

Sara Papi, Ph.D.

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Experience

- 2024 – now █ **Postdoctoral Researcher in Speech Processing**, Fondazione Bruno Kessler (Italy).
- 2023 – 2023 █ **Research Intern in Streaming Speech Recognition and Translation**, Microsoft (USA).
- 2019 – 2019 █ **Research Intern in Automatic Speech Scoring**, Fondazione Bruno Kessler (Italy).

Education

- 2020 – 2024 █ **Ph.D. cum Laude in Information Engineering and Computer Science**, Fondazione Bruno Kessler & University of Trento (Italy).
- 2017 – 2020 █ **M.Sc. cum Laude in Computer and Automation Engineering**, University of Siena (Italy).
- 2014 – 2017 █ **B.Sc. in Information Engineering**, University of Siena (Italy).

Awards and Achievements

Awards

- 2025 █ Honorable Mention for the EAMT Best Thesis Award, EAMT.
- 2024 █ Special Mention for the Best Italian PhD Thesis, AIxIA 2024.

Achievements

- █ Outstanding Paper and SAC Award, ACL 2024.
- █ Social Impact Paper Award, EMNLP 2024.

Research Publications

Journal Articles

- 1 █ **S. Papi**, P. Polak, O. Bojar, and D. Macháček, "How" real" is your real-time simultaneous speech-to-text translation system?" *Accepted at TACL*, 2025.
- 2 █ **S. Papi**, M. Gaido, A. Karakanta, M. Cettolo, M. Negri, and M. Turchi, "Direct speech translation for automatic subtitling," *Transactions of the Association for Computational Linguistics*, vol. 11, pp. 1355–1376, Nov. 2023, ISSN: 2307-387X. DOI: 10.1162/tacl_a_00607. eprint: https://direct.mit.edu/tacl/article-pdf/doi/10.1162/tacl_a_00607/2197786/tacl_a_00607.pdf.

Conference Proceedings

- 1 █ T. K. Lam*, M. Gaido*, **S. Papi**, L. Bentivogli, and B. Haddow, "Prepending or cross-attention for speech-to-text? an empirical comparison," in *Accepted at NAACL 2025*, 2025.
- 2 █ I. S. Ahmad, A. Anastasopoulos, O. Bojar, *et al.*, "FINDINGS OF THE IWSLT 2024 EVALUATION CAMPAIGN," in *Proceedings of the 21st International Conference on Spoken Language Translation (IWSLT 2024)*, Bangkok, Thailand (in-person and online): Association for Computational Linguistics, Aug. 2024, pp. 1–11. DOI: 10.18653/v1/2024.iwslt-1.1.

