

Jessy Ceha

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EDUCATION

University of Waterloo, Waterloo, Canada

Ph.D. Computer Science: Human-Computer Interaction 2017 - 2021

Advisors: Edith Law (Computer Science) and Dana Kulic (ECE)

Thesis Topic: *Promoting Curiosity-Driven Interaction*

Key Courses: Experimental Design (STAT 830), Empirical Software Evolution (CS 846), Human-AI Interaction (CS 889)

University of Groningen, Groningen, the Netherlands

M.Sc. Human-Machine Communication, *cum laude* 2014 - 2016

Advisor: Marieke van Vugt (Institute of AI & Cognitive Engineering)

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

Key Courses: User Models, Cognitive Modelling, Cognitive Engineering, Computational Discourse

Honours Master - High Tech Systems And Materials 2014 - 2016

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

University of British Columbia, Vancouver, Canada

B.Sc. Cognitive Systems: Cognition & Brain, *with Distinction* 2009 - 2014

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

Avril McDonald Prize, August 2016

- Awarded each year to 3 or 4 female Masters students, based on excellence

ACADEMIC CONTRIBUTIONS

Başkent, 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

Programming & Statistics

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

Electroencephalography (EEG) & Electromyography (EMG) & BCIs

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/Voice Assistants

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

University of Waterloo

School of Computer Science, HCI Lab

Sept. 2017 - present

Supervisors: Dr. Edith Law (co-supervisor: Dr. Dana Kulic)

Projects: - Investigating curiosity-driven learning with educational social robots
- Co-designing an educational robot peer with teachers
- Neural correlates of curiosity

Teaching & Instructional Assistant

Sept. 2017 - present

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

University Medical Centre Groningen

Department of Audiology, Speech Perception Lab

May - Dec. 2016

Supervisors: Dr. Deniz Başkent & Dr. Marieke van Vugt

Project: Conducted and published psychoacoustic experiment with simulations of bimodal electro-acoustic cochlear-implant hearing

University of Groningen

Department of Experimental Psychology, Belief, Perception, and Cognition Lab

Oct. 2015 - May 2016

Supervisors: Dr. Jacob Jolij (co-supervisors: Dr. Deniz Başkent & Dr. Marieke van Vugt)

Project: Developed EEG neurofeedback system (BCI) for improving auditory speech perception in cochlear-implant users

Inst. of AI and Cognitive Engineering, Cognitive Modelling Group

April - Dec. 2015

Supervisor: Dr. Marieke van Vugt

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

Philips (Electrical Engineering Department), *part-time intern*

Feb. - July 2015

Supervisor: Peter Bax

Project: Manufactured, tested and finalised a product

University of British Columbia

Department of Linguistics, The "eh" Lab

Jan. - May 2014

Supervisor: Dr. Martina Wiltschko

Project: Behavioural study on the syntax of speech acts

VOLUNTEERING

CHI Conference External Reviewer Reviewed full-length (10 pages) paper for CHI Conference	Oct. 2018
SHAD - 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
GIRLsmarts4tech —in collaboration with SAP - Waterloo, Canada <i>Outreach program aimed at inspiring girls to explore technology</i> Volunteer at day-long workshop where girls learned about and used various aspects of computer science	June 2018
Dave and Jan Jaworsky's Girls in STEAM event - Waterloo, Canada Role model for elementary & middle school girls	Jan. 2018
Women in Computer Science (WiCS) - Waterloo, Canada Mentor to undergraduate CS students	Nov. 2017
Best Buddies - Waterloo, Canada Weekly volunteering with individuals with developmental or intellectual disabilities	Oct. 2017 - May 2018
Learning Buddies Network - 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