Massimiliano Canzi

data scientist & lab manager · linguistics · universität konstanz

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Summary: Formally trained in quantitative research in phonetics and speech sciences. Since 2021, I am a data scientist and laboratory manager in the linguistics department at Universität Konstanz, where I teach MA-level courses in “Statistics”, “Advanced Statistics”, “Forensic Speech Science” and “Eye Tracking & Pupillometry” for linguistics students. I am an avid R coder. I also advocate for sensible experimental designs, clear and reproducible data science and honest scientific communication.

Employment

(since 1/2021) **Academic Staff** [100% TVL 13] at Universität Konstanz, DE

(2/2018-2/2020) **Graduate Teaching Assistant** at The University of Manchester, UK

- Handling Data (Dr Patrycja Strycharczuk)
- Language, Mind & Brain (Dr Wendell Kimper)
- Sounds of Language (Dr Patrycja Strycharczuk)
- Forensic Linguistics (Dr Andrea Nini)
- Psycholinguistics (Dr Thea Cameron-Faulkner)
- ...

(2/2018-9/2019) **Psycholinguistics Lab Manager** at The University of Manchester, UK

(2/2018-8/2018) **Graduate Research Assistant** on the UMRI-funded project: Beauty is in the ear of the beholder: the role of accent in mate choice. **PI**: Dr Tucker Gilman, Dr Patrycja Strycharczuk, Dr Alex Baratta. The University of Manchester, UK

Education

(2017-2021) **PhD in Linguistics** at The University of Manchester, UK. *What PMN? Investigating phonological processing in semantics-free speech perception with ERP*. Project supervised by **Dr Wendell Kimper** & **Dr Patrycja Strycharczuk**, examined by **Dr Vera Hohaus** & **Dr Linnaea Stockall**. Viva passed with *minor corrections* (A2) on August 27th, 2021

(2016-2017) **MSc in Forensic Speech Science** at University of York, UK

(2015-2016) **MA in Linguistics** at The University of Manchester, UK

(2012-2015) **BA in Foreign Languages and Literature** at Università degli Studi di Milano, IT

Publications

CRediT roles: **C**: Conceptualization; **DC**: Data Curation; **FA**: Formal Analysis; **I**: Investigation; **M**: Methodology; **S**: Software; **SU**: Supervision; **V**: Visualization; **W**: Writing

(2026) Rossi, M., **Canzi, M.**, & Rathcke, T. Phoneme Monitoring in Developmental Dyslexia: Pupillometric Evidence for Cognitive Rather than Acoustic Origins of Phonological Deficits. *Brain Sciences*, 16(7), 697. doi:10.3390/brainsci16070697 **[C DC FA I M]**

(2026) Rathcke, T., & **Canzi, M.** Individual differences in musical melody perception moderate the speech-to-song illusion in Mandarin Chinese listeners. *Scientific Reports*, 16, 10523. doi:10.1038/s41598-026-44268-z **[DC FA V]**

(2025) Tagliani, M., Cruz, L., Redolfi, M., Shirokorad, N., **Canzi, M.**, Melloni, C., & Vender, M. L2 learners take more time to catch the rhyme: An eye-tracking study on predictive processing. *International Journal of Bilingualism*. doi:10.1177/13670069251365147 **[DC FA V W]**

(2025) Gielge, R., Brehmer, B., & **Canzi, M.** Grammaticalization of (in)definiteness markers in Polish monolinguals and bilinguals: Language-internal development or contact-induced change? *Die Welt der Slaven*, 70(1), 174–198. doi:10.13173/ws.70.1.174 **[DC FA V W]**

(2024) Rathcke, T., Wong, H. Y., & **Canzi, M.** The role of sound-to-symbol literacy in phonological awareness: Evidence from Cantonese. *Brain Research*, 1845, 149240. doi:10.1016/j.brainres.2024.149240 **[DC FA V]**

(2024) Kupisch, T., **Canzi, M.**, Ferin, M., Geiss, M., Reiber, M., & Speck, P. How bilingual experience shapes accents in German-Italian primary school children. *Heritage Language Journal*, 21(1), 1–30. doi:10.1163/15507076-bja10030 **[DC FA V W]**

(2024) Rathcke, T., Castellano, C., & **Canzi, M.** Understanding the role of broadcast media in sound change. In F. Kleber & T. Rathcke (eds.), *Speech Dynamics: Synchronic Variation and Diachronic Change*, 425–452. De Gruyter. doi:10.1515/9783110765328-015 **[DC FA V W]**