- 3 M. Cettolo, A. Piergentili, **S. Papi**, M. Gaido, M. Negri, L. Bentivogli, *et al.*, “Magnet-machines generating translations: A calamita challenge,” in *Proceedings of the Tenth Italian Conference on Computational Linguistics (CLiC-it 2024)*, 2024.
- 4 M. Gaido, **S. Papi**, M. Cettolo, *et al.*, “Automatic subtitling and subtitle compression: FBK at the IWSLT 2024 subtitling track,” in *Proceedings of the 21st International Conference on Spoken Language Translation (IWSLT 2024)*, Bangkok, Thailand (in-person and online): Association for Computational Linguistics, Aug. 2024, pp. 86–96. DOI: 10.18653/v1/2024.iwslt-1.13.
- 5 M. Gaido, **S. Papi**, M. Negri, and L. Bentivogli, “Speech translation with speech foundation models and large language models: What is there and what is missing?” In *Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, Bangkok, Thailand: Association for Computational Linguistics, Aug. 2024, pp. 14760–14778. DOI: 10.18653/v1/2024.acl-long.789.
- 6 M. Gaido, **S. Papi**, M. Negri, M. Cettolo, and L. Bentivogli, “SBAAM! eliminating transcript dependency in automatic subtitling,” in *Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, Bangkok, Thailand: Association for Computational Linguistics, Aug. 2024, pp. 3673–3691. DOI: 10.18653/v1/2024.acl-long.201.
- 7 M. Gaido*, **S. Papi***, L. Bentivogli, *et al.*, “MOSEL: 950,000 hours of speech data for open-source speech foundation model training on EU languages,” in *Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing*, Miami, Florida, USA: Association for Computational Linguistics, Nov. 2024, pp. 13934–13947. DOI: 10.18653/v1/2024.emnlp-main.771.
- 8 M. Gaido*, **S. Papi***, M. Negri, and L. Bentivogli, “How do hyenas deal with human speech? speech recognition and translation with ConfHyena,” in *Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024)*, Torino, Italia: ELRA and ICCL, May 2024, pp. 8184–8191. URL: <https://aclanthology.org/2024.lrec-main.717/>.
- 9 **S. Papi**, M. Gaido, M. Negri, and L. Bentivogli, “SimulSeamless: FBK at IWSLT 2024 simultaneous speech translation,” in *Proceedings of the 21st International Conference on Spoken Language Translation (IWSLT 2024)*, Bangkok, Thailand (in-person and online): Association for Computational Linguistics, Aug. 2024, pp. 72–79. DOI: 10.18653/v1/2024.iwslt-1.11.
- 10 **S. Papi**, M. Gaido, M. Negri, and L. Bentivogli, “StreamAtt: Direct streaming speech-to-text translation with attention-based audio history selection,” in *Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, Bangkok, Thailand: Association for Computational Linguistics, Aug. 2024, pp. 3692–3707. DOI: 10.18653/v1/2024.acl-long.202.
- 11 **S. Papi**, P. Wang, J. Chen, *et al.*, “Leveraging timestamp information for serialized joint streaming recognition and translation,” in *ICASSP 2024 - 2024 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2024, pp. 10381–10385. DOI: 10.1109/ICASSP48485.2024.10447565.
- 12 **S. Papi***, M. Gaido*, A. Pilzer, and M. Negri, “When good and reproducible results are a giant with feet of clay: The importance of software quality in NLP,” in *Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, Bangkok, Thailand: Association for Computational Linguistics, Aug. 2024, pp. 3657–3672. DOI: 10.18653/v1/2024.acl-long.200.
- 13 B. Savoldi, **S. Papi**, M. Negri, A. Guerberof-Arenas, and L. Bentivogli, “What the harm? quantifying the tangible impact of gender bias in machine translation with a human-centered study,” in *Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing*, Miami, Florida, USA: Association for Computational Linguistics, Nov. 2024, pp. 18048–18076. DOI: 10.18653/v1/2024.emnlp-main.1002.
- 14 D. Fucci, M. Gaido, **S. Papi**, M. Cettolo, M. Negri, and L. Bentivogli, “Integrating language models into direct speech translation: An inference-time solution to control gender inflection,” in *Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing*, Singapore: Association for Computational Linguistics, Dec. 2023, pp. 11505–11517. DOI: 10.18653/v1/2023.emnlp-main.705.

