Aniello De Santo

Curriculum vitae et studiorum

Department of Linguistics
University Of Utah
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Academic Affiliation

July 2020 - Present | **Assistant Professor** Department of Linguistics, University of Utah

Education

2015 - 2020 | **Ph.D.** Department of Linguistics, Stony Brook University.
Dissertation *"Structure and Memory: A Computational Model of Storage, Gradience, and Priming"*

2017 - 2020 | **Affiliated Student** Institute for Advanced Computational Science (IACS), Stony Brook University

2011-2013 | **Master's Degree in Computer Science and Engineering** Università degli Studi di Pavia, Curriculum in Theory and Control of Dynamic Systems
Thesis *"Unexplained User Behaviours in Online Social Networks"*

2007-2011 | **Bachelor's Degree in Computer Science and Engineering** Università degli Studi di Pavia
Thesis *"Individualization of models for the automatic control of glycemia in Type I Diabetes"*

Journal Articles

2020 | **A. De Santo** and J. Rawski. (2020) *What can formal language theory do for animal cognition studies?* Royal Society Open Science. https://doi.org/10.1098/rsos.191772

2018 | **A. De Santo**. (2018) *Commentary: Developmental Constraints on Learning Artificial Grammars with Fixed, Flexible, and Free Word Order*. Front. Psychol. 9:276. doi: 10.3389/fpsyg.2018.00276.

F. Amato, A. Castiglione, **A. De Santo**, V. Moscato, A. Picariello, F. Persia, G. Sperli. (2018) *Recognizing human behaviours in online social networks*, Computers & Security, ISSN 0167-4048, https://doi.org/10.1016/j.cose.2017.06.002.

Book Chapters

2015 | S.K. Chang, L. Greco, **A. De Santo**. *Sentiment detection in social networks using semantic analysis: a tool for sentiment analysis and its application in the cultural heritage realm.* In *Data Management in Pervasive Systems*, Chapter 9. Colace *et al.* Editors, Springer Verlag, Berlin (2015)

F. Amato, L. Greco, F. Persia, S.R. Poccia, **A. De Santo**. *Content-based multimedia retrieval.* In *Data Management in Pervasive Systems*, Chapter 14. Colace *et al.* Editors, Springer Verlag, Berlin (2015)

Peer-Reviewed Proceedings Articles

2020   Antonio Galli, Vincenzo Moscato, Giancarlo Sperli, and **A. De Santo**. *An Explainable Artificial Intelligence Methodology for Hard Disk Fault Prediction.* Proceedings of the 2020 International Conference on Database and Expert Systems Applications (DEXA2020). Held virtually September 14-17, 2020

       A. De Santo. *MG Parsing as a Model of Gradient Acceptability in Syntactic Islands.* Proceedings of the Society for Computation in Linguistics (SCiL) 2020.

2019   T. Graf and **A. De Santo**. *Sensing Tree Automata as a Model of Syntactic Dependencies.* Proceedings of the 16th Meeting on the Mathematics of Language (MOL) 2019.

       A. De Santo and T. Graf. *Structure Sensitive Tier Projection: Applications and Formal Properties.* Proceedings of the 24st Conference on Formal Grammar (FG) 2019.

       A. De Santo. *Testing a Minimalist Grammars Parser on Italian Relative Clause Asymmetries.* Proceedings of Cognitive Modeling and Computational Linguistics Workshop (CMCL) 2019.

2016   **A. De Santo**, A. Aksënova and T. Graf. *An Alternate View on Strong Lexicalization in TAG.* Proceedings of the Twelfth International Workshop on Tree-Adjoining Grammars and Related Formalisms (TAG+) 2016

       T. Graf, A. Aksënova and **A. De Santo**. *A Single Movement Normal Form for Minimalist Grammars.* Proceedings of the 21st Conference on Formal Grammar (FG-2016)

2015   F. Colace, M. De Santo, **A. De Santo**, A. Picariello. *Connecting Times: Using Smart Technologies For Enhancing Ancient Downtowns Experience.* Proceedings of the 3rd International Conference of Information and Communication Technology (ICoICT 2015)

       F. Amato, **A. De Santo**, V. Moscato, A. Picariello, D. Serpico and G. Sperlí. *A lexicon-grammar based methodology for Ontology population in e-health applications.* Proceedings of the 9-th International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS 2015)

       F. Amato, **A. De Santo**, F. Gargiulo, V. Moscato, F. Persia, A. Picariello and S. R. Poccia. *SemTree: an index for supporting semantic retrieval of documents.* Proceedings of the IEEE DESWeb ICDE 2015

