 | 24

Mensch und Computer (ACM In-Cooperation)  
MuC 2019 | 20 | 21 | 22 | 23 | 24

# MAX PASCHER

## SELECT PUBLICATIONS

### PACM-HCI (EICS) 2024

**Paper Author:** AdaptiX – A Transitional XR Framework for Development and Evaluation of Shared Control Applications in Assistive Robotics | **Best Paper Award**

### HRI 2024

**Workshop Co-Organiser:** Virtual, Augmented, and Mixed Reality for Human-Robot Interaction (VAM-HRI)

### RO-MAN 2023

**Paper Author:** In Time and Space: Towards Usable Adaptive Control for Assistive Robotic Arms

### CHI 2023

**Paper Author:** How to communicate Robot Motion Intent: A Scoping Review

### CHI 2023

**LBW Author:** HaptiX: Vibrotactile Haptic Feedback for Communication of 3D Directional Cues

### HRI 2023

**VAT-Workshop Co-Author:** Understanding Shared Control for Assistive Robotic Arms

### AVI 2022

**Poster Author:** Adaptive DoF: Concepts to Visualize AI-generated Movements in Human-Robot Collaboration

### INTERACT 2021

**Paper Author:** Recommendations for the Development of a Robotic Drinking and Eating Aid - An Ethnographic Study

### INTERACT 2019

**Demo Author:** SwipeBuddy: A Teleoperated Tablet and eBook-Reader Holder for a Hands-Free Interaction

### CHI 2019

**Paper Co-Author:** Around the (Virtual) World: Infinite Walking in Virtual Reality Using Electrical Muscle Stimulation

### HRI 2018

**VAM-Workshop Co-Author:** Opportunities and Challenges in Mixed-Reality for an Inclusive Human-Robot Collaboration Environment

# MAX PASCHER

## STUDENT ADVISING

**Supervisor and 2nd Examiner for Master Thesis at TU Dortmund University**

Trust in AI-supported Technical Systems for People with Visual Impairments and  
Blindness

**Supervisor for Master Thesis at University of Duisburg-Essen**

Effects of Different Visual Directional Cues of an Assistive Robotic Arm on Safety  
and User Acceptance

**Supervisor for Bachelor Theses at University of Duisburg-Essen**

Qualitative Comparison of Assistive Input Devices for Controlling a Robotic Arm  
in Everyday Life

Exploring Interaction and Intervention Communication Language for Assistive  
Robots in Domestic Environments

**Supervisor for Master Theses at Westphalian University of Applied Sciences**

Motion Intent of AI-Supported Assistive Robots: Exploring Interaction and  
Visualization Concepts in a VR Simulation Study

Communication and Mapping of Directions in 3D Space utilizing Vibrotactile  
Feedback

**Supervisor for Bachelor Theses at Westphalian University of Applied Sciences**

Communication of a Robot's Intention to Move through Implicit Hints in  
Augmented Reality

Conception, Design, and Evaluation of 2D Directional Cues for the  
Communication of Robot Movement Intentions

Development and Evaluation of Discrete and Continuous  
Input Control for AI-supported Assistive Robotic Arms

Exploring Natural Language Interaction with a Multi-Robot System in a Virtual  
Reality Simulation

## PATENT

**Inventor of:** System and Method for Providing an Object-related Haptic Effect  
German Patent and Trade Mark Office (DPMA)  
File number: DE102022122173B4