

Marco S. G. Senaldi

Postdoctoral Researcher

Department of Psychology
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Personal

nationality Italian
place of birth Gallarate (VA), Italy
languages Italian (Native), English (Fluent), French (Intermediate/Advanced)

Education

- 2015–2019 **Ph.D. in Linguistics**, *Scuola Normale Superiore*, Pisa, Italy, 70/70 *cum laude*
Thesis Title: Working both sides of the street: Computational and psycholinguistic investigations on idiomatic variability
Supervisors: Prof. Pier Marco Bertinetto and Prof. Alessandro Lenci
- 2013–2015 **Master degree in Linguistics**, *University of Pisa*, Pisa, Italy, 110/110 *cum laude*
Thesis Title: Casting Light on Idiom Flexibility: A Corpus-based Approach
Supervisor: Prof. Alessandro Lenci, Co-supervisor: Prof. Giovanna Marotta, Tutors: Prof. Pier Marco Bertinetto, Dr. Gianluca E. Lebani
- 2013–2015 **Degree (Diploma di Licenza) in Linguistics**, *Scuola Normale Superiore*, Pisa, Italy
- 2010–2013 **Bachelor degree in Literature and Linguistics**, *University of Pisa*, Pisa, Italy, 110/110 *cum laude*
Thesis Title: Aorist and Imperfect in Homeric Greek
Supervisor: Prof. Domenica Romagno

Appointments

- Mar. 2020–
present **Postdoctoral Researcher**, McGill University, Department of Psychology
Supervisors: Dr. Debra Titone, Dr. Brendan T. Johns
- Mar. 2019–
Feb. 2020 **Research Scholarship**, University of Pisa, Department of Philology, Literature and Linguistics
Supervisor: Prof. Alessandro Lenci

Research and Academic Experience

- Sep. 2016–
Dec. 2016 **Graduate Research Trainee**, *Language and Multilingualism Laboratory*, McGill University, Montréal
Supervisor: Dr. Debra Titone
- Jan. 2015–
Mar. 2015 **Internship**, *Computational Linguistics Laboratory*, University of Pisa
Supervisors: Prof. Alessandro Lenci and Dr. Gianluca E. Lebani

Research Funding

- 2022-2024 **Social Sciences and Humanities Research Council (SSHRC)**, Insight Development Grant, *How do collectively experienced large-scale social events drive language dynamics at the societal and individual levels?* [430-2022-00557]
Role: PI (Co-PIs: Debra A. Titone, Brendan T. Johns)

Peer-reviewed Publications

- 2024 M. S. G. Senaldi and D. A. Titone (2024). "Idiom meaning selection following a prior context: Eye movement evidence of L1 direct retrieval and L2 compositional assembly". *Discourse Processes* 61, pp. 21–43
- 2023 G. Rambelli, E. Chersoni, M. S. G. Senaldi, P. Blache, and A. Lenci (2023). "Are Frequent Phrases Directly Retrieved like Idioms? An Investigation with Self-Paced Reading and Language Models". *Proceedings of the 19th Workshop on Multiword Expressions (MWE 2023)*. **Best Paper Award**, pp. 87–98
- 2022 M. S. G. Senaldi and D. A. Titone (2022). "Less direct, more analytical: Eye-movement measures of L2 idiom reading". *Languages* 7, paper 91
- M. S. G. Senaldi, J. Wei, J. W. Gullifer, and D. A. Titone (2022). "Scratching your tête over language-switched idioms: Evidence from eye-movement measures of reading". *Memory and Cognition* 50.6, pp. 1230–1256
- M. S. G. Senaldi, D. A. Titone, and B. T. Johns (2022). "Determining the importance of frequency and contextual diversity in the lexical organization of multiword expressions". *Canadian Journal of Experimental Psychology* 76.2, pp. 87–98
- M. Miliani, M. S. G. Senaldi, G. E. Lebani, and A. Lenci (2022). "Understanding Italian Administrative Texts: A Reader-Oriented Study for Readability Assessment and Text Simplification". *Proceedings of AIXPA 2022: 1st Workshop on AI for Public Administration*. Udine, Italy, paper 5
- 2021 I. Fioravanti, M. S. G. Senaldi, A. Lenci, and A. Siyanova-Chanturia (2021). "Lexical fixedness and compositionality in L1 and L2 speakers intuitions about Italian word combinations: Psycholinguistic and computational perspectives". *Second Language Research* 37.2, pp. 291–322
- 2019 L. C. Passaro, M. S. G. Senaldi, and A. Lenci (2019). "Do Idioms Have a Heart? The SIDE (Sentiment of IDiomatic Expressions) Project". *Proceedings of The 11th International Conference on the Mental Lexicon*
- M. S. G. Senaldi, Y. Bizzoni, and A. Lenci (2019). "What Do Neural Networks Actually Learn, When They Learn to Identify Idioms?" *Proceedings of the Society for Computation in Linguistics (SCiL)*. New York City, NY, USA, pp. 310–313
- 2018 Y. Bizzoni, M. S. G. Senaldi, and A. Lenci (2018). "Finding the Neural Net: Deep-learning Idiom Type Identification from Distributional Vectors". *Italian Journal of Computational Linguistics* 4.1, pp. 27–41
- 2017 Y. Bizzoni, M. S. G. Senaldi, and A. Lenci (2017). "Deep-learning the Ropes: Modeling Idiomaticity with Neural Networks". *Proceedings of the Fourth Italian Conference on Computational Linguistics (CLiC-it 2017)*, pp. 36–41