       F. Amato, **A. De Santo**, F. Gargiulo, V. Moscato, F. Persia, A. Picariello and G. Sperlí. *A novel approach to query expansion based on semantic similarity measures.* Proceedings of the 4th International Conference on Data Management Technologies and Applications (DATA 2015)

F. Amato, **A. De Santo**, V. Moscato, F. Persia, S. R. Poccia and A. Picariello. *Partitioning of ontologies driven by a structure-based approach.* Proceedings of the IEEE 9th International Conference on Semantic Computing (ICSC2015)

F. Amato, **A. De Santo**, V. Moscato, F. Persia, A. Picariello, S. R. Poccia, G. Sperlí. *A structure-based approach for ontology partitioning.* Proceedings of SEBD 2015: 184-191

2014 F. Amato, **A. De Santo**, V. Moscato, F. Persia and A. Picariello. *Detecting unexplained human behaviors in Social Networks*, Proceedings of the IEEE Eight International Conference on Semantic Computing (ICSC2014)

F. Persia, F. Amato, F. Gargiulo, S. R. Poccia, and **A. De Santo**. *Finding unexplained human behaviors in Social Networks.* Proceedings of the 22nd Italian Symposium on Advanced Database Systems (SEBD2014), Discussion Paper

Abstract Reviewed Articles

2019 **A. De Santo** and J. E. Drury. *Encoding and Verification Effects of Generalized Quantifiers on Working Memory.* Proceedings of the 55th meeting of the Chicago Linguistics Society (CLS 55). Chicago, IL. (to appear).

2018 **A. De Santo**, J. Rawski, A. Yazdani, and J. E. Drury. *Quantified Sentences as a Window into Prediction and Priming: An ERP Study.* Proceedings of the 54th meeting of the Chicago Linguistics Society (CLS 54). Chicago, IL. 2018.

2017 A. Aksënova and **A. De Santo**. *Strict Locality in Morphological Derivations.* Proceedings of the 53rd Chicago Linguistic Society (CLS 53). Chicago, IL. 2017.

Manuscripts

Submitted **A. De Santo** and A. Aksënova. *Learning Interactions of Local and Non-Local Phonotactic Constraints from Positive Input.*

Submitted **A. De Santo**. *A Minimalist Approach to Facilitatory Effects in Stacked Relative Clauses.*

Submitted **A. De Santo**, A. Galli, M. Gravina, V. Moscato, and G. Sperli. *Deep Learning for HDD health assessment: An application based on LSTMs.*

In prep. **A. De Santo**. *Feature Reactivation in Minimalist Parsing.*

In prep. **A. De Santo** & J. Rawski. *Mathematical Linguistics and Cognitive Complexity.* Handbook of Mathematical Cognition

Talks and Posters

(for co-authored talks: ***** personally presented)

2020 **A. De Santo** *A Minimalist Parsing Account of Gradience in Acceptability Judgments.* Poster at the 33rd Annual CUNY Conference on Human Sentence Processing, March 19-21 2020, UMass Amherst (held online).

Andrei Antonenko, Mark Aronoff, Paola Cepeda, **A. De Santo**, and Lori Repetti. *The world turned upside-down: flipping the classroom in a large linguistics lecture course.* Talk at the LSA symposium on *Teaching Large General Linguistics Classes*, Jan. 1-5 2020, New Orleans, Louisiana.

A. De Santo. *MG Parsing as a Model of Gradient Acceptability in Syntactic Islands.* Poster at the Society for Computation in Linguistics (SCiL) 2020, Jan. 1-5 2020, New Orleans, Louisiana.

2019 T. Graf and **A. De Santo***. *Sensing Tree Automata as a Model of Syntactic Dependencies.* Talk at the 16th Meeting on the Mathematics of Language (MOL), July 18-19 2019, Toronto, Canada.

A. De Santo* and T. Graf. *Structure Sensitive Tier Projection: Applications and Formal Properties.* Talk at the 24st Conference on Formal Grammar (FG). August 11th 2019, Riga, Latvia.

A. De Santo. *Testing a Minimalist Grammars Parser on Italian Relative Clause Asymmetries.* Talk at the Cognitive Modeling and Computational Linguistics Workshop (CMCL), June 7, 2019, Minneapolis, Minnesota

J. Rawski, **A. De Santo**, T. Graf, and J. Heinz. *Geometric Representations of Linguistic Structures and Computations.* Talk at the 52nd Annual Meeting of the Society for Mathematical Psychology, July 19-22, Montreal, Canada.

