Francis Mollica

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Education

2014
PhD Brain and Cognitive Sciences, *University of Rochester*, Rochester, NY.

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.[†], M. Siegelman[†], E. Diachek, R. Futrell, S.T. Piantadosi, Z. Mineroff, and E. Fedorenko. (in prep) *High local mutual information drives the response in the human language network*.

Mollica, F. and S. T. Piantadosi. (under review) *Logical word learning: The case of kinship.*

Mollica, F. and S. T. Piantadosi. (under review) *Information theoretic bounds on human knowledge of language.*

Register*, J., **Mollica, F.**, and S. T. Piantadosi. (under review) *Semantic verification is flexible and sensitive to context.*

Martí, L., **Mollica, F.**, S. T. Piantadosi, and C. Kidd. (to appear) *Certainty is primarily determined by past performance during concept learning*. Open Mind.

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

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.

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.

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.

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.

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

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

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. *Unconvering 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 *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**, *Teaching Assistant*, Spring, University of Rochester.

2017 **BCS 153: Cognition**, *Teaching Assistant*, Spring, University of Rochester.

2016 **BCS 310: Senior Seminar**, *Co-Instructor*, Fall, University of Rochester.

2016 **Building the Language Machine: An Intro to Computational Linguistics**, *Instructor*, Summer, Rochester Scholars Program.

2016 **BCS 153: Cognition**, *Teaching Assistant*, Spring, University of Rochester.

2015 **The Language Scientist: Linguist, Psychologist, Computer Scientist**, *Instructor*, Summer, Rochester Scholars Program.

2013 **LIN 207: Language, Society and the Individual**, *Teaching Assistant*, Fall, University at Buffalo.

2013 **PSY 207: Psychological Statistics**, *Teaching Assistant*, Summer, University at Buffalo.

Ad-hoc Reviewing

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

Conferences: CogSci, COLING