

# Ivana Kajić

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<b>EDUCATION</b>	<b>University of Waterloo</b> , Ontario, Canada Ph.D. Candidate in Computer Science (Anticipated graduation: Sept 2020) Thesis: Cognitively plausible models of distributional semantic representations (supervisor: Dr. Chris Eliasmith) GPA: 93%	Sept 2016 – present
	<b>Technical University of Berlin</b> , Germany M.Sc., Computational Neuroscience (with distinction) GPA: 1.2 (German grading scale, approx. 3.8/4.0)	Oct 2011 – Apr 2014
	<b>University of Zagreb</b> , Croatia B.Sc., Computing (Computer Science) Exchange year: <b>Karlsruhe Institute of Technology</b> , Germany GPA: 4.06 (Croatian grading scale, approx. 3.1/4.0)	Oct 2008 – Dec 2011 Sept 2010 – Dec 2011
<b>AWARDS, SCHOLARSHIPS &amp; TRAVEL GRANTS</b>	The Croatian-Canadian Scholarship	Mar 2018
	Ontario Graduate Scholarship (the international student recipient for Faculty of Math)	Dec 2017
	University of Waterloo President's Scholarship	Dec 2017
	Cheriton Research Symposium Poster Award	Sept 2017
	Google Travel Award for Grace Hopper Conference	Aug 2017
	David R. Cheriton Graduate Scholarship	Apr 2017
	University of Waterloo Graduate Excellence Award in Computer Science	Jan 2017
	University of Waterloo Grace Hopper Attendance Scholarship	Oct 2016
	University of Waterloo Provost Doctoral Entrance Award	Jul 2016
	University of Waterloo Entrance Scholarship	Jul 2016
	University of Waterloo International Doctoral Student Award	Jul 2016
	CSN II Travel Grant for Okinawa Computational Neuroscience Course	Jun 2015
	Google Anita Borg Memorial Scholarship	Jul 2014
	German Academic Exchange Service (DAAD) award for the outstanding achievement of a foreign student	Oct 2013
The Deutschlandstipendium (awarded by the German government)	Oct 2012 – Oct 2013	
<b>RESEARCH &amp; WORK EXPERIENCE</b>	<b>Site Reliability Engineering Intern</b> , Google, London, United Kingdom - Designed and implemented a service to detect and annotate automation failures in a software stack managing Ads services - Using machine learning to improve detection of failures	Sept 2018 – Dec 2018
	<b>Teaching Assistant</b> , University of Waterloo, Canada CS 116 Introduction to Computer Science 2 (Winter 2018) CS 240 Data Structures and Data Management (Fall 2017) CS 343 Concurrent and Parallel Programming (Fall 2016)	2016 – 2018
	<b>Research Fellow</b> , Plymouth University, United Kingdom Marie Curie Research Fellow, Centre for Robotics and Neural Systems - Created computational neural network models of semantic processes involved in creative verbal problem solving - Implemented a semantic network in a neurally plausible model that reproduced performance observed in human experiments	Jun 2014 – Aug 2016

## PUBLICATIONS

**Kajić, I.,** Eliasmith, C. (2018). Evaluating the Psychological Plausibility of word2vec and GloVe Distributional Semantic Models. Technical Report, Centre for Theoretical Neuroscience, Waterloo, ON, 08/2018, doi:10.13140/RG.2.2.25289.60004.

Cohen, R., Mathiarasu, N., Aarif, R., Ansari, S., Fraser, D., Hegde, M., Henderson, J., **Kajić, I.,** Khan, A., Liao, Z. and Mancisidor, A., (2018). An education-based approach to aid in the prevention of cyberbullying. *ACM SIGCAS Computers and Society*, 47(4), 17–28.

**Kajić, I.,** Gosmann, J., Komer, B., Orr, R. W., Stewart, T. C., Eliasmith, C. (2017). A Biologically Constrained Model of Semantic Memory Search. *Proceedings of the 39th Annual Conference of the Cognitive Science Society (Austin, TX: Cognitive Science Society)*, 631–636

**Kajić, I.,** Gosmann, J., Stewart, T. C., Wennekers, T., and Eliasmith, C. (2017). A Spiking Neuron Model of Word Associations for the Remote Associates Test. *Frontiers in Psychology* 8:99, doi: 10.3389/fpsyg.2017.00099

**Kajić, I.,** Gosmann, J., Stewart, T. C., Wennekers, T., Eliasmith, C. (2016). Towards a Cognitively Realistic Representation of Word Associations. *Proceedings of the 38th Annual Conference of the Cognitive Science Society (Austin, TX: Cognitive Science Society)*, 2183–2188

**Kajić, I.,** Wennekers, T. (2015). Neural Network Model of Semantic Processing in the Remote Associates Test. In *Proceedings of the NIPS Workshop on Cognitive Computation: Integrating Neural and Symbolic Approaches co-located with the 29th Annual Conference on Neural Information Processing Systems (NIPS 2015), Montreal, Canada, December 11-12, 2015*. 73–81

**Kajić, I.,** Schillaci, G., Bodiroža, S., Hafner, V. V. (2014). Learning Hand-Eye Coordination for a Humanoid Robot using SOMs. In *Proceedings of the 9th ACM/IEEE International Conference on Human-Robot Interaction (HRI 2014), Bielefeld, Germany*.

