

# Jessy Ceha

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## EDUCATION

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University of Waterloo, Waterloo, Canada

**Ph.D. Computer Science: Human-Computer Interaction**

2017 - 2021

Honours:

- › Provost Doctoral Entrance Award for Women, Sept. 2017  
[Awarded to outstanding female PhD students on a competitive basis]
- › University of Waterloo Entrance Scholarship, Sept. 2017

University of Groningen, Groningen, The Netherlands

**M.Sc. Human-Machine Communication, *cum laude***

2014 - 2016

Honours:

- › Avril McDonald Prize, August 2016  
[Awarded each year to 3 or 4 female Masters students, based on excellence]

Thesis:

*"Investigation into the Enhancement of Voice Perception: with simulations of cochlear implants and bimodal hearing"*

**Honours Master - High Tech Systems And Materials**

2014 - 2016

1.5 year program, organized in cooperation with Philips and other major industry partners, worth 20 ECTS and followed in addition to the standard master's

- › Attended weekly masterclasses and worked in a multidisciplinary team to produce an innovative product for Philips Consumer Lifestyle

University of British Columbia, Vancouver, Canada

**B.Sc. Cognitive Systems: Cognition & Brain, *with Distinction***

2009 - 2014

Honours:

- › Dean's Honour List, April 2014

## Academic Contributions

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- › Bařkent, D., Luckmann, A., **Ceha, J.**, Gaudrain, E., & Tamati, T. N. (2018). The discrimination of voice cues in simulations of bimodal electro-acoustic cochlear-implant hearing. *The Journal of the Acoustical Society of America*, 143(4), EL292-EL297.
- › **Ceha, J.**, Chibberr, N., Law, E., Kulic, D., Goh, J., Oudeyer, P.-Y., and McDonald, C. (2018). Expression of curiosity in social robots: Design, perception, and effects on behaviour. (In submission)
- › Law, E., **Ceha, J.**, Kulic, D., Oudeyer P.-Y., and Roy, D. (2018). Participatory design for identifying the roles of robots in learning activities. (In submission)
- › **Ceha, J.M.** (2016). Investigation into the Enhancement of Voice Perception: with simulations of cochlear implants and bimodal hearing. (Master's thesis)
- › *Theta-band phase locking after attentional blink training*. **Ceha, J.**, Buwalda, T., Taatgen, N., Borst, J., & van Vugt, M. December 2015. Poster presentation at the 15th NVP Winter Conference on Cognition, Brain, and Behaviour. The Netherlands.

## Skills & Experience

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### Programming & Statistics

- › Matlab, Python, HTML, CSS, Java, Processing, OpenViBE - Software for Brain Computer Interfaces (BCIs), R, SPSS

### Electroencephalography (EEG) & Electromyography (EMG)

- › EEG: Experimental design, writing experiment code, conducting user studies, data collection, signal processing, and statistical analysis
- › EMG: Co-created and assembled EMG powered, 3D-printed robotic hand

### Psychoacoustic Experiments

- › Conducting, designing, analyzing

### Conversational Agents

- › Designed and deployed an Amazon Alexa Skill for the *Alexa Skills Challenge: Kids*

### Product Design and Development (consumer electronics at Philips)

- › Rapid prototyping with Arduino, embedded systems, plastic processing

### Eye-Tracking/Pupil Dilation & Cognitive Modelling

- › Developed an interruption management system based on pupil dilation indicating cognitive workload
- › Built model of human time perception based on Adaptive Control of Thought-Rational (ACT-R) cognitive architecture

### Social Robot Experiments (Human-Robot Interaction)

- › Experimental design, conducting user studies, quantitative and qualitative data collection & analysis

## Research & Work Experience

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### University of Waterloo

#### Research Assistant

Sept. 2017 - present

David R. Cheriton School of Computer Science

*Human-Computer Interaction Lab: Dr. Edith Law (co-supervisor: Dr. Dana Kulic)*

Current Projects:

- Investigating curiosity-driven learning with educational social robots
- Co-designing educational robot peer with teachers
- Neural correlates of curiosity (in collaboration with Inria Bordeaux POTIOC - Dr. Fabien Lotte)

#### Teaching & Instructional Assistant

Sept. 2017 - present

- Hold office hours, conduct tutorials and labs, mark assignments and exams

### University Medical Centre Groningen

#### Research Assistant

May 2016 - Dec. 2016

Department of Otorhinolaryngology (Audiology)

*Speech Perception Lab: Dr. Deniz Başkent (co-supervisor: Dr. Marieke van Vugt)*

- Conducted and published psychoacoustic experiments with simulations of bimodal electro-acoustic cochlear-implant hearing

### University of Groningen

#### Research Assistant

Oct. 2015 - May 2016

Department of Experimental Psychology

*Belief, Perception, and Cognition Lab: Dr. Jacob Jolij (co-supervisors: Dr. Deniz Başkent & Dr. Marieke van Vugt)*

- Developed EEG neurofeedback system (Brain-Computer Interface) for improving auditory speech perception in cochlear-implant users

#### Research Assistant

April 2015 - Dec. 2015

Institute of Artificial Intelligence and Cognitive Engineering

*Cognitive Modelling Group: Dr. Marieke van Vugt*

- EEG study on theta oscillation phase-locking after attentional blink (AB) training

#### Intern

Feb. 2015 - July 2015

Philips Consumer Lifestyle (Electrical Engineering Department)

- Manufactured, tested and finalised a product

### University of British Columbia

#### Research Assistant

Jan. 2014 - May 2014

Department of Linguistics

*The "eh" Lab - Dr. Martina Wiltschko*

- Behavioural study on the syntax of speech acts

## Volunteering

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<b>CHI Conference Reviewer</b> Reviewed paper for CHI Conference	Oct 2018
<b>SHAD</b> - Waterloo, Canada <i>Annual Canadian summer enrichment program for high-achieving high school students</i> Held a 3-day workshop on Human-Robot Interaction	July 2018
<b>GIRLsmarts4tech</b> - Waterloo, Canada <i>Outreach program aimed at inspiring girls to explore technology</i> Volunteer at day-long workshop where girls learned and used various aspects of computer science	June 2018
<b>Dave and Jan Jaworsky's Girls in STEAM event</b> - Waterloo, Canada Role model for elementary & middle school girls	Jan. 2018
<b>Women in Computer Science (WiCS)</b> - Waterloo, Canada Mentor to undergraduate CS students	Nov. 2017
<b>Best Buddies</b> - Waterloo, Canada Weekly volunteering with individuals with developmental or intellectual disabilities	Oct. 2017 - May 2018
<b>Learning Buddies Network</b> - Vancouver, Canada Elementary school math tutor	Jan. 2014 - April 2014

### Personal Attributes

- Hard-working and dependable
- Strong desire to learn and be challenged
- Both independent and a team worker
- Adaptable and a problem-solver

### Nationalities

- Canadian
- Dutch

### Languages

- Native English
- Dutch
- School-level German