(2024) Rathcke, T., Smit, E., Zheng, Y., & **Canzi, M.** Perception of temporal structure in speech is influenced by body movement and individual beat perception ability. *Attention, Perception, & Psychophysics*, 86(5), 1746–1762. doi:10.3758/s13414-024-02893-8 **[DC V]**

(2023) **Canzi, M.**, & Rathcke, T. Unmasking the truf: Impact of community masks on the perception of voiceless fricatives in English. *Proceedings of ICPhS 2023*. **[DC FA I V W]**

(2023) Tsaroucha, A., Rathcke, T., & **Canzi, M.** Effects of a face mask on the perception of English fricatives by native speakers of Greek. *Proceedings of ICGL15*. **[DC FA I SU V]**

(2023) Brehmer, B., Sopata, A., & **Canzi, M.** Same or different? Subject realization in the majority and the heritage language of Polish-German bilingual children. *Linguistics Vanguard*, 9(s2), 179–189. doi:10.1515/lingvan-2022-0061 **[DC FA V W]**

(2023) Ulbrich, C., & **Canzi, M.** Intonational alignment in second language acquisition. *Speech Communication*, 146, 70–81. doi:10.1016/j.specom.2022.11.007 **[DC FA V W]**

(2021) Mumtaz, B., **Canzi, M.**, & Butt, M. Prosody of Case Markers in Urdu. *Proceedings of Interspeech 2021*, 2661–2665. doi:10.21437/Interspeech.2021-1776 **[DC FA V]**

Skills

advanced | intermediate | *beginner*

Programming:
R, Praat, Presentation, *SQL, Python*

Physiological & Articulatory Methods:
ERP, EEG, EGG, Pupillometry, Eye Tracking (Gaze), *Ultrasound*

Experimental Software:
Praat, PsychoPy, Presentation, Gorilla, EEG/ERPLAB, ActiView, Audacity, E-Prime, Tobii ProLab, OpenSesame, *JsPsych, Matlab*

Web & Typesetting:
Microsoft Word, LaTeX, Markdown, Typo3, Hugo, Blogdown

Languages:
Italian (native), **English** (C2), **Portuguese** (B2), *German* (A2)

Invited Talks and Workshops

"*" *indicates presenting authors for multi-authored presentations*

(2026) **Canzi, M**. Pupillometry for the study of language (and beyond). Invited talk at the Manchester Forum in Linguistics [University of Manchester, UK] [01.05]

(2025, 2024) ***Canzi, M.** & *Venagli, I. Data visualisation with ggplot2 in R. Graduate workshop taught at the Konstanz Methods Excellence Workshop series [Universität Konstanz, DE]

(2025) **Canzi, M.** Introduction to data visualisation in R with ggplot2. Invited graduate workshop taught at the Peace Research Institute Frankfurt (PRIF) [Frankfurt, DE] [01.12-02.12]

(2024) **Canzi, M.** Introduction to Statistics with R. MA-level, 8-hour workshop taught at the Department of Culture and Civilization [University of Verona, IT] [02.12-06.12]

(2024) **Canzi, M.** Data Manipulation and Visualisation in R. PhD-level, 8-hour workshop taught at the Department of Culture and Civilization [University of Verona, IT] [20.05-24.05]

(2023) **Canzi, M.** Topics in Quantitative Methods. PhD-level, 11-hour workshop taught at the Department of Culture and Civilization [University of Verona, IT] [06.06-08.06]

(2022) **Canzi, M.** Good and Bad Habits in Quantitative and Experimental Linguistics Research. Workshop taught online in the linguistics department [Universität Konstanz, DE]

(2021) **Canzi, M.** Looking for the Phonological Mapping Negativity (in all the wrong places). Invited talk presented at the Linguistics Department Research Colloquium [Universität Konstanz, DE]

(2021) *Rathcke, T., & ***Canzi, M.** Deaf by face mask? Impact of community masks on the perception of voiceless fricatives in English. Invited talk presented at the Linguistics and English Language (LEL) Summer Seminars [University of Manchester, UK]

(2019) **Canzi, M.** Don't let me be misunderstood: exploring early phonological and lexical processing in auditory perception. Invited talk presented at the Laboratory of Phonetics [University of Glasgow, UK]

Conference Presentations

"*" *indicates presenting authors*

(2025) Wang, L., **Canzi, M.**, & *Liu, F. Mental representations of pitch contours in speech and complex tones change with age in non-autistic individuals but remain stable in autistic individuals. Poster presented at Auditory Science Meeting [Nottingham Trent University, UK]