A. De Santo. *The Processing of Italian Relative Clauses within a Computational Parsing Model.* Poster at the 49th Linguistic Symposium on Romance Languages (LSRL49), May 1-4 2019, Athens, Georgia.

A. De Santo and Nazila Shafiei. *On the Structure of Relative Clauses in Persian: Evidence from Computational Modeling and Processing Effects.* Talk at the 2nd North American Conference in Iranian Linguistics (NACIL2), April 19-21 2019, University of Arizona.

A. De Santo* and John E. Drury. *Generalized Quantifiers and Working Memory: Disentangling Encoding from Verification.* Poster at the 32nd Annual CUNY Conference on Human Sentence Processing, March 28-31 2019, Boulder, Colorado.

A. De Santo. *Evaluating a Minimalist Grammar Parser on Italian Relative Clause Asymmetries.* Poster at the 32nd Annual CUNY Conference on Human Sentence Processing, March 28-31 2019, Boulder, Colorado.

Nazila Shafiei and **A. De Santo***. *What Processing and Computational Modeling Can Tell Us about Syntax: The Case of Persian Relative Clauses.* Poster at the 32nd Annual CUNY Conference on Human Sentence Processing, March 28-31 2019, Boulder, Colorado.

Andrei Antonenko, Mark Aronoff, Paola Cepeda, **Aniello De Santo***, and Lori Repetti. *Classroom? We don't need no classroom to do linguistics!* Talk at CELT Annual Teaching and Learning Colloquium, March 8 2019, Stony Brook University.

K. McMullin, A. Aksënova, and **A. De Santo**. *Learning phonotactic restrictions on multiple tiers.* Talk at the Society for Computation in Linguistics (SCiL) 2019, New York City, NY.

2018   T. Graf, A. Aksënova, H. Baek, **A. De Santo ***, H. Dolatian, S. Moradi, J. Rawski, S. Yang, and J. Heinz. *Tiers and Relativized Locality Across Language Modules.* Parallels Between Phonology and Syntax Workshop. Amsterdam, Meertens Instituut, July 9, 2018

Aniello De Santo*, J. Rawski, A. Yazdani, and J. E. Drury. *Quantified Sentences as a Window into Prediction and Priming: An ERP Study.* Talk at CLS 54, April 26-28 2018, Chicago, IL.

A. De Santo. *Extending TSL to Account for Interactions of Local and Non-Local Constraints.* Poster at the Society for Computation in Linguistics (SCiL) 2018, Salt Lake City, Utah, January 4–7, 2018.

2017   **A. De Santo***, J. Rawski, and J. E. Drury. *ERP effects for quantifier complexity, priming, and truth-value in an auditory/visual verification task.* Poster at the Society for the Neurobiology of Language (SNL) 2017, Baltimore, Maryland.

J. Rawski, **A. De Santo***, and J. Heinz. *Reconciling Minimum Description Length with Grammar-Independent Complexity Measures.* Poster at MIT Workshop on Simplicity in Grammar Learning, September 23, 2017.

A. De Santo*, T. Graf, and J. E. Drury. *Evaluating Subregular Distinctions in the Complexity of Generalized Quantifiers.* Talk at ESSLLI 29th's Workshop on Quantifiers and Determiners (QUAD 2017), July 17 – 21, Toulouse, France.

A. De Santo. *One class to rule them all? A study of TSL languages motivated by typological outliers.* Poster presented at PLC 41, March 24-25 2017, Philadephia, PA

2016   **A. De Santo**. *A game of tiers: Exploring the formal properties of TSL languages.* Computational Phonology Workshop at Stony Brook University, December 16, 2016, Stony Brook, NY

A. De Santo*, A. Aksënova, and T. Graf. *An Alternate View on Strong Lexicalization in TAG.* 12th International Workshop on Tree-Adjoining Grammars and Related Formalisms (TAG+) 2016, June 29 - July 1, 2016, Düsseldorf

T. Graf, A. Aksënova, and **A. De Santo**. *A Single Movement Normal Form for Minimalist Grammars.* (with T. Graf, A. Aksënova). 21st Conference on Formal Grammar (FG-2016)

2015   F. Colace, M. De Santo, **A. De Santo***, A. Picariello. *Connecting Times: Using Smart Technologies For Enhancing Ancient Downtowns Experience.* 3rd International Conference of Information and Communication Technology (ICoICT 2015), May 27-29, 2015, Bali, Indonesia