- 15 M. Gaido, **S. Papi**, M. Negri, and M. Turchi, “Joint speech translation and named entity recognition,” in *Interspeech 2023*, 2023, pp. 47–51.  DOI: 10.21437/Interspeech.2023-1767.
- 16 **S. Papi**, M. Gaido, and M. Negri, “Direct models for simultaneous translation and automatic subtitling: FBK@IWSLT2023,” in *Proceedings of the 20th International Conference on Spoken Language Translation (IWSLT 2023)*, Toronto, Canada (in-person and online): Association for Computational Linguistics, Jul. 2023, pp. 159–168.  DOI: 10.18653/v1/2023.iwslt-1.11.
- 17 **S. Papi**, M. Negri, and M. Turchi, “Attention as a guide for simultaneous speech translation,” in *Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, Toronto, Canada: Association for Computational Linguistics, Jul. 2023, pp. 13340–13356.  DOI: 10.18653/v1/2023.acl-long.745.
- 18 **S. Papi**, M. Turchi, and M. Negri, “Alignatt: Using attention-based audio-translation alignments as a guide for simultaneous speech translation,” in *Interspeech 2023*, 2023, pp. 3974–3978.  DOI: 10.21437/Interspeech.2023-170.
- 19 **S. Papi**, P. Wang, J. Chen, J. Xue, J. Li, and Y. Gaur, “Token-level serialized output training for joint streaming asr and st leveraging textual alignments,” in *2023 IEEE Automatic Speech Recognition and Understanding Workshop (ASRU)*, 2023, pp. 1–8.  DOI: 10.1109/ASRU57964.2023.10389715.
- 20 M. Gaido*, **S. Papi***, D. Fucci, G. Fiameni, M. Negri, and M. Turchi, “Efficient yet competitive speech translation: FBK@IWSLT2022,” in *Proceedings of the 19th International Conference on Spoken Language Translation (IWSLT 2022)*, Dublin, Ireland (in-person and online): Association for Computational Linguistics, May 2022, pp. 177–189.  DOI: 10.18653/v1/2022.iwslt-1.13.
- 21 **S. Papi**, M. Gaido, M. Negri, and M. Turchi, “Does simultaneous speech translation need simultaneous models?” In *Findings of the Association for Computational Linguistics: EMNLP 2022*, Abu Dhabi, United Arab Emirates: Association for Computational Linguistics, Dec. 2022, pp. 141–153.  DOI: 10.18653/v1/2022.findings-emnlp.11.
- 22 **S. Papi**, M. Gaido, M. Negri, and M. Turchi, “Over-generation cannot be rewarded: Length-adaptive average lagging for simultaneous speech translation,” in *Proceedings of the Third Workshop on Automatic Simultaneous Translation*, Online: Association for Computational Linguistics, Jul. 2022, pp. 12–17.  DOI: 10.18653/v1/2022.autosimtrans-1.2.
- 23 **S. Papi**, A. Karakanta, M. Negri, and M. Turchi, “Dodging the data bottleneck: Automatic subtitling with automatically segmented ST corpora,” in *Proceedings of the 2nd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 12th International Joint Conference on Natural Language Processing (Volume 2: Short Papers)*, Online only: Association for Computational Linguistics, Nov. 2022, pp. 480–487.  DOI: 10.18653/v1/2022.aacl-short.59.
- 24 A. Karakanta*, **S. Papi***, M. Negri, and M. Turchi, “Simultaneous speech translation for live subtitling: From delay to display,” in *Proceedings of the 1st Workshop on Automatic Spoken Language Translation in Real-World Settings (ASLTRW)*, Virtual: Association for Machine Translation in the Americas, Aug. 2021, pp. 35–48.  URL: <https://aclanthology.org/2021.mtsummit-asltrw.4/>.
- 25 **S. Papi**, M. Gaido, M. Negri, and M. Turchi, “Dealing with training and test segmentation mismatch: FBK@IWSLT2021,” in *Proceedings of the 18th International Conference on Spoken Language Translation (IWSLT 2021)*, Bangkok, Thailand (online): Association for Computational Linguistics, Aug. 2021, pp. 84–91.  DOI: 10.18653/v1/2021.iwslt-1.8.
- 26 **S. Papi**, M. Negri, and M. Turchi, “Visualization: The missing factor in simultaneous speech translation,” in *CEUR WORKSHOP PROCEEDINGS*, vol. 3033, 2021.
- 27 **S. Papi***, M. Gaido*, M. Negri, and M. Turchi, “Speechformer: Reducing information loss in direct speech translation,” in *Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing*, Online and Punta Cana, Dominican Republic: Association for Computational Linguistics, Nov. 2021, pp. 1698–1706.  DOI: 10.18653/v1/2021.emnlp-main.127.

- 28 S. Papi, E. Trentin, R. Gretter, M. Matassoni, and D. Falavigna, "Mixtures of deep neural experts for automated speech scoring," in *Interspeech 2020*, 2020, pp. 3845–3849. DOI: 10.21437/Interspeech.2020-1055.

Invited Talks

Seminars/Keynote Talks

- 2025 ■ **SlatorCon Remote**. Talk Title: "*How "Real" is your Real-Time Simultaneous Speech-to-Text System?*".
- **MT Marathon**. Invited Speaker.

Panels

- 2024 ■ **IWSLT 2024**. Panel Title: "*Emerging trends in Speech Translation*".

Community Service

Organizer/Committee Member

- 2025 ■ **IWSLT 2025 - Evaluation Campaigns**, Instruction Following (Chair) and Simultaneous Translation (Organizer). Conference.
- 2024 ■ **EACL 2024 Student Research Workshop** (Student Program Chair). Conference.
- **IWSLT 2024 - Evaluation Campaigns**, Subtitling (Organizer). Conference.

Area Chair

- 2025 ■ **ACL Rolling Review**. February cycle (ACL). Conference.

Reviewer

- **Interspeech 2025**. Conference.
- **IWSLT 2025**. Conference.
- **LANS-TTS**. Journal.
- **ICASSP 2025**. Satellite Workshop: Workshop on Speech Pathology Analysis and DEtection (SPADE).
- 2024 ■ **ACL Rolling Review**. February (ACL), April, and June (EMNLP) cycles. Conference.
- **Interspeech 2024**. Conference.
- 2023 ■ **HITLAML 2023**. Conference.
- 2022 ■ **AMTA 2022**. Conference.