

# Hannah Pelikan

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## EDUCATION

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**Ph.D. Student** 2018-2022

*Linköping University, Linköping, Sweden*

Thesis Title: Coordinating Robots and Humans: Sound and Embodiment in Human-Robot Interaction

Supervisors: Prof. Leelo Keevallik, Prof. Mathias Broth

**M.Sc. in Interaction Technology** 2016-2018

*University of Twente, Enschede, The Netherlands*

Thesis Title: "What's going on there?" Negotiating common ground in robotic vs. open surgery. A comparison of surgeon-initiated requests for action in open and robotic surgery

Thesis grade: very good (9/10), Final Average Grade: cum laude (8.92/10)

Subject areas: Conversational Agents, Brain Computer Interfacing, Philosophy of Technology, Computer Ethics, Human Computer Interaction, Embodied Interaction, Multisensory Design, Image Processing and Computer Vision, Trends in Human-Robot Interaction Research

**B.Sc. in Cognitive Science** 2012-2015

*Osnabrück University, Osnabrück, Germany*

Thesis Title: How humans adapt to a robot recipient – An interaction analysis perspective on human–robot interaction. Published at CHI 2016.

Thesis Grade: excellent (1.0/4.0), Final Grade: excellent (1.5/4.0)

Examination areas: Cognitive Psychology, Computer Science, Neuroinformatics, Neuroscience, Mathematics

**Erasmus Exchange Studies** 2014-2015

Linköping University, Linköping Sweden

## RESEARCH EXPERIENCE

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**Visiting Researcher** 08-12/2017

*Robots in Groups Lab, Cornell University, Ithaca, NY, USA*

Research on how surgical robots affect teamwork. Results published at CSCW (Pelikan et al., 2018; Cheatle et al., 2019)

**Research Assistant** 01/2016-10/2017

*University of Duisburg-Essen & Bielefeld University*

Development of a toolbox for visualization of Kinect data based on annotations in ELAN

**Research Intern** 10-12/2015

*University of Duisburg Essen*

Analysis of video data recorded on a NAO robot in a museum setting. Facilitation of a breaching experiment with a museum guide

**Intern** 08-10/2013

*Klinik für Neuropsychologie am Klinikum Bogenhausen*

Assistance in preparation of experiments on premotor neglect, visits to therapy sessions

## TEACHING

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### **Linköping University**

Seminar *Ethics of Artificial Intelligence* (Culture & Society) autumn 2020  
Tutor *Perspektiv på informationsteknologi* (Computer & Information Science) autumn 2020  
Guest lecture *Robots in Healthcare* (Biomedical Engineering) autumn 2019, 2020

### **University of Twente**

Tutor *Communication Technology for Global Work* summer 2018  
(Electrical Engineering, Mathematics & Computer Science)

### **Osnabrück University**

Tutor *Introduction to Philosophy of Mind* (Cognitive Science) summer 2014  
Tutor *Statistics and Data Analysis I* (Psychology) autumn 2013

## SERVICE

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### **Reviewing**

ACM/IEEE HRI: Human-Robot Interaction, 2021  
ACM CHI, Human Factors in Computing Systems, 2017, 2021  
ACM CSCW: Computer-Supported Cooperative Work and Social Computing, 2019, 2020  
NordiCHI: Human-Computer Interaction, 2020  
CUI: Conversational User Interfaces, 2020  
Interaction Studies Journal, 2019

### **Workshop Organization**

Sound in Human-Robot Interaction, HRI 2021  
Enriching HRI Research with Qualitative Methods, ICSR 2020

### **Seminar and Network Activities**

EMCA&AI network: co-founder since summer 2020  
AI in Society seminar: host since 09/2020

### **Student Volunteering**

ACM CSCW 2019 assistance during the virtual program committee meeting  
ACM CSCW 2018

### **Boards and Institutional Representation**

Vice-President: IKOS PhD council, Linköping University, since 01/2021  
Secretary: student association LiUPhD, Linköping University, since 07/2020  
Alumni representant: re-accreditation of master program I-Tech, University of Twente, 2019

## AWARDS AND SCHOLARSHIPS

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### **Awards**

*Graduation award*, University of Twente 2019  
Faculty of Electrical Engineering, Mathematics and Computer Science (EEMCS)

*Best Paper Award*, CSCW Conference 2019  
with Amy Cheatle, Malte Jung, and Steven Jackson

## Scholarships

Scholarship for outstanding students, Evangelisches Studienwerk Villigst 2012-2018

## Travel grants

Helge Ax:son Johnsons stiftelse 2020

Erasmus+ staff training (Loughborough University, UK) 2019

Erasmus+ students (Linköping University, Sweden) 2014-2015

## PUBLICATIONS

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### JOURNAL PUBLICATIONS

Amy Cheatle, **Hannah R. M. Pelikan**, Malte F. Jung, and Steven J. Jackson. 2019. Sensing (Co)operations: Articulation and Compensation in the Robotic Operating Room. *Proceedings of the ACM on Human-Computer Interaction 2*, CSCW, Article 225 (November 2019), 26 pages. <https://doi.org/10.1145/3359327> <<Best Paper Award>>

**Hannah R. M. Pelikan**, Amy Cheatle, Malte F. Jung, and Steven J. Jackson. 2018. Operating at a Distance – How a Teleoperated Surgical Robot Reconfigures Teamwork in the Operating Room. *Proceedings of the ACM on Human-Computer Interaction 2*, CSCW, Article 138 (November 2018), 28 pages. <https://doi.org/10.1145/3274407>