F. Amato, **A. De Santo**, V. Moscato, A. Picariello, D. Serpico and G. Sperlí. *A lexicon-grammar based methodology for Ontology population in e-health applications.* 9th International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS 2015)

F. Amato, **A. De Santo**, F. Gargiulo, V. Moscato, F. Persia, A. Picariello and S. R. Poccia. *SemTree: an index for supporting semantic retrieval of documents.* IEEE DESWeb ICDE 2015

F. Amato, **A. De Santo**, F. Gargiulo, V. Moscato, F. Persia, A. Picariello and G. Sperlí. *A novel approach to query expansion based on semantic similarity measures.* 4th International Conference on Data Management Technologies and Applications (DATA 2015)

F. Amato, **A. De Santo**, V. Moscato, F. Persia, S. R. Poccia and A. Picariello. *Partitioning of ontologies driven by a structure-based approach.* IEEE 9th International Conference on Semantic Computing (ICSC2015)

F. Amato, **A. De Santo**[*], V. Moscato, F. Persia, A. Picariello, S. R. Poccia, G. Sperlí. *A structure-based approach for ontology partitioning.* SEBD 2015: 184-191

2014   F. Amato, **A. De Santo**, V. Moscato, F. Persia and A. Picariello. *Detecting unexplained human behaviors in Social Networks.* IEEE Eight International Conference on Semantic Computing (ICSC2014)

F. Persia, F. Amato, F. Gargiulo, S. R. Poccia, and **A. De Santo**[*]. *Finding unexplained human behaviors in Social Networks.* 22nd Italian Symposium on Advanced Database Systems

Invited Talks

2020   **A. De Santo**. *Bridging Minimalist Syntax and Sentence Processing via Transparent Computational Models.* Integrated Language Science and Technology Seminar (ILST), University of Pennsylvania. September, 2020.

A. De Santo. *MG parsing as a window into human sentence processing.* Department of Linguistics, UCLA. February, 2020.

A. De Santo. *Parsing as a window into human sentence processing.* Department of Linguistics, San Jose State University. January, 2020.

A. De Santo. *Of Parsers and Trees: Memory usage as a measure of complexity in human sentence processing.* Department of English, Miami University (OH). January, 2020.

A. De Santo. *Memory usage as a measure of structural complexity in Minimalist parsing.* Department of Linguistics, University of Utah. January, 2020.

2019   **A. De Santo**. *Memory usage as a measure of structural complexity in Minimalist parsing.* Computation and Psycholinguistics Lab, Department of Cognitive Science, Johns Hopkins University. October 30, 2019.

2017   A. Aksënova and **A. De Santo**. *n-Gram Models of Morphological Derivations.* Invited Poster. Institute for Advanced Computational Sciences (IACS)'s Five-Year Review, September 7, 2017, Stony Brook University, Stony Brook, NY.

2016 **A. De Santo**. *What the Dialects can teach us about Italian: the case of Irpino*, Richard Nasti Lecture Series, Stony Brook University Center for Italian Studies, October 4, 2016. (Repeated on February 2017)

Scholarships and awards

○ Stony Brook University 2019/2020 Graduate Fellowship in the Arts, Humanities and Lettered Social Sciences.
○ CMCL Student Travel Award. Sponsored by the French National Centre for Scientific Research (CNRS), April 2019.
○ CUNY Student Travel Award. 32nd CUNY Human Sentence Processing Conference, University of Colorado Boulder, March 2019.
○ Department of Linguistics Travel Award. Stony Brook University, December 2018.
○ Institute for Advanced Computational Science (IACS) Travel Award. Stony Brook University, July 2018.
○ Department of Linguistics Travel Award. Stony Brook University, December 2017.
○ Sigma Xi Travel Award for Excellence in Research. Stony Brook University, May 2017.
○ Department of Linguistics Travel Award. Stony Brook University, December 2016.
○ Travel Grant to conduct field work in Irpinia (Italy), on a project about Raddoppiamento fonosintattico in the Irpino Dialect. Awarded by the *Center for Italian Studies*, Stony Brook University, June 2016.
○ Research Scholarship on the project *Networks of Excellence - EMBEDDED SYSTEMS in Critical Domains*, Università degli Studi *Federico II* di Napoli, Rif. Borsa DIETI 30/2014
○ Research Scholarship on the project *SmartHealth - Methodologies for natural language processing in clinical applications*, Università degli Studi *Federico II* di Napoli, RIF. DIETI 47/2014

Teaching

As an Instructor

Fall 2020	**Fundamentals of Python (LING 5981/6080)** U. of Utah.
Spring 2020	**Computational Linguistics (LIN220)** Stony Brook University.
Fall 2019	**Language and Technology (LIN120)** Stony Brook University.
Sum. 2019	**Bilingualism (LIN541/426)** Stony Brook University.
Spring 2019	**Language and Technology (LIN120)** Stony Brook University. co-Instructor (two sections, co-taught with Alëna Aksënova)
Sum. 2018	**Language in the USA (LIN200)** Stony Brook University.
Winter 2017	**Language and Life in Italy (LIN356)** Stony Brook University.
Sum. 2016	**Language and Technology (LIN120)** Stony Brook University.