- A. Lenci, F. Masini, M. Nissim, S. Castagnoli, G. E. Lebani, L. C. Passaro, and M. S. G. Senaldi (2017). "How to harvest Word Combinations from corpora. Methods, evaluation and perspectives". *Studi e Saggi Linguistici* 55.2, pp. 45–68
- M. S. G. Senaldi, G. E. Lebani, and A. Lenci (2017). "Determining the Compositionality of Noun-Adjective Pairs with Lexical Variants and Distributional Semantics". *Italian Journal of Computational Linguistics* 3.1, pp. 43–58
- M. A. Rodda, M. S. G. Senaldi, and A. Lenci (2017). "Panta Rei: Tracking Semantic Change with Distributional Semantics in Ancient Greek". *Italian Journal of Computational Linguistics* 3.1, pp. 11–24
- 2016 M. A. Rodda, M. S. G. Senaldi, and A. Lenci (2016). "Panta Rei: Tracking Semantic Change with Distributional Semantics in Ancient Greek". *Proceedings of the Third Italian Conference on Computational Linguistics (CLiC-it 2016)*. **Distinguished Young Paper Award**
- M. S. G. Senaldi, G. E. Lebani, and A. Lenci (2016). "Determining the Compositionality of Noun-Adjective Pairs with Lexical Variants and Distributional Semantics". *Proceedings of the Third Italian Conference on Computational Linguistics (CLiC-it 2016)*. **Distinguished Young Paper Award**
- M. S. G. Senaldi, G. E. Lebani, and A. Lenci (2016). "Lexical Variability and Compositionality: Investigating Idiomaticity with Distributional Semantic Models". *Proceedings of the 12th Workshop on Multiword Expressions (MWE 2016)*, pp. 21–31
- 2015 G. E. Lebani, M. S. G. Senaldi, and A. Lenci (2015). "Modeling Idiom Variability with Entropy and Distributional Semantics". *Proceedings of the 6th Conference on Quantitative Investigations in Theoretical Linguistics (QITL 6)*. Tübingen, Germany
- A. Lenci, G. E. Lebani, M. S. G. Senaldi, S. Castagnoli, F. Masini, and M. Nissim (2015). "Mapping the Constructicon with SYMPATHy. Italian Word Combinations between fixedness and productivity". *Proceedings of the NetWordS Final Conference on Word Knowledge and Word Usage: Representations and Processes in the Mental Lexicon*. Pisa, Italy, pp. 144–149

Organized Sessions and Symposia

- 2022 M. S. G. Senaldi, D. A. Titone, and B. T. Johns (2022). "Building a comprehensive view of multiword and figurative language". *Symposium organized at the Annual Meeting of the Canadian Society for Brain, Behaviour and Cognitive Science*. Halifax, NS, Canada

Conference Presentations and Posters

- 2023 I. Fioravanti, M. S. G. Senaldi, A. Lenci, and A. Siyanova-Chanturia (2023). "Processing of L1 and L2 Word Combinations: Probing the Role of Lexical Fixedness". *ESCOP 2023 - 23rd Conference of the European Society for Cognitive Psychology*. Porto, Portugal
- M. S. G. Senaldi, D. A. Titone, and B. T. Johns (2023). "Exploring the role of socially-based contextual diversity in idiom processing". *24th Annual Neuropsychology Day*. Montreal Neurological Institute

