# Marzena Karpinska

Curriculum Vitae

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Marzena Karpinska is currently a postdoctoral researcher at the University of Massachusetts Amherst, Manning College of Information & Computer Sciences. She received her Ph.D. in linguistics from the Department of Language and Information Sciences, the University of Tokyo. Her research interests lie at the intersection of natural language processing (NLP), cognitive science, and translation studies.

#### Education

2020-2024	<b>Postdoc:</b> The University of Massachusetts Amherst (USA), Manning College of Information & Computer Sciences, Natural Language Processing
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Focus:	Long-form Text Generation and Machine Translation.
2014 - 2020	<b>Ph.D.:</b> The University of Tokyo (Japan), Language and Information Sciences Dept.
Thesis	The influence of socio-indexical cues on speech perception by non-native English listeners.
2012 - 2014	M.A.: The University of Tokyo (Japan), Language and Information Sciences Dept.
Thesis	The Source-Path-Goal Schema in Japanese and Polish.
2011 - 2012	<b>Research Stay:</b> The University of Tokyo (Japan), Language and Information Sciences Dept.
Focus:	The Conceptualization of 'Source' in Japanese and Polish.
2007-2010	M.A.: The University of Warsaw (Poland), Oriental Studies Dept., Japanese Linguistics
Thesis	Semantics of Japanese Evaluative Adjectives.
2008 - 2009	Research Stay: Tokyo University of Foreign Studies (Japan), Japanese Studies
Focus:	Coexisting Intransitive Verbs: A Case of Japanese.
2004 - 2007	<b>B.A.:</b> The University of Warsaw (Poland), Oriental Studies Dept., Japanese Linguistics
Thesis	Semantics of Japanese Transitive - Intransitive Verb Pair 'ateru: ataru.'
	Research Experience
2020-	<b>Postdoctoral Researcher:</b> University of Massachusetts Amherst (USA), ( <i>full-time position</i> )
Focus:	Document-level machine translation
	Long-form generation of creative text
	Multilingual question answering with focus on low-resource languages
2018-2019	<b>Research Assistant:</b> The University of Tokyo (Japan), A joint research project of The University of Tokyo, Tokyo Institute of Technology, and Konan University, ( <i>part-time position</i> )

Focus: Cleaning and processing multilingual corpora Training word2vec models and aligning embeddings with MUSE Curating cognates dataset for Romance, Germanic, and Slavic languages

#### Publications

- 1. **[WMT] Marzena Karpinska** and Mohit Iyyer (2023). "Large language models effectively leverage document-level context for literary translation, but critical errors persist". *Proceedings of the Eighth Conference on Machine Translation (WMT)*, (URL)
- [NeurIPS] Kalpesh Krishna, Yixiao Song, Marzena Karpinska, John Wieting, Mohit Iyyer (2023).
  "Paraphrasing evades detectors of AI-generated text, but retrieval is an effective defense". Advances in Neural Information Processing Systems 36 (NeurIPS), (URL)