As a Teaching assistant (TA)

Fall 2017	**Language and Technology (LIN120)** Stony Brook University. Instructor: Thomas Graf
Spring 2017	**Language and Mind (LIN426)** Stony Brook University. Instructor: John E. Drury
Fall 2016	**Language and Technology (LIN120)** Stony Brook University. Instructor: Thomas Graf
Spring 2016	**Language and Speech Disorders (LIN380)** Stony Brook University. Instructor: Joseph Hoffman
Fall 2015	**Language and Technology (LIN425)** Stony Brook University. Instructor: Thomas Graf
Spring 2015	**Multimedia Systems and Applications** Università degli Studi *Federico II* di Napoli. Instructor: Antonio Picariello
Fall 2014	**Foundations of Computer Science** Università degli Studi *Federico II* di Napoli. Instructor: Antonio Picariello
Fall 2014	**Introduction to Data Base Systems** Università degli Studi *Federico II* di Napoli. Instructor: Vincenzo Moscato

Research Positions

05/2014–08/2015	**Research Assistant** DIETI, Università degli Studi *Federico II* di Napoli I worked on statistical models, formal languages, NLP techniques, game theory and graph theory applied to social networks analysis, big data analytics, semantic analysis.
09/2013-02/2014	**Research Internship** LABADAM, Università degli Studi *Federico II* di Napoli Supervisor: Prof. Antonio Picariello. Main Advisor: Prof. Virginio Cantoni I developed statistical models for the detection of unexplained user behaviors in online social networks.
02/2012–09/2012	**Research Internship** Identification and Control of Dynamic Systems (ICDS) Laboratory, Università degli Studi di Pavia Main supervisor: Prof. Lalo Magni I worked on models for the automatic control of glycaemia in Type I Diabetes, within the AP@Home Project sponsored by the Juvenile Diabetes Research Foundation.

Other Positions

01/2018–01/2019	**Graduate Assistant.** Stony Brook University. PIs: Andrei Antonenko, Mark Aronoff, Lori Repetti S-BOLD (Stony Brook Online Learning Development) Project: convert SBU linguistics' largest general education course (LIN 200 – Language in the USA) to an online format.

Additional Education

07/2017	**29th European Summer School in Logic, Language, and Information (ESSLLI)** University of Toulouse (France) 7–28 July, 2017
10/2016	**Online Education Symposium** Stony Brook University October 21, 2016, Stony Brook, NY

Service

Reviewing	CoNNL (2020); COLING (2020); CMCL (secondary, 2019; 2020); SCiL (secondary, 2019); Biolinguistics (2017; 2018); SYNC (2016; 2017; 2018); International Journal of Big Data Intelligence (2014); International Workshop on Cloud and Distributed System Applications (2014)
To U. of Utah	Undergraduate Student Committee
To SBU	Student representative (2018-2019); IACS student association executive committee (2018-2019); Department website administrator (2017); Linguistics Colloquia organizer (2017); Latin & Linguistics Colloquium organizing committee (2017); NACLO volunteer (training sessions and exam supervision; 2015-2019)

Computer Skills

OS	MacOS, Unix/Linux, Windows	**Coding**	*(In decreasing order of Proficiency)* Python and NLTK; R; Matlab/Simulink; Java; C; Assembly languages (ARM, x86); SQL; Prolog; Jess; Labview
Editing	LaTeX, Markdown, Office Suite		

Languages

Italian	Native	
English	Fluent	
German	Beginner	*FIT, Level A2*
French	Beginner	*Level A1*

Non Academic Work Experience

2012	**Translator and proof-reader.** Fanucci Editore. As member of the SMTeam I worked as proof-reader on the new Italian edition of the Wheel of Time cycle by Robert Jordan.
2009–2012	**Didactics integration activities and remedial lessons for students in need.** Private employer. Pavia, Italy
2009–2012	**Waiter.** Restaurant *Alla Corte.* Trivolzio .(PV), Italy