- M. S. G. Senaldi and D. A. Titone (2023). "Which factors drive meaning selection during L1 and L2 idiom processing following a prior context: Direct retrieval or compositional assembly?" *PsychoShorts 2023*. University of Ottawa, ON, Canada
- M. S. G. Senaldi, D. A. Titone, and B. T. Johns (2023). "Exploring the role of socially-based contextual diversity in idiom processing". *CompCog23*. Online Symposium
- 2022 D. A. Titone and M. S. G. Senaldi (2022). "Which factors drive meaning selection during L1 and L2 idiom processing following a prior context: Direct retrieval or compositional assembly?" *Psychonomic Society 63rd Annual Meeting*. Boston, MA, USA
- M. S. G. Senaldi, D. A. Titone, and B. T. Johns (2022). "Exploring the role of socially-based contextual diversity in idiom processing". *12th International Conference on the Mental Lexicon*. Niagara-on-the-Lake, ON, Canada
- M. S. G. Senaldi, D. A. Titone, and B. T. Johns (2022). "Contextual diversity as a lexical organizer of multiword expressions". *Canadian Society for Brain, Behaviour and Cognitive Science: Annual Meeting 2022*. Halifax, NS, Canada
- M. Yang, M. S. G. Senaldi, J. Wei, B. T. Johns, and D. A. Titone (2022). "Validity of Corpus-Based Measures of Idiom Processing in English and Mandarin Chinese". *Canadian Society for Brain, Behaviour and Cognitive Science: Annual Meeting 2022*. Halifax, NS, Canada
- 2021 M. S. G. Senaldi and D. A. Titone (2021). "How do direct retrieval and compositional parsing interact in L2 idiom reading?" *Psychonomic Society 62nd Annual Meeting*. Online conference
- M. S. G. Senaldi, I. Fioravanti, A. Lenci, and A. Siyanova-Chanturia (2021). "Lexical fixedness and compositionality in L1 and L2 speakers intuitions about Italian word combinations: A psycholinguistic and computational study". *AILA 2021 World Congress*. Online conference
- I. Fioravanti, M. S. G. Senaldi, A. Lenci, and A. Siyanova-Chanturia (2021). "Is *keep a promise* the same as *retain a promise*? The role of lexical fixedness in word combination processing". *AILA 2021 World Congress*. Online conference
- M. S. G. Senaldi, D. A. Titone, and B. T. Johns (2021). "Contextual Diversity and the Lexical Organization of Multiword Expressions". *43rd Annual Meeting of the Cognitive Science Society*. Online conference
- M. S. G. Senaldi, K. Kasparian, K. Lovseth, and D. A. Titone (2021). "Less direct, more analytical: investigating L2 idiom processing with eye movement data". *International Symposium on Bilingualism (ISB13)*. Online conference
- M. S. G. Senaldi, K. Kasparian, K. Lovseth, and D. A. Titone (2021). "Decomposability and cross-language overlap effects in L2 idiom reading: Evidence from eye movement data". *Canadian Society for Brain, Behaviour and Cognitive Science: Annual Meeting 2021*. Online conference
- M. S. G. Senaldi, D. A. Titone, and B. T. Johns (2021). "Analyzing the Role of Frequency and Contextual Diversity in the Lexical Organization of Multiword Expressions". *CRBLM Scientific Day 2021*. Online conference

