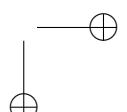
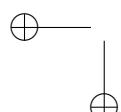


Contents

Agradecimientos	iii
Abstract	v
Resumen	vii
Resum	ix
Contents	xi
List of acronyms	xxiii
1 Introduction	1
1 Motivation	2
2 Scientific goals	3
3 Preliminaries	5
3.1 Machine Learning	5

xi



3.2	Machine Translation	9
3.3	Transformer architecture	12
3.4	Data processing and benchmarking	18
3.5	Evaluation of results	20
4	List of publications	23
4.1	Paper 1	23
4.2	Paper 2	24
4.3	Paper 3	25
4.4	Paper 4	25
4.5	Paper 5	26
	References	28
2	Selected Papers	33
1	Europarl-ST: A Multilingual corpus for Speech Translation of Parliamentary Debates	35
1.1	Introduction	37
1.2	Data collection and processing	38
1.3	Experiments and results	41
1.4	Conclusions	45
	References	46
2	Direct Segmentation Models for Streaming Speech Translation	49
2.1	Introduction	51
2.2	Statistical framework	54
2.3	Direct Segmentation Model	56
2.4	Experimental setup	59

2.5	Evaluation	62
2.6	Conclusions	67
2.7	Reproducibility	68
2.8	ASR Systems	68
2.9	MT Systems	70
2.10	Segmentation Systems	72
	References	73
3	Streaming cascade-based speech translation leveraged by a direct segmentation model	79
3.1	Introduction	82
3.2	Streaming automatic speech recognition	84
3.3	Simultaneous machine translation	88
3.4	Direct segmentation model	89
3.5	Evaluation	93
3.6	Conclusions	110
	References	111
4	Stream-level Latency Evaluation for Simultaneous Machine Translation	119
4.1	Introduction	121
4.2	Related work	122
4.3	Stream-level evaluation	123
4.4	Experiments	127
4.5	Conclusions	130
4.6	Reproducibility of proposed measures	131
4.7	MT System	132
4.8	Segmenter System	133

References	133
5 From Simultaneous to Streaming Machine Translation by Leveraging Streaming History	135
5.1 Introduction	137
5.2 Streaming MT	139
5.3 Experimental setup	144
5.4 Evaluation	147
5.5 Conclusions	152
5.6 Extended Streaming Translation Results	153
5.7 Efficiency of the proposed models	154
5.8 MT System configuration	157
5.9 Segmenteer System configuration	160
References	161
3 General discussion of the results	165
References	174
4 Conclusions and future work	175
References	177