

Francis Mollica

416 Meliora Hall
Rochester, NY 14627
✉ mollicaf@gmail.com
📄 mollicaf.github.io

Education

- 2014
2019 **PhD Brain and Cognitive Sciences**, *University of Rochester*, Rochester, NY.
Committee: Steven Piantadosi, Michael Tanenhaus, Naomi Feldman, Aaron White
Expected May 2019.
- 2014
2017 **MA Brain and Cognitive Sciences**, *University of Rochester*, Rochester, NY.
Committee: Steven Piantadosi, Michael Tanenhaus, Robbie Jacobs (chair)
- 2010
2014 **BA Linguistics**, *University at Buffalo*, Buffalo, NY.
Language and Cognition Concentration
- 2010
2014 **BS Psychology**, *University at Buffalo*, Buffalo, NY.

Honors and Awards

- 2018 **Student Travel Award**, *CUNY Sentence Processing*.
- 2017 **Student Travel Award**, *Cognitive Science Society*.
- 2016 **Honorable Mention**, *NSF Graduate Research Fellowship Program*.
- 2015 **Student Travel Award**, *Cognitive Science Society*.
- 2015 **Honorable Mention**, *NSF Graduate Research Fellowship Program*.
- 2014 **Outstanding Senior Award**, *Dept. of Linguistics, University at Buffalo*.
- 2012 **Grace W. Capen Academic Award**, *University at Buffalo*.

Funding

- 2017
2018 **Donald M. and Janet C. Bernard Fellowship**, *University of Rochester*.
- 2015 **Discover Grant**, *University of Rochester*.
- 2010
2014 **Provost Scholarship**, *University at Buffalo*.
- 2010
2014 **Johnson Controls Foundation Scholarship**.

Journal Publications

- Mollica, F.** and S. Piantadosi. (in prep) *Universal and cultural-specific processes in exact number word acquisition*.
- Rubio-Fernández, P., **Mollica, F.**, and J. Jara-Ettinger. (submitted) *Why searching for a blue triangle is different in English than in Spanish*.

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- Rubio-Fernández, P., **Mollica, F.**, M. Oraa Ali, and E. Gibson. (in revision) *How do you know that? Automatic belief inferences in passing conversation*.
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- Mollica, F.**[†], M. Siegelman[†], E. Diachek, S.T. Piantadosi, R. Futrell, Z. Mineroff, and E. Fedorenko. (under review) *High local mutual information drives the response in the human language network*.
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- Mollica, F.** and S. T. Piantadosi. (in revision) *Logical word learning: The case of kinship*.
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- Register*, Y., **Mollica, F.**, and S. T. Piantadosi. (under review) *Semantic verification is flexible and sensitive to context*.
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- Mollica, F.** and S. T. Piantadosi. (to appear) *Humans store ~ 1.5 megabytes during language acquisition: information theoretic bounds*. Royal Society Open Science.
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- 2018 • Martí, L., **Mollica, F.**, S. T. Piantadosi, and C. Kidd. "Certainty is primarily determined by past performance during concept learning". In: *Open Mind* 2.2, pp. 47–60.
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- 2017 • **Mollica, F.** and S. T. Piantadosi. "How data drives early word learning: a cross-linguistic waiting time analysis." In: *Open Mind* 1.2, pp. 67–77.

Conference Proceedings

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- 2018 • Yan, S.[†], **Mollica, F.**[†], and M. K. Tanenhaus. "A context constructivist account of contextual diversity." In: *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
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- 2018 • Oey*, L., **Mollica, F.**, and S. T. Piantadosi. "Adults use gradient similarity information in compositional rules." In: *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.
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- 2017 • **Mollica, F.** and S. T. Piantadosi. "An incremental information theoretic buffer supports sentence processing." In: *Proceedings of the 39th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society., pp. 805–810.
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- 2017 • **Mollica, F.**, S. Wade, and S. T. Piantadosi. "A rational constructivist account of the characteristic to defining shift." In: *Proceedings of the 39th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society., pp. 799–804.
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- 2016 • Martí, L., **Mollica, F.**, S. T. Piantadosi, and C. Kidd. "What determines human certainty?" In: *Proceedings of the 38th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society., pp. 698–703.

2015

Mollica, F. and S. T. Piantadosi. "[Towards semantically rich and recursive word learning models.](#)" In: *Proceedings of the 37th Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society., pp. 1607–1612.

2015

Mollica, F., S. T. Piantadosi, and M. K. Tanenhaus. "[The perceptual foundation of linguistic context.](#)" In: *Proceedings of the 37th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society., pp. 1613–1618.

Conference Talks

2019

Mollica, F., J. Jara-Ettinger, and S.T. Piantadosi. *A cross-linguistic Bayesian data analysis of number word learning*. Biennial Meeting of the Society for Research in Child Development. Baltimore, MD.

