Yiming Liang

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Research interests

My research endeavours to bridge gaps between formal syntax, information theory, and linguistic variation and change. Specifically, I employ quantitative methods to address the pervasive continuum pattern found in language uses and adopt generative syntax to explain the mechanism behind. Proficient in Python programming, statistical analysis and machine learning, I am also keenly interested in incorporating powerful language models (like GPT) into the study of language variation and change and developing tools to facilitate automatic processing of linguistic data.

Academic employment

2024–present **Postdoctoral researcher**, *Ghent University*, Ghent.
ERC Causality project (PI: Alexandra Simonenko)
Syncretization of verbal inflexions and disappearance of null-subjects in English, German and Dutch.

Education

2020-2023 **PhD in Linguistics**, *Université Paris Cité*, Paris.
Thesis: *Quantitative Syntax, Formal Syntax and Information Theory: bridging gaps by studying French variation* (defended on Dec. 14, 2023)
Funding: ERC SMIC project (PI: Heather Burnett)
Committee: Heather Burnett (supervisor), Pascal Amsili (supervisor), Julie Auger, Benedikt Szmrecsanyi, Caterina Donati, Philippe Muller, Luigi Rizzi

2019–2020 **Master 1, Computational Linguistics**, *Université de Paris*, Paris, *Mention très bien*.
M1 NLP Project: *Automatic sentence compression by deletion with LSTMs* (collaboration with Fang Zhao; score: 20/20)
Project supervisor: Benoît Crabbé
Courses: Machine learning and NLP, Formal language and parsing, Graph algorithms, Probability theory

2017–2019 **M.A. Theoretical and Experimental Linguistics**, *Université Paris Diderot*, Paris, *Mention très bien*.
M.A. Thesis: *A Corpus Study on complementizer "que" omission in Quebec French* (score: 18/20)
Supervisors: Pascal Amsili and Heather Burnett
Courses: Generative syntax, Advanced syntax, Syntactic islands, Comparative syntax; Formal semantics, Modal logic, advanced semantics; Phonetics and Phonology; Psycholinguistics; Language acquisition.

2013–2017 **B.A. French Literature and Language**, *Beijing Foreign Studies University*, Beijing, China.
B.A. thesis: *The effect of French learning on Chinese L1: experimental investigation among advanced French learners*; outstanding thesis award

Additional Training

2022 **The 4th Crete Summer School of Linguistics (CSSL22)**, *University of Crete*, Rethymnon, Crete.

2021 **The 33rd European Summer School in Logic, Language and Information (ESSLLI)**, *Free University of Bozen-Bolzano*, Italy (online).
Courses: Formal semantics, Information theory in linguistics, Cognitive plausibility of neural language models, Distributional semantics.

International mobility

2023 **SFB 1102-Information Density and Linguistic Encoding**, *Saarland university*, Saarbrücken, Germany.
Three-month research at the Language Science and Technology Department. Collaboration with Prof. Vera Demberg on the operationalization of the Uniform Information Density hypothesis by language models and psycholinguistic experiments.

2015–2016 **Exchange year in the French language department**, *Université Paris IV*, Paris, France.
Courses: Textual linguistics, French linguistics, Latin.

Publications

to appear **Liang, Y.**, Amsili, P., Burnett, H. & Demberg, V. Uniform information density explains subject doubling in French. Proceedings of the 46th Annual Conference of the Cognitive Science Society (Cogsci).

to appear **Liang, Y.**, Amsili, P. & Burnett, H. The Polarity Effect in Future Temporal Reference: New insights from Parisian French. Revue canadienne de linguistique/Canadian Journal of Linguistics.

2023 **Liang, Y.**, Amsili, P. & Burnett, H. (2023). Uniformité de la densité informationnelle: le cas du redoublement du sujet (The Uniform Information Density Hypothesis : the case of subjet-doubling in French). In *Actes de la 30e Conférence sur le Traitement Automatique des Langues Naturelles (TALN)*, volume 1 : travaux de recherche originaux – articles longs, pp. 164–176.

2021 **Liang, Y.**, Amsili, P. & Burnett, H. (2021). New ways of analyzing complementizer drop in Montréal French: Exploration of cognitive factors. *Language Variation and Change*, *33*(3), 359-385. DOI: https://doi.org/10.1017/S0954394521000223

2021 Chen, S., Amsili, P., & **Liang, Y**. (2021). Inter-clausal Anaphora in Chinese Conditionals: a Multi-factorial Analysis. In Hu, K., Kim, J. B., Zong, C., & Chersoni, E. (Eds.), *Proceedings of the 35th Pacific Asia Conference on Language, Information and Computation* (pp. 140-148). arXiv: https://aclanthology.org/2021.paclic-1.15

Presentations

Oral presentations

2023 **Liang, Y.**, Donati, C. & Burnett, H. (2023). "French clitics: A paradox from variation". Workshop on Variation and Syntactic Theory at New Ways of Analyzing Variation 51 (NWAV 51), October 14th, 2023, New York, United States.

2023 **Liang, Y.**, Donati, C. & Burnett, H. (2023). "French Subject Doubling: A Third Path". 53rd Linguistic Symposium on Romance Languages (LSRL 53), June 26th–30th, 2023, Paris, France.

2023 **Liang, Y.**, Amsili, P. & Burnett, H. (2023). "Uniformité de la densité informationnelle: le cas du redoublement du sujet". Traitement automatique des langues naturelles (TALN) 2023, June 5th-9th, Paris, France.