- I. Fioravanti, M. S. G. Senaldi, A. Lenci, and A. Siyanova-Chanturia (2021). "How does lexical fixedness affect the processing of L1 and L2 word combinations?" *American Association for Applied Linguistics 2021 Virtual Conference*. Online conference
- 2020 M. S. G. Senaldi, J. Wei, J. W. Gullifer, and D. A. Titone (2020). "Scratching your *tête* over code switched idioms: Evidence from eye movement measures of reading." *26th Architectures and Mechanisms for Language Processing Virtual Conference (AMLaP 2020)*. Online conference
- 2019 M. S. G. Senaldi, P. Canal, and A. Lenci (2019). "Not all passives are processed equal: Verb voice and word order in idiom comprehension". *32nd Annual CUNY Sentence Processing Conference*. Boulder, CO, USA
- M. S. G. Senaldi, Y. Bizzoni, and A. Lenci (2019). "What Do Neural Networks Actually Learn, When They Learn to Identify Idioms?" *Society for Computation in Linguistics (SCiL)*. New York City, NY, USA
- 2018 I. Fioravanti, M. S. G. Senaldi, A. Lenci, and A. Siyanova-Chanturia (2018). "Lexical Fixedness and Compositionality in Native and Non-native Speakers Intuitions about Italian Word Combinations: Psycholinguistic and Computational Perspectives". *Workshop on Psycholinguistic and Computational Perspectives on Non-Compositional Meaning in Phrases*. Tübingen, Germany
- L. C. Passaro, M. S. G. Senaldi, and A. Lenci (2018). "Do idioms have a heart? The SIDE (Sentiment of IDiomatic Expressions) project". *11th International Conference on the Mental Lexicon*. Edmonton, AB, Canada
- M. S. G. Senaldi, P. Canal, A. Lenci, and P. M. Bertinetto (2018). "How idiomaticity and verb voice affect sentence reading: an eye-tracking study on Italian". *31st Annual CUNY Sentence Processing Conference*. Davis, CA, USA
- 2017 Y. Bizzoni, M. S. G. Senaldi, and A. Lenci (2017). "Deep-learning the Ropes: Modeling Idiomaticity with Neural Networks". *Fourth Italian Conference on Computational Linguistics (CLiC-it 2017)*. Rome, Italy
- M. S. G. Senaldi, G. E. Lebani, and A. Lenci (2017). "Exploring idiomaticity with distributional semantics and entropy". *DGfS 2017 Workshop on the Role of Constituents in MWEs*. Saarbrücken, Germany
- 2016 M. A. Rodda, M. S. G. Senaldi, and A. Lenci (2016). "Panta Rei: Tracking Semantic Change with Distributional Semantics in Ancient Greek". *Third Italian Conference on Computational Linguistics (CLiC-it 2016)*. Naples, Italy
- M. S. G. Senaldi, G. E. Lebani, and A. Lenci (2016). "Determining the Compositionality of Noun-Adjective Pairs with Lexical Variants and Distributional Semantics". *Third Italian Conference on Computational Linguistics (CLiC-it 2016)*. Naples, Italy
- M. S. G. Senaldi, G. E. Lebani, and A. Lenci (2016). "Predicting crowdsourced idiomatic flexibility judgments from corpus-based statistics". *the 22nd AMLaP conference, Architectures and Mechanisms for Language Processing*. Bilbao, Spain
- M. S. G. Senaldi, G. E. Lebani, and A. Lenci (2016). "Lexical Variability and Compositionality: Investigating Idiomaticity with Distributional Semantic Models". *12th Workshop on Multiword Expressions (MWE 2016)*. Berlin, Germany

- 2015 S. Castagnoli, F. Masini, M. Nissim, G. E. Lebani, M. S. G. Senaldi, and A. Lenci (2015). "Extracting and Analysing Italian Word Combinations with SYntactically Marked PATterns". *PARSEME 4th general meeting*. Valletta, Malta

A. Lenci, G. E. Lebani, M. S. G. Senaldi, S. Castagnoli, F. Masini, and M. Nissim (2015). "Mapping the Constructicon with SYMPATHy. Italian Word Combinations between fixedness and productivity". *NetWordS Final Conference on Word Knowledge and Word Usage: Representations and Processes in the Mental Lexicon*. Pisa, Italy

Student Mentorship

- 2023-2024 Teva Alon, Research Assistant, McGill University
 Léa Baillargeon, Psychology Undergraduate Thesis, McGill University
 Suyang Li, Research Assistant, McGill University
 Ellie Chambers, Research Assistant, McGill University
 Sijie Xu, Psychology Undergraduate Honors Thesis, McGill University
- 2022-2024 Emiliya Emin, Psychology Undergraduate Honors Thesis, McGill University
 Iola Patalas, Graduate Student, Concordia University
- 2021-2022 Alexandra Saliba, Cognitive Science Undergraduate Honors Thesis, McGill University
- 2020-2021 Paul De Luca, Psychology Undergraduate Thesis, McGill University
 Hector Leos Mendoza, SURA Research Award, McGill University
 Alexandra Saliba, NSERC Undergraduate Research Award, McGill University
 Jingkan Wang, Psychology Undergraduate Thesis, McGill University
 Michelle Yang, Research Assistant and ARIA Research Award, McGill University
 Yong Zhang, SURA Research Award, McGill University
- 2018-2019 Noemi Palmieri, Undergraduate Thesis, University of Pisa

