Beyond Models: The Impact of AI on NLP through the Lens of Machine Translation

Marco Turchi[1]

[1]*Zoom*

1. Abstract

Artificial intelligence is transforming how machines understand and generate human language. From chatbots to real-time transcription, large language models now handle translation, summarization, and speech recognition within a single framework — reshaping industries and redefining how people communicate across borders.

In this presentation, I use machine translation to cut through the hype and examine what this transformation actually looks like — both technically and organizationally. On the technology one, I trace how translation evolved from dedicated neural systems to general-purpose AI models, how quality is measured, and how text and speech translation are converging into real-time voice-to-voice pipelines. On the organizational side, I examine how these shifts are reshaping teams, demanding new competencies, and blurring the boundaries between translation, speech, and AI specialists. Drawing on practical experience deploying AI-based translation at scale at Zoom, the talk offers a candid look at where the technology delivers, where it falls short, and what it means for the teams building the next generation of multilingual AI.

2. Short Biography

Marco Turchi is Head of the Machine Translation Unit at Zoom and holds a PhD in Computer Science. He previously led the Machine Translation team at Fondazione Bruno Kessler, where his research focused on sequence-to-sequence modelling for machine translation, speech translation, automatic post-editing, and translation quality estimation. His broader research interests include information extraction, text and web mining, document summarization, sentiment analysis, and multilingual document classification. He has contributed to several European projects, including SMART, MateCat, ModernMT, and QT21, and is a co-organizer of the Conference on Machine Translation. He received an Amazon AWS Machine Learning Research Award for his work on end-to-end spoken language translation in data-rich conditions.

NL4AI 2026: Ninth Workshop on Natural Language for Artificial Intelligence, October 7–8, 2026, Perugia, Italy
marco.turchi@gmail.com (M. Turchi)
© 2026 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).