2022 Martin, A., Abbou, J., Dénigot, Q., **Liang, Y.**, & Burnett, H. (2022). "The power of the written word: A re-analysis of the social meanings of variable liaison". Sociolinguistics Symposium 24, July 13th–16th, 2022, Ghent, Belgium.

2021 Martin, A., **Liang, Y.**, Abbou, J., Dénigot, Q., Amsili, P. & Burnett H. (2021). "*Tu n'utiliseras pas le futur proche*: a corpus and experimental study of the effect of polarity on future variation in Metropolitan French". New Ways of Analyzing Variation 49 (NWAV49), October 19th-24th, 2021, Austin, United States (online).

2021 **Liang, Y.**, Amsili, P. & Burnett H. (2021). "Exploring the polarity effect on future variation in Parisian French". UK Language Variation and Change 13 (UKLVC13), September 8th-10th, 2021, Glasgow, United Kingdom (online).

2021   Chen, S., **Liang, Y.** & Amsili, P. (2021). "Chinese Inter-clausal Anaphora in Conditionals: A Mixed Effects Logistic Regression Study". 34th Journées de Linguistique Asie Orientale (JLAO34), July 7th-9th, 2021, Paris, France (online).

2021   **Liang, Y.**, Amsili, P. & Burnett H. (2021). "Revisiter l'omission du complémenteur *que* en français montréalais: exploration de facteurs cognitifs". Annual conference of the Canadian Linguistic Association 2021, June 4th-7th, 2021, Canada (online).

Poster presentations

2022   **Liang, Y.**, Abbou, J., Amsili, P., Dénigot, Q., Martin, A., & Burnett, H. (2022). "Soft Intervention Effects in Sociolinguistic Variation". Poster presented at Generative Linguistics in the Old World 45 (GLOW45), April 27th–29th, 2022, London, United Kingdom.

2019   **Liang, Y.**, Amsili, P. & Burnett H. (2019). "*Faut je t'apporte quelque chose*: Complementizer drop in Quebec French". Poster presented at Colloque de Syntaxe et Sémantique à Paris 19 (CSSP19), October 2nd-4th, 2019, Paris, France. [PDF]

2019   Chen, S., Yuan, C. & **Liang, Y.** (2019). "Interclausal Anaphora in Chinese: The Case of Conditional and Causal Sentences". Poster presented at Summer School Conditionals in Paris – logic, linguistics and psychology, June 3rd-7th, 2019, Inalco, Paris, France.

Invited talk

2023   **Liang, Y.** (2023). "Subject doubling from the perspective of formal syntax and information theory". Guest lecture for *Introduction to Linguistics*, January 5th, 2023, École Normale Supérieure, Paris, France.

2021   **Liang, Y.**, Martin, A. & Burnett, H. (2021). "A corpus and experimental investigation of the effect of polarity on future variation in Metropolitan French". Syntactic seminar of Hilda Koopman, June 7th, 2021, UCLA, Los Angeles, United States (online).

Teaching

Fall 2022   **Teaching assistant for LING101: Introduction to Linguistics**, *Department of Cognitive Sciences*, *Cogmaster*, École Normale Supérieure/EHESS/Univeristé Paris Cité, Paris, France.
Graduate-level course (Professor Salvador Mascarenhas) [syllabus].
Led weekly discussion sessions, grading, office hours.
30 hours of teaching.

Fall 2021	**Teaching assistant for Semantics**, *Department of Linguistics*, Université Paris Cité, Paris, France.
	Undergraduate-level course (Professor Lucia M. Tovena).
	Led weekly discussion sessions, grading, designed quizzes.
	36 hours of teaching.

Mentoring

Spring 2023	**Lorraine Charles**, *B.A. Computational Linguistics*, Université Paris Cité, Paris, France, with Heather Burnett.
	5-week final-year undergraduate research internship (35 hours).
Spring 2023	**Sawsan Hajoui**, *B.A. Linguistics*, Université Paris Cité, Paris, France, with Heather Burnett.
	5-week final-year undergraduate research internship (35 hours).
Spring 2022	**Léa Thevenot**, *B.A. Linguistics*, Université Paris Cité, Paris, France, with Heather Burnett.
	5-week final-year undergraduate research internship (35 hours).
Spring 2021	**Célia Sid and Lina Tibourtine**, *B.A. Linguistics*, Sorbonne Nouvelle, Paris, France, with Pascal Amsili.
	7-week final-year undergraduate research internship (100 hours in total).

Academic Service

Reviewing	**Journal: *Language Variation and Change***.
Seminar organisation	**Co-organizer of the "Doctoral Seminar SFL-LLF"**, *Université Paris Cité*, Paris, with Yanis Da Cunha (LLF), Daniel Gavris (SFL) and Mauro Viganò (SFL) [2021-2022].
	Organized monthly inter-laboratory doctoral seminar within LLF and Structures Formelles du Langage (Université Paris 8)
Other service	**Representatives of Ph.D. students**, *Laboratoire de lingusitique formelle*, Université Paris Cité/CNRS, Paris, France.
	[2021-2023]

Skills

Languages

French	C2
English	C1
Mandarin	Native speaker
Cantonese	Native speaker

Technical skills

Programming	Python, Java, R

Machine Learning	Transformer, LSTM, CNN, MLP, SVM; Pytorch, Scikit-learn, Keras
Data Science	pandas, numpy, seaborn, matplotlib
Annotation	stanza, SpaCy, nltk
Office	LaTex, Microsoft Office, LibreOffice
Bibliography	Bibtex, Zotero
Others	Adobe Audition, Audacity