

Vittoria Dentella

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Last updated: June 1, 2026

RESEARCH POSITIONS

- 2024– Postdoctoral researcher [@ReMapLab](#). PI: L. Rinaldi
Department of Brain and Behavioral Sciences, University of Pavia
- 09-12/2023 Research fellow [@CognitiveNeuropsychologyLab](#). PI: A. Caramazza
Faculty of Arts and Sciences, Harvard University
- 11-12/2019 Research intern [@Speech, Language and Neural Computations Lab](#). PI: C. Zmarich
CNR: Istituto di Scienze e Tecnologie della Cognizione, Padova

EDUCATION

- 2021-2024 **PhD in Cognitive Science and Language, Rovira i Virgili University**
Funded by a **Marie Skłodowska Curie Actions Cofund Fellowship**
Thesis title: *Large Language Models: Language abilities and limitations*
Advisors: E. Leivada, I. Oltra-Massuet
- 2018-2020 **MA in Linguistics *summa cum laude*, University of Padova**
Thesis title: *Linguistic gender in transcortical aphasia*
Advisors: C. Semenza, D. Bertocci
- 2014-2017 **BA in Translation Studies, University of Trieste**
Thesis title: *Glossario di verbi con clitico cristallizzato*
Advisor: S. Ondelli

PUBLICATIONS

Journal articles

- preprint* M. Binz, E. Akata, A. Almaatouq, . . . **V. Dentella**, . . . E. Schulz. [Post-training makes large language models less human-like](#). arXiv:2605.07632
- preprint* **V. Dentella**, W. Huang, S.A. Mansi, J. Grieve, E. Leivada. [ChatGPT-generated texts show authorship traits that identify them as non-human](#). arXiv:2508.16385.
- 2026 **V. Dentella**, M. Marelli, L. Rinaldi. [LLMs displaying less cognitive bias are not necessarily better decision makers](#). *Nature Machine Intelligence*.
- 2025 E. Murphy, E. Leivada, **V. Dentella**, F. Günther, G. Marcus. [Fundamental principles of linguistic structure are not represented by o3](#). *Biolinguistics* 19, e19021.
- 2025 **V. Dentella**, F. Günther, E. Leivada. [Language in vivo vs. in silico: Size matters but Larger Language Models still do not comprehend language on a par with humans due to impenetrable semantic reference](#). *PLOS One* 20(7), e0327794.
- 2024 **V. Dentella**, F. Günther, E. Murphy, G. Marcus, E. Leivada. [Testing AI on language comprehension tasks reveals insensitivity to underlying meaning](#). *Nature Scientific Reports* 14, 28083.

- 2024 E. Leivada, F. Günther, **V. Dentella**. Reply to Hu et al.: Applying different evaluation standards to humans vs. Large Language Models overestimates AI performance. *PNAS* 121(36), e2406752121.
- 2024 E. Leivada, **V. Dentella**, F. Günther. Evaluating the language abilities of Large Language Models vs. humans: Three caveats. *Biolinguistics* 18, e14391.
- 2024 **V. Dentella**, C. Masullo, E. Leivada. Bilingual disadvantages are systematically compensated by bilingual advantages across tasks and populations. *Nature Scientific Reports* 14, 2107.
- 2023 **V. Dentella**, F. Günther, E. Leivada. Systematic testing of 3 Language Models reveals low language accuracy, absence of response stability, and a yes-response bias. *PNAS* 120(51), e2309583120.
- 2023 C. Masullo, **V. Dentella**, E. Leivada. 73% of the observed bilingual (dis)advantageous effects on cognition stem from social variables: A systematic review. *Bilingualism: Language & Cognition* 27(3), 480–494.
- 2023 E. Leivada, **V. Dentella**, C. Masullo, J. Rothman. On trade-offs in bilingualism and moving beyond the stacking the deck fallacy. *Bilingualism: Language & Cognition* 26(3), 550–555.
- 2022 **V. Dentella**, D. Bertocci, C. Semenza. Corrective repetition of ungrammatical gender agreement stimuli: A transcortical sensory aphasia single case study. *Aphasiology* 37(4), 599–612.

Books and book chapters

- 2026 E. Leivada, **V. Dentella**, E. Murphy. *The Quo Vadis of the relationship between language and Large Language Models*. In J.-L. Mendívil-Giró (Ed.), *Artificial knowledge of language. A linguist's perspective on its nature, origins and use*. Vernon Press, pp. 21-44.
- 2022 G. Cassolato, M. de Biasi, **V. Dentella**, C. Lacorte, S. Viel, C. Zottar. In S. Ondelli (Ed.), *Piccolo dizionario dei verbi procomplementari*. Edizioni Università di Trieste.