- 3. [ACL] Anna Rogers, Marzena Karpinska, Jordan Boyd-Graber, Naoaki Okazaki (2023). "Program Chairs' Report on Peer Review at ACL 2023". Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), xl-lxxv. Toronto, Canada: Association for Computational Linguistics. (URL)
- [EACL Findings] Ankita Gupta, Marzena Karpinska, Wenlong Zhao, Kalpesh Krishna, Jack Merullo, Luke Yeh, Mohit Iyyer, Brendan O'Connor (2023). "ezCoref: Towards Unifying Annotation Guidelines for Coreference Resolution". *Findings of the Association for Computational Linguistics: EACL 2023*. Dubrovnik, Croatia: Association for Computational Linguistics, pp. 312–330. (URL)
- 5. [EMNLP] Katherine Thai★, Marzena Karpinska★, Kalpesh Krishna, William Ray, Moira Inghilleri, John Wieting, and Mohit Iyyer (2022). "Exploring Document-Level Literary Machine Translation with Parallel Paragraphs from World Literature". Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing. Abu Dhabi, United Arab Emirates: Association for Computational Linguistics, pp. 9882–9902. (URL) equal contributions★
- [EMNLP] Marzena Karpinska, Nishant Raj, Katherine Thai, Yixiao Song, Ankita Gupta, and Mohit Iyyer (2022). "DEMETR: Diagnosing Evaluation Metrics for Translation". Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing. Abu Dhabi, United Arab Emirates: Association for Computational Linguistics, pp. 540–9561. (URL)
- [COLING] Yoshifumi Kawasaki, Maëlys Salingre, Marzena Karpinska, Hiroya Takamura, and Ryo Nagata (2022). "Revisiting Statistical Laws of Semantic Shift in Romance Cognates". Proceedings of the 29th International Conference on Computational Linguistics. Gyeongju, Republic of Korea: International Committee on Computational Linguistics, pp. 141–151. (URL)
- [LREC-COLING] Anna Rogers, Marzena Karpinska, Ankita Gupta, Vladislav Lialin, Gregory Smelkov, Anna Rumshisky (2022). "NarrativeTime: Dense Temporal Annotation on a Timeline". ARXIV: 1908.11443 [cs.CL] (accepted to LREC-COLING 2024)
- 9. [ANLP] Yoshifumi Kawasaki, Maëlys Salingre, Marzena Karpinska, Hiroya Takamura, and Ryo Nagata (2022). "Analysis of Semantic Change in Romance Cognate Verbs Using Word Embeddings". Proceedings of the 28th Annual Conference of the Association for Natural Language Processing. Hamamatsu, Japan: The Association for Natural Language Processing. (URL) special committee award for novelty
- [EMNLP] Marzena Karpinska, Nader Akoury, and Mohit Iyyer (2021). "The Perils of Using Mechanical Turk to Evaluate Open-Ended Text Generation". Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing. Online and Punta Cana, Dominican Republic: Association for Computational Linguistics, pp. 1265–1285. (URL)
- [ICPhS] Marzena Karpinska (2019). "How accented do Caucasian-looking vs. Asian-looking native speakers sound to a Japanese listener?" Proceedings of the 19th International Congress of Phonetic Sciences. Melbourne, Australia, pp 3691–3695. (URL)
- [Book Chapter] Marzena Karpinska, Paula Kurzawska, and Katarzyna Rozanska (2019). "Digital Lingua Franca or a Culture-Specific Product Leading to Misunderstandings?" Emoticons, Kaomoji, and Emoji: The Transformation of Communication in the Digital Age (Routledge Research in Language and Communication) (URL)
- [KJEE] Kimie Yamamura, Ryo Gakutani, Marzena Karpinska, Tetsuro Tanojiri, and Tom Gally (2019). "The Discourse of Kyōyō and English Education in Japan" Komaba Journal of English Education (URL)
- [RelNLP] Marzena Karpinska, Bofang Li, Anna Rogers, and Aleksandr Drozd (2018). "Subcharacter Information in Japanese Embeddings: When Is It Worth It?" Proceedings of the Workshop on the Relevance of Linguistic Structure in Neural Architectures for NLP. Melbourne, Australia: Association for Computational Linguistics, pp. 28–37. (URL)
- 15. **[ICPhS] Marzena Karpinska**, Shodai Uchida, and Izabelle Grenon (2015). "Vowel perception by listeners from different English dialects" *Proceedings of the 18th International Congress of Phonetic Sciences.* Glasgow, Scotland (<u>URL</u>)

# **Ongoing Projects**

- 1. LitMT: Collecting readers' feedback on machine translated literature in order to further improve machine translation systems and train passage-level evaluation metrics (<u>URL</u>).
- 2. Human-Computer Interaction: Investigating how machine translation systems can be introduced in the traditional translation pipeline.
- 3. Multilingual QA Dataset: Collecting a multilingual QA dataset for assessing the model's performance on low-resource languages, such as Wolof, Kirundi, Fijian, and Hiligaynon.