### CONFERENCE PUBLICATIONS

**Hannah R. M. Pelikan**. 2021. Why Autonomous Driving Is So Hard: The Social Dimension of Traffic. In *Companion of the 2021 ACM/IEEE International Conference on Human-Robot Interaction (HRI '21 Companion)*, March 8–11, 2021, Boulder, CO, USA. ACM, New York, NY, USA, 5 pages. <https://doi.org/10.1145/3434074.3447133>

**Hannah R. M. Pelikan**, Mathias Broth, and Leelo Keevallik. 2020. 'Are You Sad, Cozmo?' How Humans Make Sense of a Home Robot's Emotion Displays. In *Proceedings of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI '20)*, March 23–26, 2020, Cambridge, United Kingdom. ACM, New York, NY, USA, 10 pages. <https://doi.org/10.1145/3319502.3374814>  
acceptance rate: 23.6%

Dimosthenis Kontogiorgos and **Hannah R. M. Pelikan**. 2020. Towards Adaptive and Least-Collaborative-Effort Social Robots. In *Companion of the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI '20 Companion)*, March 23–26, 2020, Cambridge, United Kingdom. ACM, New York, NY, USA, 3 pages. <https://doi.org/10.1145/3371382.3378249>

**Hannah R. M. Pelikan** and Mathias Broth. 2016. Why That Nao?: How Humans Adapt to a Conventional Humanoid Robot in Taking Turns-at-Talk. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16)*. ACM, New York, NY, USA, 4921-4932. <https://doi.org/10.1145/2858036.2858478>  
acceptance rate: 23%

## BOOK CHAPTER

**Hannah Pelikan**, Leelo Keevallik and Mathias Broth. 2020. Människa–robot-interaktion. In M. Broth & L. Keevallik (Eds.) Multimodal Interaktionsanalys (pp. 395-415). Studentlitteratur.

## WORKSHOP CONTRIBUTIONS

**Hannah R. M. Pelikan**. 2020. Intermediate-Level Knowledge: A Conversation Analysis Perspective. Paper presented at the first international workshop on Designerly HRI Knowledge held in conjunction with the 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2020).

**Hannah R. M. Pelikan**, Mathias Broth, and Leelo Keevallik. 2020. Designing for Incidental Encounters with Autonomous Buses: An Ethnomethodology and Conversation Analysis Approach. Paper accepted for the Workshop The Forgotten in HRI: Incidental Encounters with Robots in Public Spaces at the 2020 ACM/IEEE International Conference on Human-Robot Interaction (HRI '20).

**Hannah R. M. Pelikan**. 2019. "A Stubborn Child" – How Robot Sounds are Oriented to in Everyday Situated Interaction at Home. Mensch und Computer 2019 – Workshopband. Bonn: Gesellschaft für Informatik e.V.. DOI: [10.18420/muc2019-ws-659](https://doi.org/10.18420/muc2019-ws-659)

**Hannah R. M. Pelikan**. 2019. Tackling Interactional Challenges in Social Robots: A Multimodal Conversation Analytic Approach. Paper presented at ACM CHI Conference on Human Factors in Computing Systems, workshop on The Challenges of Working on Social Robots that Collaborate with People, Glasgow, UK.

Federico Fabiano, **Hannah R. M. Pelikan**, Jelle Pingen, Judith Zissoldt, Alejandro Catala and Mariët Theune. 2017. Designing a Co-Creative Dancing Robotic Tablet. Paper presented at 6th International Workshop on Computational Creativity, Concept Invention, and General Intelligence, Madrid, Spain.

## POSTER

Hannah R. M. Pelikan. 2020. Coordinating Actions with a Mobile Embodied AI. Presented at the European Conference on Conversation Analysis 2020 (ECCA2020) in Nijmegen, The Netherlands.

## DATA SESSIONS

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Coordinating movement with an autonomous bus. 10 September 2020. Samtals- och interaktionsseminariet, Linköping University, Linköping, Sweden (online)

Coordinating with a self-driving bus. Non-lexical sounds in bus-pedestrian and bus-cyclist interaction. 8 May 2020. MOBSIN Workshop (online)

Coordinating with an embodied AI at work: Non-lexical robot sounds in family homes. 6 February 2020. Samtals- och interaktionsseminariet, Linköping University, Linköping, Sweden

Coordinating with a robot: Non-lexical robot sounds in family homes. 31 January 2020. Talk, Interaction and Multimodality Data Session Series, Stockholm University, Stockholm, Sweden

Encounters with a social robot. 16 May 2019. MOBSIN 9 Workshop, Leuven, Belgium.

Interacting with a conventional humanoid robot. 6 August 2015. IEMCA Conference, Kolding, Denmark

#### INVITED TALKS

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How Humans Make Sense of a Home Robot's Emotion Displays. Q&A in a seminar course on HRI. 12 October 2020. Computer Science Department, University of Chicago, USA (online)

How humans adapt to make robots work. 22 October 2019. EPFL, Lausanne, Switzerland

Are you sad Cozmo? Participants' orientation to robot emotional displays. 27 September 2019. Mixed Reality Laboratory, Nottingham, UK

Surgical Robots and Teamwork. 28 February 2019. COIN seminar, Linköping University, Sweden