INVITED PRESENTATIONS

- 2026 *Workshop speaker* at APS: American Psychological Association Annual Convention
Title: LLMs displaying less cognitive bias are not necessarily better decision makers
 Barcelona, May 28-30, 2026. Organizers: K.D. Kiy, D. Lynott
- 2026 *Speaker* at LabtoLab: *Promenade* meets *OutOfSpace*
Title: Do linguistic priors influence low-level visual processes?
 IUSS Pavia, February 23, 2026. Organizers: V. Bambini, L. Rinaldi
- 2026 *Speaker* at Questioni logico-filosofiche sulla semantica dei LLM
Title: LLM e grammatica
 University of Sassari, January 23, 2026. Organizer: G. Seddone
- 2025 *Speaker* at CoMPLi: 3rd Workshop on Computational Models in Psycholinguistics
Title: What is a mental representation?
 Humboldt University in Berlin, April 9-10, 2025. Organizer: F. Günther
- 2023 *Speaker* at Rolling: Research on Language and Linguistics research group
Title: Language and language models: An outline
 Rovira i Virgili University, April 17, 2023. PI: I. Oltra-Massuet
- 2023 *Speaker* at PoLaR Lab research group
Title: On trade-offs in bilingualism and moving beyond the stacking the deck fallacy
 UiT The Arctic University of Norway, February 1, 2023. PI: J. Rothman

REFEREED CONFERENCE PRESENTATIONS

- upcoming* **V. Dentella**, M. Marelli, L. Rinaldi. Computational models boost semantic measurement in cognitive linguistics. Poster at SLE: 59th annual meeting of the Societas Linguistica Europaea. University of Osnabrück, August 26-29, 2026.
- 2026 **V. Dentella**, D. Gatti, P. Previtali, E. Catricalà, M. Marelli, M. Petilli, L. Rinaldi. The neural underpinnings of false memory formation: A TMS study. Poster at PiF: Psycholinguistics in Flanders. University of Pavia, May 12-13, 2026.
- 2026 P. Previtali, **V. Dentella**, C. Manoulidou, T. Vecchi, M. Marelli, L. Rinaldi. Does language shape numbers? Cross-linguistic insights from vector-space models. Poster at PiF: Psycholinguistics in Flanders. University of Pavia, May 12-13, 2026.
- 2026 F. Günther, **V. Dentella**, E. Leivada. Of apples and oranges: Comparing LLM to human performance requires experimental rigor. Presentation at TeaP: Tagung experimentell arbeitender Psycholog*innen. University of Tübingen, March 15-18, 2026.
- 2025 P. Previtali, **V. Dentella**, C. Manoulidou, T. Vecchi, M. Marelli, L. Rinaldi. Does language shape numbers? Cross-linguistic insights from vector-space models. Poster at AIP: Associazione Italiana Psicologia Sperimentale. University of Torino, September 11-13, 2025.
- 2025 **V. Dentella**, M. Marelli, L. Rinaldi. A computational companion to human ratings is available. Poster at ESCoP: European Society for Cognitive Psychology. University of Sheffield, September 1-5, 2025.
- 2024 **V. Dentella**, F. Günther, E. Leivada. Language Models' larger size does not bridge the gap with human performance. Presentation at SALC: 9th Conference of the Scandinavian Association for Language and Cognition. Norwegian University of Science and Technology in Trondheim, June 5-7, 2024.
- 2024 A. Nacchi, S. Facchini, T. Balsemin, **V. Dentella**, C. Semenza. Reading errors in neglect dyslexia: The role of phonology. Poster at the World Federation of Neurology: Specialty Group on Aphasia, Dementia and Cognitive Disorders. Nara, April 4-5, 2024.
- 2024 **V. Dentella**. Large Language Models fail to assign meaning to form. Presentation at (Non) dire quasi la stessa cosa. University of Bergamo/Pavia, January 31, 2024.
- 2024 A. Nacchi, S. Facchini, T. Balsemin, **V. Dentella**, C. Semenza. Phonological errors in neglect dyslexia. Poster at EWCN: European Workshop on Cognitive Neuropsychology. Bressanone, January 21-26, 2024.
- 2023 A. Nacchi, S. Facchini, T. Balsemin, **V. Dentella**, C. Semenza. Phonological substitution errors in neglect dyslexia. Presentation at AoA: 61st Annual Meeting of the Academy of Aphasia. University of Reading, October 21-23, 2023.
- 2023 C. Masullo, **V. Dentella**, E. Leivada. A systematic review of the elusive origin of bilingual adaptations on cognition. Presentation at ISB14: International Symposium on Bilingualism. Macquarie University, June 26-30, 2023.
- 2023 C. Masullo, **V. Dentella**, E. Leivada. The origins of bilingualism's effects on cognition: Social, cognitive or mixed? A systematic review. Presentation at ISP: XVI International Symposium of Psycholinguistics. University of the Basque Country, May 31-June 2, 2023.
- 2023 **V. Dentella**, E. Leivada, G. Fullin, C. Semenza. A complementary network-informed perspective on agrammatism. Poster at EWCN: European Workshop on Cognitive Neuropsychology. Bressanone, January 22-28, 2023.
- 2022 C. Masullo, **V. Dentella**, E. Leivada. Developing a social-based theory for the origin of bilingual adaptations on cognition: A systematic review. Presentation at BMRS: Bilingualism Matters Research Symposium. University of Edinburgh, October 25-26, 2022.
- 2022 **V. Dentella**, C. Masullo, E. Leivada. On the distribution of bilingual effects: A PRISMA review. Poster at SoA: Science of Aphasia. University of Bordeaux, September 12-15, 2022.