2018

Yan, S.[†], **Mollica, F.**[†], and M. K. Tanenhaus. *A context constructivist account of contextual diversity*. The 40th Annual Conference of the Cognitive Science Society. Madison, WI.

2018

Oey*, L., **Mollica, F.**, and S. T. Piantadosi. *Adults use gradient similarity information in compositional rules*. The 40th Annual Conference of the Cognitive Science Society. Madison, WI.

2018

Oey*, L., **Mollica, F.**, and S. T. Piantadosi. *Like a horse but striped: Combining similarity and rules in conceptual representation*. The 32nd Annual National Conference on Undergraduate Research. Oklahoma City, OK.

2017

Mollica, F. and S.T. Piantadosi. *An incremental information theoretic buffer supports sentence processing*. The 39th Annual Conference of the Cognitive Science Society. London, UK.

2017

Mollica, F., S. Wade, and S.T. Piantadosi. *A rational constructivist account of the characteristic to defining shift*. The 39th Annual Conference of the Cognitive Science Society. London, UK.

2017

Mollica, F. and S.T. Piantadosi. *An incremental information theoretic buffer supports sentence processing*. The 30th CUNY Sentence Processing Conference. Cambridge, MA.

2015

Mollica, F. and S.T. Piantadosi. *Characterizing data-driven word learning: A cross-linguistic analysis*. More on Development. Columbus, OH.

2015

Mollica, F., S.T. Piantadosi, and M.K. Tanenhaus. *The perceptual foundation of linguistic context*. The 37th Annual Conference of the Cognitive Science Society. Los Angeles, CA.

Conference Posters

- 2019 ● **Mollica, F.** and S.T. Piantadosi. *A cross-linguistic Bayesian data analysis of number word learning*. Budapest CEU Conference on Cognitive Development. Budapest, Hungary.
- 2018 ● Rubio-Fernández, P. and **Mollica, F.** *Incremental contrasts: Why spotting a blue triangle is different in English than in Spanish*. The 31st CUNY Sentence Processing Conference. Davis, CA.
- 2018 ● **Mollica, F.** and E. Gibson. *Towards a psychological evaluation metric for semantic representations*. The 31st CUNY Sentence Processing Conference. Davis, CA.
- 2016 ● Galette, C.*, **Mollica, F.**, and R. Raizada. *Unconverging the representation of ambiguous words*. The 30th Annual National Conference on Undergraduate Research. Asheville, NC.
- 2015 ● **Mollica, F.**, S.T. Piantadosi, and M.K. Tanenhaus. *The perceptual foundation of linguistic context*. The 28th CUNY Sentence Processing Conference. Los Angeles, CA.

* supervised undergraduate researcher

† co-authored work (equal contribution)

Departmental/Colloquia/Invited Talks

- 2018 ● *The Human Learning Machine: Computational Models of Conceptual Development* Computational Cognitive Science Lab *University of Melbourne*, October, 2018
- 2018 ● *The Human Learning Machine: Computational Models of Conceptual Development* Computation and Cognitive Development Lab *Yale*, April, 2018
- 2018 ● *Simplicity, data and inter-related systems: A computational account of kinship term acquisition*. Children's Acquisition of Kinship Knowledge: Theory and Method Workshop *University of Bristol*, January, 2018
- 2017 ● *An information-theoretic buffer supports language processing*. The Computational Psycholinguistics Lab *MIT*, November, 2017
- 2017 ● *A contextual diversity hypothesis of lexical retrieval in online language processing*. The Language Lab *MIT*, October, 2017
- 2017 ● *How data drives word learning: A cross-linguistic analysis*. The Language Lab *MIT*, September, 2017
- 2016 ● *Formalizing conceptual development: The case of kinship*. NRT Mini-Conference *University of Rochester*, September, 2016
- 2016 ● *How data drives word learning: A cross-linguistic analysis*. Evolution and Development Talk Series *University of Rochester*, April, 2016

Teaching

2018	BCS 259: Language Development, <i>Teaching Assistant</i> , Spring, University of Rochester
2017	BCS 153: Cognition, <i>Teaching Assistant</i> , Spring, University of Rochester
2016	BCS 310: Senior Seminar, <i>Co-Instructor</i> , Fall, University of Rochester
2016	Building the Language Machine: An Intro to Computational Linguistics, <i>Instructor</i> , Summer, Rochester Scholars Program
2016	BCS 153: Cognition, <i>Teaching Assistant</i> , Spring, University of Rochester
2015	The Language Scientist: Linguist, Psychologist, Computer Scientist, <i>Instructor</i> , Summer, Rochester Scholars Program
2013	LIN 207: Language, Society and the Individual, <i>Teaching Assistant</i> , Fall, University at Buffalo
2013	PSY 207: Psychological Statistics, <i>Teaching Assistant</i> , Summer, University at Buffalo

Ad-hoc Reviewing

Journals: Behavioral Research Methods, Language, Cognition & Neuroscience, Morphological Typology and Linguistic Cognition, PLOS One

Conferences: CogSci, COLING