## **Teaching Experience**

- 2024 **Guest Lecture:** University of Massachusetts Amherst (USA) Human-centered Machine Translation (COMP-LIT 481)
- 2023 **Guest Lecture:** University of Massachusetts Amherst (USA) Machine Translation on Paragraph-level (CS 685)
- 2022 **Guest Lecture:** University of Massachusetts Amherst (USA) Biases in Large Language Models (PHILL 755)
- 2018–2019 Instructor: Tama Art University (Japan), (part-time position)
- 2014–2018 Instructor: Nippon Institute of Technology (Japan), (part-time position)
- 2015–2018 Teaching Assistant: The University of Tokyo (Japan), (part-time position)
- 2012–2013 Teaching Assistant: The University of Tokyo (Japan), (part-time position)

## Mentoring Experience (NLP)

Ankita Gupta, Katherine Thai (Ph.D. students)

Nishant Raj, William Ray (Master's students)

Jiarui Liu, Ipsita Bhattacharjee, Michael Ifejiagwa, Shreyan Mallik, Agneshka Rohra, Sofia Simonoff (Undergraduate students)

#### Invited Talks

05/2023 Instituto Superior Técnico & Unbabel Seminar

Paragraph-level Machine Translation of Literary Texts with Large Language Models

04/2023 Microsoft MT Reading Group

Paragraph-level Machine Translation of Literary Texts with Large Language Models

01/2023 Polish Academy of Sciences, NLP Seminar Evaluation of Long-form Text Generation

#### **Research Interest**

Long-form text generation (evaluation, long-form question answering), human-computer interaction, multilinguality of large language models, machine translation, automatic evaluation metrics, human evaluation protocols, ethics of data collection

## **Teaching Interest**

Natural language processing (introductory and advanced classes), data analysis and visualization, statistical analysis, programming in Python, data analysis in R, introduction to human-computer interaction research, experimental methods, multilingual natural language processing, machine learning, inter alia

# **Industry Experience**

2014–2020 Language Specialist: Innovative Language Learning (ILL) (Japan), (part/full-time position)

Tasks Developing curricula, assessments, and study materials for over 30 languages on the ILL digital learning platform (URL)

Designing experiments to measure and improve students' performance

Utilizing NLP tools for content development

Improving user experience with the Alexa voice assistant for the ILL language skill

- 2008–2020 Translator: Japanese-Polish-English Translator and Interpreter (freelance)
- Experience Various translations including manga, legal documents, technical documentation, oral presentations, and formal events for many high profile clients such as Deloitte, Sumitomo Corporation, Toyota, and Polish Embassy in Japan

## Awards and Scholarships

- Competitive Research Grant for Ph.D. Students awarded based on the research proposal, 2017−2019 (granted yearly; ~¥600,000)
- o Research Student Scholarship of Ministry of Education of Japan, 2008–2009 and 2011–2017 (~¥11,500,000)
- o Scholarship awarded yearly based on the GPA by the Rector of the University of Warsaw, 2005–2010

## Skills and Expertise

- Programming: Python, R, JAVASCRIPT, CSS;
- Machine learning frameworks: scikit-learn, PyTorch;
- *Theoretical frameworks*: distributional semantics, frame semantics, cognitive semantics, pragmatics, discourse analysis, sociolinguistics, sociophonetics, translation theory;
- *Research Skills*: designing controlled experiments, collecting participant data, performing statistical analysis (R), ethics of data collection;
- Languages: English, Polish, Japanese (native or near-native), German (intermediate), Chinese, Czech, French, Russian (beginner), broad knowledge of typological traits of over 30 languages available on the ILL platform (URL)

#### Certificates

Pedagogical Completed 90 hours of training as a part of the University of Tokyo <u>Future Faculty Program</u> Training:

Language: Japanese-Language Proficiency Test (JLPT N1; 25-30% pass rate), Japan Kanji Aptitude Test (Level 2; 20-22% pass rate, predominantly taken by native Japanese speakers)

## Service and Outreach

Reviewing: ACL, EMNLP, EACL, ICPhS, NLP Workshops

Other: Statistical analysis of peer-review data from the Association for Computational Linguistics (ACL) 2023