- 2022 **V. Dentella**, C. Masullo, E. Leivada. Bilingual disadvantages checked against bilingual advantages: A PRISMA review. Presentation at EUROSLA31: European Second Language Association. University of Fribourg (CH), August 24-27, 2022.
- 2022 **V. Dentella**, C. Masullo, E. Leivada. Bilingual disadvantages and bilingual advantages compensate each other in a trade-off pattern: A PRISMA review. Presentation at ISMBS: International Symposium on Monolingual and Bilingual Speech. University of Louisiana at Lafayette, April 6-9, 2022.
- 2022 **V. Dentella**, C. Masullo, E. Leivada. Cognitive trade-offs at the basis of bilingual advantages and disadvantages: A PRISMA review. Presentation at the 7th Annual Spring Research Seminar: Rising up to new challenges in multilingual education. International University of Catalonia, April 1, 2022.
- 2022 **V. Dentella**, C. Masullo, E. Leivada. On the distribution of cognitive adaptations to bilingualism: A PRISMA review. Presentation at EWCN: European Workshop on Cognitive Neuropsychology. Bressanone, January 23-28, 2022.
- 2021 **V. Dentella**, C. Masullo, E. Leivada. A bilingual disadvantage is systematically compensated by a bilingual advantage: A PRISMA review. Presentation at BiMuLT: New Approaches to Bilingualism and Multilingualism and Language Learning/Teaching Conference. University of Cyprus, November 20-21, 2021.
- 2021 **V. Dentella**, D. Bertocci, C. Semenza. Gender agreement processing in transcortical sensory aphasia. Presentation at PNCLR: 9th Novi Sad workshop on Psycholinguistic, Neurolinguistic and Clinical Linguistic Research. University of Novi Sad, October 30, 2021.
- 2021 **V. Dentella**, D. Bertocci, C. Semenza. Gender agreement processing in transcortical sensory aphasia. Poster at AoA: Academy of Aphasia 59th Annual Meeting. Virtual, October 24-26, 2021.
- 2021 **V. Dentella**, D. Bertocci, C. Semenza. Gender agreement processing in transcortical sensory aphasia. Presentation at EWCN: European Workshop on Cognitive Neuropsychology. Bressanone, January 24-29, 2021.

SERVICE

Conference and workshop organizer

- 2026 *Conference co-organizer, PiF: Psycholinguistics in Flanders*
University of Pavia, May 12-13, 2026.

Ad-hoc journal reviewer

- 2026 *Computational Brain & Behavior; Journal of Psycholinguistic Research; Nature Machine Intelligence*
- 2025 *Artificial Intelligence Review; Behavioral Sciences; Nature Scientific Reports*
- 2024 *PNAS*
- 2023 *Biolinguistics*

TEACHING

- 2024 **Neuropsychology for linguists** (2 ECTS)
MA in Linguistics, University of Padova. Referent: C. Semenza
- 2023 **Linguistics** (6 ECTS)
BA in English Studies, Rovira i Virgili University. Referent: I. Oltra-Massuet

FUNDING

- 2021–2024 **EU Horizon 2020 Research and Innovation Programme**
Marie Skłodowska Curie Actions Cofund Fellowship, grant no. 945413
- 2021 **NIDCD: National Institute on Deafness and Other Communication Disorders**
Academy of Aphasia 59th Annual Meeting conference grant

MEMBERSHIPS

Active memberships in professional societies: [ESCoP](#), European Society for Cognitive Psychology; [SLE](#), Societas Linguistica Europaea

- 2024– [ReMapLab](#), University of Pavia. PI: L. Rinaldi
- 2021– [ATOM: Adaptations to Multilingualism](#) research project, Autonomous University of Barcelona. PI: E. Leivada
- 2021–2024 [ROLLING: Research on Language and Linguistics](#) research group, Rovira i Virgili University. PI: I. Oltra-Massuet

SELECTED PRESS COVERAGE

- 2026 [UNIPV.news](#) I bias cognitivi dell'IA possono essere utili: uno studio coordinato dall'Università di Pavia pubblicato su Nature Machine Intelligence
- [SassariNotizie](#) La domanda più inquietante sull'AI in un convegno all'Università il 23 gennaio
- 2025 [EurekAlert](#) A URV-led study highlights the limitations of AI models in understanding language
- [DiariDigitalURV](#) Evidencien les limitacions dels models d'IA en la comprensió del llenguatge
- 2024 [EurekAlert](#) Artificial intelligence fails in grammar
- [DiariDigitalURV](#) La intel·ligència artificial suspèn en gramàtica
- [UABNewsroom](#) La intel·ligència artificial suspende en gramàtica

LANGUAGES

- Native Italian, Bergamàsch
- Fluent English (IELTS Academic C1)
- Elementary Russian, Slovenian, Spanish