Invited Talks

- 2024 M. S. G. Senaldi (2024). "Computational and behavioral investigations of usage-based language: The case of multiword units". *Department of Psychology*. Rochester Institute of Technology. Rochester, NY, USA
- 2023 M. S. G. Senaldi (2023). "Leveraging computational and behavioral evidence to jointly inform usage-based language models: The case study of multiword units". *Centre for Research in Applied Linguistics*. University of Nottingham. Nottingham, UK
- M. S. G. Senaldi (2023). "Leveraging computational and behavioral evidence to jointly inform usage-based language models: The case study of multiword units". *Department of Linguistics*. University of Illinois at Chicago. Chicago, IL, USA
- 2020 M. S. G. Senaldi (2020). "Working both sides of the street: Computational and psycholinguistic investigations on idiomatic variability". *IUSS Linguistics Seminars - Experimental Pragmatics Project*. IUSS. Pavia, Italy
- 2016 M. S. G. Senaldi, G. E. Lebani, and A. Lenci (2016). "Exploring idiomaticity with Shannon entropy and Distributional Semantics". *Language and Multilingualism Laboratory*. McGill University. Montreal

Invited Lectures

- 2023 M. S. G. Senaldi (2023). "Clustering in Machine Learning". McGill School of Computer Science. Montreal, Canada
M. S. G. Senaldi (2023). "Determining the importance of frequency and contextual diversity in the lexical organization of multiword expressions". *Computational Cognitive Science I*. University of Copenhagen. Copenhagen, Denmark
M. S. G. Senaldi (2023). "Syllables and syllable structure". *LING 150 - Introduction to the Study of Language*. University of Illinois at Chicago. Chicago, IL, USA

Awards and Honors

- 2023 **MWE 2023**, Best Paper Award
2016 **CLiC-it 2016**, 2 Distinguished Young Paper Awards
2015 **Scuola Normale Superiore of Pisa**, Admission to PhD program with 3-year fully funded scholarship
2013 **Scuola Normale Superiore of Pisa**, Admission to Master's Degree program with 2-year fully funded scholarship

Scientific Communications

- 2022 When in doubt, keep it Gaussian.
<https://featuredcontent.psychonomic.org/when-in-doubt-keep-it-gaussian/>

Technical skills

programming	Python, JavaScript
statistical analysis	R, JASP, Jamovi, EyeLink Data Viewer, Microsoft Excel
experiment design	SR Research Experiment Builder, OpenSesame, jsPsych
authoring packages	R(Markdown), Jupyter, L ^A T _E X, HTML
OSs	Windows, Linux

Professional Memberships

Canadian Society for Brain, Behaviour and Cognitive Science
Psychonomic Society

Academic Service

Editorial Board Member	Canadian Journal of Experimental Psychology (2023-)
Editorial Assistant	Italian Journal of Linguistics (2015-2019)
Volunteer	Canadian Society for Brain, Behaviour and Cognitive Science: Annual Meeting 2021
Volunteer Coordinator	57th Annual Meeting of the Association for Computational Linguistics (ACL 2019)

Journal	Behavior Research Methods
Reviewing	Canadian Journal of Experimental Psychology
	Journal of Experimental Psychology: General
	Memory & Cognition
	Bilingualism: Language and Cognition
	Applied Psycholinguistics
	Psychophysiology
	Cognitive Science
	Journal of Psycholinguistic Research
	Language Learning
	Frontiers in Artificial Intelligence
	Languages
	Studies in Second Language Acquisition
	Italian Review of Applied Linguistics
Conference and	Language Resources and Evaluation Conference (LREC) 2020
Workshop	Workshop on Linguistic and Neurocognitive Resources (LiNCR) 2020
Reviewing	Workshop on Cognitive Modeling and Computational Linguistics (CMCL) 2020
	International Conference on Computational Linguistics (COLING) 2020
	International Conference on Computational Semantics (IWCS) 2019
	Annual Meeting of the Association for Computational Linguistics (ACL) 2019
	Conference on Computational Natural Language Learning (CoNLL) 2019
	Italian Conference on Computational Linguistics (CLiC-it) 2019
	Conference on Lexical and Computational Semantics (*SEM) 2018
	Workshop on Cognitive Aspects of Computational Language Learning and Processing (CogACLL) 2018
	11th International Conference on the Mental Lexicon 2018
	Italian Conference on Computational Linguistics (CLiC-it) 2018
	Language Resources and Evaluation Conference (LREC) 2018
	Architectures and Mechanisms of Language Processing (AMLaP) 2017
	Student Session of the European Summer School in Logic, Language and Information (ESSLI) 2017
	Italian Conference on Computational Linguistics (CLiC-it) 2016
	International Conference on Computational Linguistics (COLING) 2016

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