**Kajić, I.,** Schillaci, G., Bodiroža, S, Hafner, V. V. (2014). A Biologically Inspired Model for Coding Sensorimotor Experience Leading to the Development of Pointing Behaviour in a Humanoid Robot. *Workshop: A bridge between Robotics and Neuroscience, International Conference on Human-Robot Interaction (HRI 2014), Bielefeld, Germany*.

Putze, F., Heger, D., Müller, M., Chassein, Y., **Kajić I.,** Schultz, T. (2013). Profiling Arousal in Response to Complex Stimuli using Biosignals, *BIOSIGNALS 2013: 347-350, Barcelona, Spain*

## INVITED TALKS

A Biologically Constrained Model of Semantic Memory Search at The 39th Annual Meeting of Cognitive Science Society, London, United Kingdom (July 2017)

Bridging the Gap Between the Natural and Artificial Intelligence at Robotics Innovation Group Talk Series Conestoga College, Kitchener, Canada (November 2016)

Towards a Cognitively Realistic Representation of Word Associations at The 38th Annual Meeting of Cognitive Science Society, Philadelphia, United States (August 2016)

Learning Hand-Eye coordination for a Humanoid Robot using SOMs at The German-Israeli Minerva School on Cognitive Robotics, Berlin, Germany (February 2014)

## POSTER PRESENTATIONS

Kajić, I., & Eliasmith, C. A Biologically Plausible Neural Network Model of Semantic Memory Search, *Cheriton Research Symposium, University of Waterloo, Canada (September 2017)*

Kajić, I., & Wennekers, T. Neural network model of semantic processing in the Remote Associates Test, *NIPS Workshop on Cognitive Computation, Montreal, Canada (December 2015)*

Kajić, I., & Wennekers, T. A Hebbian cell assembly based neural field model for the remote associate task and creative search at The 24th Annual Computational Neuroscience Meeting, Prague, Czech Republic (July 2015)

Kajić, I., & Wennekers, T. Neural Network Model of Semantic Processing in the Remote Associates Test at OIST Computational Neuroscience course 2015, Okinawa, Japan (June 2015)

Kajić, I., & Wennekers, T. Remote Associations in Hebbian Cell Assemblies at Integrated Systems Neuroscience Workshop 2015, Manchester, United Kingdom (March 2015)

Kajić, I., & Wennekers, T. Remote Associations in Hebbian Cell Assemblies at Interdisciplinary College 2015, Günne, Germany (March 2015)

Kajić I., Schillaci, G., Bodiroza, S. and Hafner, V. V. Learning Hand-Eye Coordination for a Humanoid Robot using SOMs at Google Scholars Retreat, Zrich, Switzerland (June 2014)

Kajić I., Schillaci, G., Bodiroza, S. and Hafner, V. V. Learning Hand-Eye Coordination for a Humanoid Robot using SOMs at 9th ACM/IEEE International conference on Human-Robot Interaction, Bielefeld, Germany (March 2014)

Kajić I., Schillaci, G., Bodiroza, S. and Hafner, V. V. A Biologically Inspired Model for coding Sensorimotor Experience Leading to the Development of Pointing Behaviour in a Humanoid Robot at the Workshop: A bridge between Robotics and Neuroscience, International conference on Human-Robot Interaction, Bielefeld, Germany (March 2014)

## LEADERSHIP

**Organizer, Programming Workshop for Beginners** 2016 – 2018

- Organized and instructed three day programming workshops at the University of Waterloo (Jan 2016, Nov 2016, Nov 2017, Jun 2018)
- Acquired \$2,200 in external funding from Python Software Foundation and Google through grant proposals

**Graduate committee member, UW Women in Computer Science** Oct 2015 – present

- Organized talks and networking events for graduate students
- Served on a committee reviewing Grace Hopper scholarship applications
- Welcomed prospective graduate students, spoke on panels about graduate studies experiences
- Administrator for the female CS graduate students mailing list

**Software Carpentry Instructor** Dec 2015 – present

- Taught basic computing skills for science, engineering and medical research (Python, Shell, Git) at the University of Waterloo

**Reviewer, IEEE Transactions on Cognitive and Developmental Systems** 2016

**Local Organizer, Advanced Scientific Programming in Python, University of Split, Croatia** Sept 2014

- Hosted international summer school for 30 participants, 10 lecturers
- Organized venue, gathered local hosting team, assigned tasks
- Arranged local sponsorship, coordinated preparations

## TECHNICAL & OTHER SKILLS

Programming: Python (Scientific stack: Numpy, Scipy, Pandas, Matplotlib, Jupyter), C, C++, UNIX Shell, Matlab, SQL

Other: version control systems (git, svn), TDD, design patterns and OOP, SQL,  $\text{\LaTeX}$   
Languages: Croatian (native), English (fluent), German (fluent), French (basic)