(2025) *Ong, J., **Canzi, M.**, & Liu, F. Mental representations of speech and song reveal language-specific and universal pitch and duration patterns in English and Mandarin listeners. Talk presented at Auditory Science Meeting [Nottingham Trent University, UK]

(2024) *Rathcke, T., Smit, E., Yue, R., & **Canzi, M.** Synchronised movement and individual rhythmic skill influence the perception of temporal structure in spoken language. Poster presented at AMLaP 2024 [University of Edinburgh, UK]

(2024) *Link, P. M., **Canzi, M.**, & Rathcke, T. Individual differences in sensorimotor synchronization and pupillometry. Poster presented at AMLaP 2024 [University of Edinburgh, UK]

(2024) *Wang, L., Ong, J., **Canzi, M.**, Jiang, C., & *Liu, F. Mental representations of speech and musical pitch contours show reduced pitch ranges in congenital amusia. Talk presented at 7th bi-annual meeting of the European Society for Cognitive and Affective Neuroscience (ESCAN) [University of Ghent, BE]

(2023) ***Canzi, M.**, & Rathcke, T. Unmasking the truth: Impact of community masks on the perception of voiceless fricatives in English. Talk presented at ICPhS 2023 [University of Prague, CZ]

(2022) *Tsaroucha, A., Rathcke, T., & **Canzi, M.** Effects of a face mask on the perception of English fricatives by native speakers of Greek. Talk presented at 15th International Conference on Greek Linguistics (ICGL15) [University of Belgrade, RS]

(2021) *Mumtaz, B., **Canzi, M.**, & Butt, M. Prosody of Case Markers in Urdu. Talk presented at Interspeech 2021 [University of Brno, CZ]

(2018) *Coretta, S., & ***Canzi, M.** The effect of lexical frequency on vowel phonation as a correlate of /t/-glottaling. Talk presented at Linguistic Association of Great Britain (LAGB) [University of Sheffield, UK]

(2018) ***Canzi, M.** The forensic implications of comparing soft, neutral and loud speech. Talk presented at Manchester Forum in Linguistics [University of Manchester, UK]

(2018) ***Canzi, M.** A quantitative analysis of inter- and intra-speaker variation of f-pattern and vowel duration in soft, neutral and loud speech in Italian. Poster presented at British Association of Academic Phoneticians (BAAP) [University of Kent, UK]

Taught modules

*All modules are MA-level courses taught to students of **Linguistics**, **Speech & Language Processing**, and **Multilingualism** at the University of Konstanz.*

Statistics (2021+, every semester) — introduction to R, linear regression, linear mixed models, logistic regression, and analysis of experimental data.

Advanced Statistics (2021+) — non-linear modeling (GAMMs) and exploratory methods including cluster analysis, factor analysis, and random forests.

Pupillometry (2026, with Yining Yan) — hands-on course on pupillometry for cognitive and language-related tasks.

Introduction to Forensic Speech Science (2023, 2025) — phonetic analysis for forensic tasks such as speaker comparison and speaker profiling.

Eye-tracking and Pupillometry (2024, with Dr. Ilaria Venagli) — both methods applied to the study of language, with strong practical focus.

PhD Supervision

(2026-) Co-supervisor of Ms. Yining Yan, PhD-candidate in the LiVV (Lifting the Veil of Violence) project funded by the Cluster of Excellence on the study of Inequality, at the University of Konstanz. First supervisor: Prof. Dr. Tanja Kupisch.

Awards

(2025) **Canzi, M**, Cavaglià, S.: Chessable Research Awards 2025 for: “Synchronicity in gaze patterns, pupil dilation and heart rate patterns during blitz chess”.

(2024) **Canzi, M.** Department of Linguistics Mittelbau Teaching Award for Statistics.

(2018) Coretta, S., & **Canzi, M.** (joint winners) of **Best Student Abstract** submitted to the LAGB 2018 conference: The effect of lexical frequency on vowel phonation as a correlate of /t/- glottaling.

Service

Department of Linguistics, Universität Konstanz

(2025) **Organising committee** of the Konstanz Linguistics Conference 2025

(2024) **Main organiser** of the Konstanz Linguistics Conference 2024

(2023) **Organising helper** at the Musical Minds Workshop

(2023, 2024) **Main organiser** of the Methods @ LingLab open-access workshops on methods in linguistics.

Department of Linguistics and English Language, The University of Manchester

(2020) **Main organiser** of the Manchester Forum in Linguistics conference

(2019) **GTA Representative** for the Linguistics and English Language division

(2019) **Organising helper** at the Manchester Phonology Meeting conference (MFM)